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How does globalisation affect social cohesion?

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IDOS DISCUSSION PAPER 5/2023

How Does Globalisation Affect Social Cohesion?

Kasper Vrolijk

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How does globalisation affect social cohesion?

Kasper Vrolijk

Bonn 2023

Dr Kasper Vrolijk is a researcher in the “Transformation of Economic and Social Systems” programme at the German Institute of Development and Sustainability (IDOS).

Email: Kasper.vrolijk@idos-research.de

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Preface

This Discussion Paper is part of IDOS's research project "**Policies for Social Cohesion in Africa**". Social cohesion – or social solidarity – within societies is a key success factor for sustainable development in Africa. Social cohesion is particularly under-pressure in most world regions, including Africa. The inter-disciplinary IDOS team aims to identify patterns of social cohesion in Africa, analyse factors that influence the degree of social cohesion and identify domestic and international policies that contribute to the creation and consolidation of social cohesion. The team addresses five issue areas:

- **measurement** and understanding of patterns of social cohesion in African countries;
- **inclusive economic development,** including urbanisation, financial sector development, and foreign direct investment with an emphasis on how to maximise opportunities for sustainable economic development;
- **social policy, poverty and health**, addressing the specific role that different social and health policies can have in promoting social cohesion;
- **values, political institutions and resource mobilisation,** spanning from the relevance of value orientations for the functioning of political institutions to tax systems, which affect the interaction between citizens and the state; and
- **conflict and societal peace**, including the influence of political institutions and regime transitions on societal peace in post-conflict societies and how international support can contribute to social cohesion.

This research is funded by the German Federal Ministry for Economic Cooperation and Development (BMZ).

We hope that IDOS research will not only help to better understand the drivers and consequences of social cohesion but will also inform effective policies that contribute to cohesive societies worldwide.

Bonn, October 2022

Julia Leininger[1], Armin von Schiller[2] and Francesco Burchi[3]

1 Julia Leininger is head of the research programme "Transformation of political (dis-)order" at IDOS and co-lead of the research project "Social cohesion in Africa".

2 Armin von Schiller is co-lead of the research project "Social cohesion in Africa" and senior researcher in the programme "Transformation of political (dis-)order".

3 Francesco Burchi is co-lead of the research project "Social cohesion in Africa" and senior researcher in the programme "Transformation of economic and social systems".

Abstract

This paper explores the effects of globalisation on social cohesion outcomes and the underlying mechanisms. A framework for reviewing the literature is offered, in which labour earnings, household expenditures and firm productivity are identified as the main channels through which economic globalisation affects cohesion, trust and pro-social behaviour. Evidence points towards substantial losses in cohesion following negative globalisation changes, altering cohesion through absolute and relative changes in employment and expenditure (and people's perception thereof). However, evidence is thin and inconsistent; studies are limited to effects of trade (and not foreign direct investment), cover some dimensions of cohesion but not others, and often evaluate the effect of negative trade events on cohesion (while trade and foreign direct investment may offer gains to workers, households and firms, which boosts cohesion). From the available evidence, it is determined that when setting policy, it is important to address relative losses from globalisation (between groups), incorporate economic costs of social repercussions, and take on market distortions and underlying cyclical or secular trends that may amplify the effects of globalisation on cohesion.

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Bonn, February 2023 Kasper Vrolijk

Contents

Preface III
Abstract IV
Acknowledgements V
Abbreviations VIII

1 Introduction 1

2 Conceptual framework 2

3 The empirics of globalisation on social cohesion 7

3.1 Globalisation shock and cohesion 7

3.2 Earnings and cohesion 10

3.3 Expenditures and cohesion 12

3.4 Development and cohesion 13

3.5 Firm productivity (and its underlying channels) and cohesion 14

3.6 Globalisation shock and development outcomes 15

3.7 Cohesion and policy preferences 16

3.8 Time-invariant factors 17

4 Summary of empirical evidence and gaps 18

5 Conclusion 22

References 23

Appendices 31

A1 Other cyclical and secular trends 31

A2 Overview of study findings and characteristics 33

Figures

Figure 1: Causal relations between globalisation and cohesion and its intermediate mechanisms 4

Figure 2: Evidence (gaps) on globalisation, cohesion and its mechanisms 20

Tables

Table 1: Globalisation and cohesion 8

Table 2: Earnings and cohesion 10

Table 3: Expenditures and cohesion 12

Table 4: Development and cohesion 13

Table 5: Productivity and cohesion 14

Table 6: Cohesion and preferences 16

Table 7: Time-invariant effects and cohesion 17

Tables in Appendix

Table A1: Globalisation and cohesion 33

Table A2: Cohesion and globalisation 35

Table A3: Earnings and cohesion 36

Table A4: Cohesion and earnings 37

Table A5: Expenditure and cohesion 39

Table A6: Development and cohesion 40

Table A7: Globalisation and development outcomes 41

Table A8: Cohesion and policy preferences 42

Table A9: Time-invariant factors and cohesion 44

Abbreviations

FDI	foreign direct investment
GVC	global value chain
MNE	multinational enterprise

1 Introduction

It has become increasingly clear that economic globalisation has social and political repercussions. Rodrik (1997) warned in his seminal book that ignoring social consequences of globalisation may lead to social disintegration and in turn political backlash against trade. A few years later, Putnam (2000, p. 283) observed that "global economic transformations are having an important impact on community life". Indeed, recent anecdotal and empirical evidence suggests that globalisation has led to an anti-globalisation backlash and a return to protectionism.[4]

Despite its relevance, we know little about how economic globalisation affects social cohesion. One shortcoming is that most of the literature examines social capital and leaves out other concepts relevant to social cohesion. Another deficiency is that we lack a model that connects economic globalisation to social cohesion outcomes. This paper proposes a conceptual framework from economic theory that highlights three main channels through which globalisation affects social cohesion: (i) labour earnings, (ii) household expenditure and (iii) firm productivity. To structure thinking, a particular classification of cohesion (divided into six dimensions) is adopted that moves beyond social capital and captures most important features in the literature; political and interpersonal (social) *trust*, national and group *identity,* and civil and political *cooperation*.[5]

With this framework at hand, the empirical evidence on globalisation and cohesion, and its intermediate channels are reviewed. The main objective is to study the effects of foreign direct investment (FDI) and international trade on social cohesion. To systematically review the evidence, adopt the following inclusion criteria are adopted. Papers are included that are related to economic globalisation, thus excluding studies on diffusion of norms, culture, ideas and people. To expand the sample, some studies on non-globalisation events (e.g., economic recessions) are added to make inferences about how events in each of the three main channels (i.e., earnings, expenditures, firms) may propagate in each cohesion dimension. Given the multitude of cohesion definitions, and limited studies on cohesion generally, first a broad search on multiple keywords for cohesion (e.g., pro-social behaviour, values, social capital) is deployed. In a second step, those search results are categorised and evaluated against the six cohesion dimensions described above.

With this structure in place, the aim is to address the following questions. How does economic globalisation affect cohesion? Are there reverse linkages between cohesion and globalisation? That is, are there economic implications of social disintegration? And what are the research gaps and policy implications that emanate from the evidence? It is found that studies document clearly how negative changes in trade affect social cohesion, where cohesion is modified through absolute and relative losses (e.g., changes in actual income and income in respect to others), and people's perception of losses, in labour and expenditures. Evidence is mainly on the earnings channel, although there is some evidence of how negative shocks propagate through the expenditure channel, and by means of market reallocations and between-firm selection (which indirectly influence earnings and expenditures). Studies suggest that distortions (e.g., inefficient institutions, market imperfections, firm distortions), which tend to be more prominent in low-income countries, reduce *absolute* gains from FDI and trade, and enlarge *distributional* effects across the household and worker distribution, thus plausibly aggravating the social cohesion repercussions of globalisation. Finally, the evidence suggests reversed

4 On economic globalisation and political backlash, see Rodrik (2018). On the return to (trade) protectionism in the US, see Fajgelbaum, Goldberg, Kennedy, and Khandelwal (2020) and Amiti, Redding, and Weinstein (2019).

5 For recent studies on other determinants of social cohesion, see Walle (2022) and Burchi and Zapata-Román (2022).

causal links; for example, earnings affect cohesion, but the level of cohesion also affects earnings. The main take away from this is that there are economic costs to social cohesion repercussions.

A general caveat is that there are considerable evidence gaps: we lack data on (i) FDI effects, (ii) certain dimensions of cohesion, and notably, (iii) how *positive* globalisation shocks affect cohesion. Both trade (through reductions in prices and increases in product variety) and FDI (by means of employment creation, higher wages, lower prices and greater product variety) can offer gains to firms and workers, which may affect cohesion positively, but this is not studied frequently in the literature. Also, most evidence is on developed economies and no study comprehensively examines all channels by which globalisation influences social cohesion, even though evidence suggests globalisation effects often operate in these channels simultaneously.

The remainder of the paper is structured as follows. Section 2 derives a model from theory by which to connect economic outcomes from globalisation to its cohesion outcomes and identifies three main channels through which cohesion outcomes are affected by globalisation. Against this framework, Section 3 describes the empirical evidence on the link between globalisation and cohesion and its intermediate channels (Appendix A2 summarises study findings and characteristics). Section 4 reviews the framework against this evidence to point towards the main findings and research gaps. Additionally, Appendix A1 investigates whether other secular or cyclical trends explain changes in cohesion. Section 5 offers concluding remarks, and suggestions for policy and future research.

2 Conceptual framework

To study the causal relationship between globalisation and social cohesion, and pinpoint mechanisms that condition this association, a detailed structural model is required (Figure 1). First, the main concepts used in the framework are defined. Then the basic structure of the model is introduced, and its features are discussed in detail using economic theory and evidence. Globalisation in terms of “shocks” is operationalised throughout the model and the evidence review. The reason is that most of the evidence analyses specific globalisation events (e.g., increasing imports from China) as opposed to longer-term globalisation trends. The framework distinguishes between shocks that are exogenous (e.g., rising trade from China affects labour outcomes and cohesion) and endogenous shocks (e.g., changes in cohesion outcomes affect policy preferences, which alters trade policy).

In the framework, economic globalisation (henceforth globalisation) includes the movement of goods and services (international trade) and capital (investment flows). Social cohesion is interpreted in a broad sense because most studies in economics use a narrow definition restricted to social capital that may not capture all facets of societal cohesion.[6] Maxwell (1996, p. 13) defines social cohesion as “building shared values and communities of interpretation, reducing disparities in wealth and income, and generally enabling people to have a sense that they are engaged in a common enterprise, facing shared challenges, and that they are members of the same community”. To this end, social cohesion is categorised into six dimensions, following Leininger et al. (2021): political and interpersonal *trust*, national and group *identity,* and civil and political *cooperation*. This paper uses this selection of concepts because it most captures various measures that have been used in the literature to denote cohesion, including identity, trust, cooperation, participation, social interaction, pro-social behaviour, social capital and civic virtues (see, for example, Lowes & Montero, 2021). Specifically, interpersonal trust is

6 Putnam (2000) defines social capital as the “features of social life, networks, norms, trust that enable participants to act together more effectively to pursue shared objectives”. Other concepts include social norms (Elster, 1989) and social preferences (Fehr & Fischbacher, 2002).

defined as the degree to which people think other people are reliable (Rosenberg, 1956). Political or institutional trust is the confidence in formal institutions of government and its incumbents, capturing both trust in political representatives and institutions.[7] Group or social identity represents groups status, that is, the degree to which people identify with one or more groups (Shayo, 2020). Society consists of multiple social categories that have power and status relations with other groups, which in turn affects the level of cohesion within the society (Grossman & Helpman, 2021).[8] It also captures changes in values or attitudes *within* groups and how it affects tolerance of other groups in society (Ballard-Rosa, Jensen, & Scheve, 2021). National identity is the degree to which people identify with a country identity (as compared with identification with one or more social identities), which, as social identity, is multi-dimensional and fluid (Edensor, 2020). Civil cooperation refers to public actions that people may take to voice concerns, for example, participating in community meetings.[9] Civil cooperation differs from political cooperation; the latter is the intensity with which people directly interact with political incumbents, either locally or in national institutions. In the framework, these facets of social cohesion are interdependent; trust influences cooperation, identity affects trust, cooperation regulates identity, and so on.

The framework emphasises the (a) household channel and (b) firm channel as the main ways through which globalisation affects cohesion. In the first channel, households are affected through (a1) earnings (or wages) and (a2) expenditures (or cost of living), which in turn affects social cohesion and pro-social behaviour. Indirectly, earnings and expenditure effects may affect cohesion through development outcomes (e.g., education, health).[10] The causal relation between globalisation and cohesion is mediated by time-invariant factors, such as culture and institutions. Alternatively, social cohesion may be affected *indirectly*; globalisation affects firm productivity – either by way of (i) within-firm changes, (ii) factor reallocations or (iii) between-firm selection – which in turn influences worker earnings (b1) and household expenditures (b2). For example, following an inflow (or shock) of FDI, changes in labour demand may affect domestic market wages, which modifies labour earnings. Entry of foreign firms may lead to domestic firm exit, which may reduce the product variety available to domestic consumers. In this framework, trade or FDI may be endogenous, determined in part by economic and political conditions, which are indirectly affected by social cohesion. Similarly, changes in social cohesion may affect individual policy preferences, which – through changes in voting behaviour and electoral outcomes – may regulate trade and investment flows.

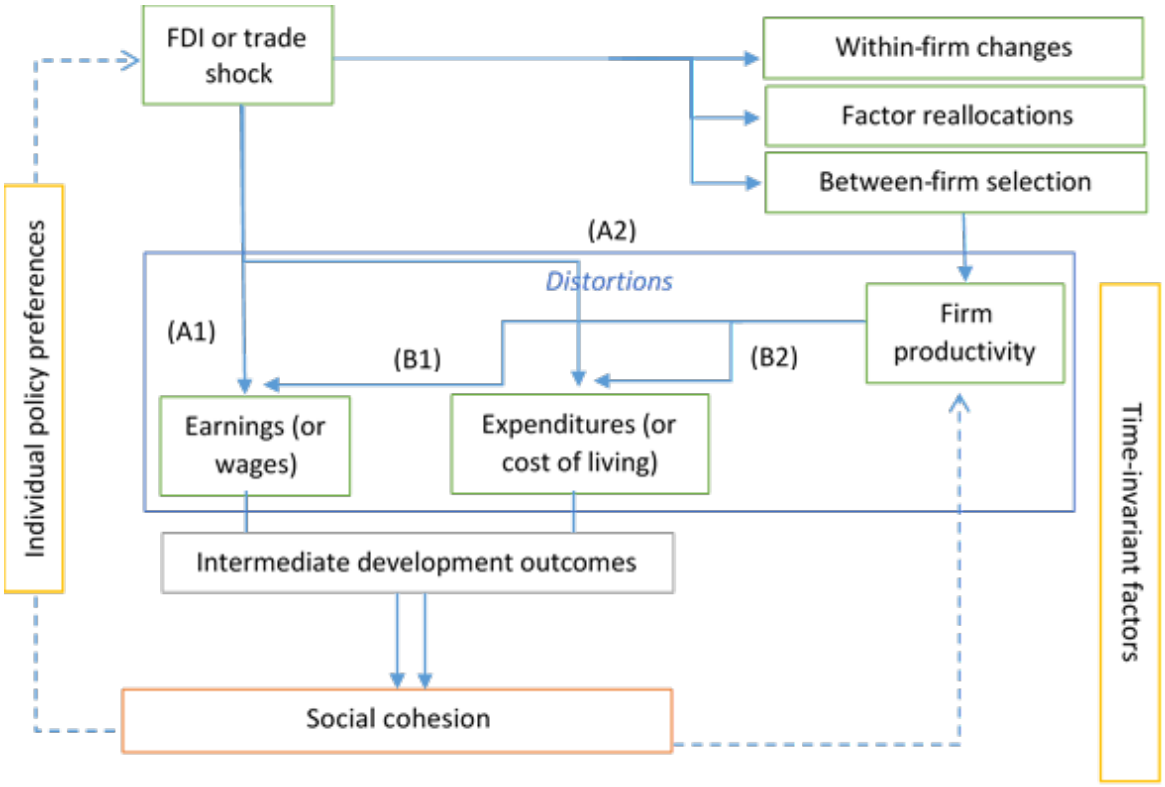
7 For a discussion of political trust and the distinction between trust in the system and incumbents, see Levi and Stoker (2000).

8 The focus is on societal implications of group identity; this paper abstracts from the individual (utility) gains of associating with specific groups that one identifies with (Tajfel, 1981).

9 Note that the definition is ambiguous as to whether participation aids or deteriorates cohesion. While it can support society as whole, civil participation may also be borne out of self-interest (e.g., protest to lobby government), see Bombardini and Trebbi (2020).

10 This is important to study because earning and expenditure shocks have been shown to have developmental effects, while there is also evidence that development outcomes have economic repercussions.

Figure 1: Causal relations between globalisation and cohesion and its intermediate mechanisms



Source: Author

The main effect of trade on social cohesion is through the earnings channel (a1). In trade theory, market integration (which could also be thought of as a description of entry of foreign firms) leads to international specialisation between countries, where those countries specialising in low-skilled intensive goods see price increases in such goods, which increases the return (wages) to the factor (labour) that is intensively used (the Stolper-Samuelson Theorem). Empirical evidence, however, contrasts these predictions and shows that, for example, during large tariff reductions in Argentina, Brazil, Chile, Colombia, India and Mexico between the 1970s and 1990s, wages and demand increased for *skilled* labour, despite a *rise* in the relative cost of skilled labour (Goldberg & Pavcnik, 2007). If shocks increase *relative* income differences (i.e., increase income inequality), they may reinforce a regression towards identity that reduces pro-social behaviour, while *absolute* income reductions may increase economic insecurity, both of which are forces that negatively influence cohesion. New literature on multinational enterprises (MNEs) (Alfaro-Ureña, Manelici, & Vasquez, 2021; Setzler & Tintelnot, 2021) further points to positive effects from foreign entry, both directly – through higher wage premiums for workers at MNEs – and indirectly – by means of employment and wage effects at domestic firms. This would imply positive effects on cohesion, but only if there are no distributional effects across the income, education, sector or skills distribution, which evidence suggests is in fact the case.

The second effect occurs through the expenditure channel (a2). In theory, market integration results in price reductions, by means of increasing returns to scale and reductions in markups, and increases in product variety available to consumers. Evidence shows that trade liberalisation offers positive consumer gains, and that such gains primarily accrue to poorer households (Caliendo & Parro, 2015; Fajgelbaum & Khandelwal, 2016). Jaravel and Sager (2019) examine the consumer welfare effects of Chinese import competition and find that it led to a reduction in consumer prices, with the largest reductions for poorer households. The evidence on FDI and household expenditures hints at positive but regressive effects (Atkin,

Faber, & Gonzalez-Navarro, 2018). Like labour earnings, cleavages in relative and absolute expenditure power may influence cohesion negatively through resentment or discontent towards particular groups or government. Limited gains through price or variety (or instead price inflation) may also influence the general levels of social cohesion adversely and lead to public discontent or confrontations between groups.

Of course, the effect of FDI or trade through the earnings (a1) and expenditure channels (a2) is dependent on the nature of the FDI or trade. When FDI is "cost-advantage-seeking" (vertical), it uses local factors, such as labour, and therefore affects households mainly through the earnings channel, whereas "market seeking" (horizontal) FDI has effects on both household expenditure, through its entry into local product markets, and the earnings channel if employing local labour.[11] In the case of trade, a supply shock that leads to rising import competition may lead to a decline in local employment (Autor, Dorn, & Hanson, 2013) and affect consumer expenditure by means of reductions in product variety (Amiti, Redding, & Weinstein, 2019). In the event of a demand shock, the literature points to positive employment effects from export exposure (Dauth, Findeisen, & Suedekum, 2014). In the context of global value chains (GVCs), a further distinction can be made between MNE subsidiaries (which operate within the boundary of the firm) and MNE outsourcing (where local firms engage in arm's-length transitions with the foreign firm). Where the former is vertical FDI, the latter includes non-equity investments between foreign and local firms, such as in relational contracts (Macchiavello, 2021).

Furthermore, in the case of FDI, earnings and expenditure effects may be shaped by changes in market structure after an FDI shock. If MNEs are able to capture large market shares in a domestic market, this may raise concentration in product and labour markets, allowing MNEs to have market power; that is, the ability to set prices (in product markets) and set wages (in labour markets). Evidence shows that rising concentration in labour markets is associated with lower wages (Azar, Marinescu, Steinbaum, & Taska, 2020). Further, rising concentration in product markets led to lower within-industry labour shares (Autor, Dorn, Katz, Patterson, & Van Reenen, 2020), which suggests there are employment losses after an FDI shock if a foreign firm has market power in a product market. Increased product market concentration is also related to declining wages for low-skilled workers and declining labour force participation generally (De Loecker, Eeckhout, & Unger, 2020). Keller and Yeaple (2021) provide initial data that market power of MNEs has increased in the past decades.

The two remaining channels (b1 and b2) affect household earnings and expenditures *indirectly* through changes in firm productivity. While this may not seem an obvious channel through which a globalisation shock affects cohesion, the three underlying channels through which globalisation may affect productivity are plausibly important in indirectly affecting earnings and expenditures. First, a trade or FDI shock may result in within-firm changes, such as by means of productivity spillovers, technology upgrading or within-firm reallocations (Alfaro & Chen, 2018).[12] It can also bring about factor reallocations (in either the labour, product or capital market) or between-firm selection. The latter two are direct predictions from heterogeneous firm theory (Melitz, 2003), where, after market integration, firms that are least productive exit the market and their factors are reallocated to firms with higher productivity. Any productivity increases from changes in these channels can positively affect wages because productivity increases are associated with rising wages, in part by means of "rent-sharing" behaviour (Barth,

11 Alfaro and Chen (2018) show that when MNEs compete with domestic firms in their local product market it leads to decreases in revenue and employment for domestic firms without increases in productivity. When MNEs compete for domestic labour, it results in reductions in employment but increases in firm productivity and revenue at domestic firms.

12 Production spillovers include externalities that firms can take advantage of and frequently occur by means of buyer-supplier linkages, sharing of common inputs or labour mobility. The FDI shock may also lead to technology upgrading by the firm, or reallocation of factors and products within the firm, as a result of increased competitive pressures.

Bryson, Davis, & Freeman, 2014). As described above, changes in labour demand – or changes in workers' outside options – following an FDI shock may affect the domestic market wage, which then affects worker earnings. Reallocations and between-firm selection after a globalisation shock may reduce prices through increased productivity but may also lead to losses in employment and product variety, if domestic firms are outcompeted by foreign firms (and those loses are not recouped by employment gains and new product offerings from foreign firms) (Hsieh, Li, Ossa, & Yang, 2020).

The nature of sectors likely regulates the extent to which globalisation has repercussions on social cohesion. A qualitative research strand has emphasised that sectors and how they integrate in GVCs differ in the productivity spillovers they offer to domestic firms (Farole & Winkler, 2014). They hint that linkages to domestic firms and the technology gap between foreign and domestic firms regulates the probability of spillovers, for example, mining has few linkages to local suppliers and domestic agricultural businesses are far away from the technological frontier. In line with this, Alfaro-Ureña et al. (2021) show that buyer-supplier linkages generate the largest productivity gains for manufacturing firms, with only half of those gains documented for services and retail sectors, and no productivity gains in agriculture. Setzler and Tintelnot (2021) find that effects of MNE expansion on domestic firm performance – such as value added and employment – are larger in the tradeable sector. This is in line with the idea that the manufacturing sector offers most productivity spillovers vis-à-vis other sectors and is an important driver of growth.[13] The labour and expenditure gains also differ across sectors. In the manufacturing industry, productivity spillovers come with increases in employment and entry of new firms (Abebe, McMillan, & Serafinelli, 2020), while in retail, productivity gains come with negative wage and employment effects and firm exit (Atkin et al., 2018). In addition, for FDI, foreign and domestic firm characteristics regulate the type and amount of spillover that occurs.[14] It is plausible that if FDI spillovers are limited, or FDI benefits some sectors or firms (and therefore some workers) over others, this may result in public discontent and social disintegration.

In low-income economies one expects these main channels (and how they function) to deviate from the textbook model. Imperfect markets and distortions likely regulate how trade shocks affect employment, expenditures and firm productivity. These distortions include inefficient institutions (e.g., contract enforcement), imperfect markets (e.g., labour, credit) and firm-level distortions (e.g., lobbying) (Atkin & Khandelwal, 2020). Inefficient enforcement of contracts, for example, changes the patterns of trade and affects the type of exports countries specialise in, which in turn may alter labour gains from trade (Nunn, 2007). At the same time, given that the quality of employment in developing economies is often low, market integration (e.g., through buyer-supplier linkages) may lead to better enforcement of regulation (Tanaka, 2020). In terms of markets, in theory, factors tend to reallocate to the most productive firms after market-integration. Liberalisation of *export* markets reallocates workers from informal firms to formal businesses (McCaig & Pavcnik, 2018). However, with unilateral liberalisation, frictions may constrain workers to adjust to trade shocks and locate to other sectors, firms or locations

13 See Abramovitz (1986), Hirschmann (1958), Kaldor (1960), Young (1928). Alfaro (2003) shows that FDI in the primary sector negatively affects growth, manufacturing FDI results in positive growth, and FDI growth effects in the service sector are ambiguous. Greenstone, Hornbeck, and Moretti (2010) show the role of agglomeration economies as an important feature of the manufacturing sector and its positive effects on productivity spillovers.

14 For a review on the different channels through which spillovers take place, and how they are regulated by the type of foreign structure and ownership, sourcing strategy and technology intensity, and country characteristics (e.g., labour regulation) and domestic firm characteristics (e.g., size, sector), see Farole and Winkler (2014).

(Pavcnik, 2017).[15] Frictions are biased against older workers and those less geographically mobile, meaning that frictions augment rather than attenuate distributional effects of trade. If there are imperfect credit markets, domestic firms may be unable to adapt to rising competition, for example, if fixed costs are required to move into exporting (Foley & Manova, 2015). In input markets, market integration offers access to high quality inputs (Amiti & Konings, 2007), although search costs for new inputs – which may be greater in low-income economies – are an important friction following trade shocks (Huneeus, 2018). Furthermore, in theory, market integration improves the competitiveness of markets, but rising market power of foreign firms – that is, the ability to set prices in product markets and set wages in labour markets – may change gains from trade and FDI, as discussed above. Finally, intra-national trade costs reduce the gains that consumers in remote areas see from trade liberalisation (Atkin & Donaldson, 2015).[16] In terms of firm distortions, politically connected firms may alter firm-selection and aggregate productivity gains as predicted by theory (Baccini, Impullitti, & Malesky, 2019). However, market integration also reduces firm distortions; it lessens the political connections of firms (Jävervall & Khoban, 2022). In summary, the expectation is that distortions common in low-income economies reduce *absolute* gains from FDI and enlarge *distributional* effects across household and worker distributions.

To investigate the outlined conceptual model empirically is a tall order. Therefore, the aim of this paper is to review the empirical evidence on the mechanisms identified, deduce insights regarding the ways in which FDI and trade shocks affect cohesion and identify research gaps in the literature.

3 The empirics of globalisation on social cohesion

This section studies each mechanism identified above. Each subsection presents main findings and research gaps before discussing the most important studies. The causal mechanisms between globalisation, and earnings and expenditures, which received attention in the framework discussed above, are not separately discussed in this section.

3.1 Globalisation shock and cohesion

Main findings

FDI shocks increase local violence, which may raise discontent. Trade exposure negatively affects values and trust, but positively affects political cooperation. Trade lowers labour force participation. There is evidence that trust in economic transactions (interpersonal trust) positively affects trade and FDI flows.

Research gaps

15 Trade liberalisation episodes show imperfect interregional mobility of labour and capital; regions seeing larger tariff declines experienced lower reductions in poverty and less consumption growth, continuing drops in number of firms and in firm size, and increases in firm exit and job losses (Dix-Carneiro & Kovak, 2017, 2019; Topalova, 2010). In contrast to theory predictions, workers are not absorbed by high-productivity firms or comparative-advantage sectors and transition into service sectors, unemployment or informality (Dix-Carneiro, Goldberg, Meghir, & Ulyssea, 2021; Menezes-Filho & Muendler, 2011).

16 This includes monopsony power of foreign and intermediary firms that limit the pass-through of gains to consumers following a trade shock (Bergquist & Dinerstein, 2020; Dhingra & Tenreyro, 2017). Related to this, advances in trade-related intellectual property rights (TRIPs) – in which firms in developed economies demand more stringent monopoly restrictions for their firms in low-income countries – has resulted in higher prices for knowledge-intensive goods (e.g., pharmaceuticals) (Chaudhuri, Goldberg, & Jia, 2006).

Table 1: Globalisation and cohesion

	Globalisation effects on cohesion	Cohesion effects on globalisation
Trust	Negative (interpersonal)	Positive (interpersonal)
Identity	Negative (i.e., less democratic values)	?
Cooperation	Positive (political)	?

Note: Orange and yellow indicate some evidence and no direct evidence on the dimension, respectively.

Source: Author

A large body of literature examines the social repercussions of Chinese investments. Iacoella, Martorano, Metzger, and Sanfilippo (2021) document that Chinese investment projects in Africa lead to rises in protests. They show that perceptions of China's growing influence and low trust in government institutions amplify this response. While these insights are relevant, they are particular to China's investment, for example, tailored to natural resources, conditional for aid.[17] However, Sonno (2020) shows a general causation between expansion of MNEs and violence; for example, MNE expansion in the forestry sector raises violence, while expansion in social sectors lowers violence. He finds that this effect is greater in areas that have a presence of powerless ethnic groups; that is, the leading ethnic group can place the burden of land deals on the unrepresented groups.[18] Christensen (2019) finds that FDI in the mining sector raises the probability of protests, where effects are lower when transparency on how gains are distributed is increased. These studies suggest that political representation and transparency regulate the degree to which FDI accumulates into social unrest. Volatility in mineral prices is also important in explaining the effect of mining on local conflicts (Berman, Couttenier, Rohner, & Thoenig, 2017), hinting that exogenous global trends (and therefore exposure to world markets) also govern public discontent. A particular channel through which FDI affects violence and cohesion is "land grabs". These include large-scale acquisitions of farmland, which in addition to violence also influence food security (Cotula, 2009) and, therefore, the expenditure channel. While the effect of FDI on violence is well documented, and plausibly affects social cohesion, we lack evidence on how it translates into changes in trust, identity or cooperation.[19]

A limited but growing strand of literature studies the effect of trade on cohesion. Of those studies, most use the China shock instrument, developed by Autor et al. (2013), to provide causal evidence. Ballard-Rosa et al. (2021) show that economic decline that results from increased Chinese import competition affects social identity in the US and makes individuals more likely to adopt authoritarian values. A two-standard deviation increase in trade exposure is associated with two-thirds of a standard deviation rise in support of authoritarian values. These values, they find, in turn affect voting behaviour, and raise support for populist candidates and parties. Colantone and Stanig (2018a) study rising Chinese import competition in the EU and find that those regions most exposed see largest reductions in support for democratic and liberal values; a 1 per cent rise in trade exposure reduces support for democracy by 23 per cent and support

17 Wellner, Dreher, Fuchs, Parks, and Strange (2022) find that Chinese aid increases public support for the Chinese government.

18 A much larger body of literature documents the negative long-term effects of foreign entry during colonialism on (economic) development and social cohesion outcomes (for a review, see Lowes & Montero, 2021).

19 Evidence on violence and social cohesion show positive effects of violence on participation (e.g., voting, community organisation) and ambiguous effects on trust (for a review of the literature, see Gilligan, Pasquale, and Samii (2014)).

of liberal values by 16 per cent. Less educated individuals show the strongest response to increases in import exposure, pointing to heterogeneity across educational level and job status. Autor, Dorn, Hanson, and Majlesi (2020) find that, with increasing Chinese import competition, more exposed districts in the US have a 2.6 per cent increase in voter turnout, which suggests increased political participation. In addition, using a composite measure of globalisation, Fischer (2012) and Fang, Gozgor, and Yan (2021) offer cross-country evidence, across both developed and developing countries, that rising globalisation lowers social trust (particularly for those with low educational levels) and enhances societal and political polarisation, although the effect on polarisation is less pronounced in developing countries. Given that FDI may also lead to negative effects through the labour channel, one expects similar increases in authoritarian values and higher voter turnout (and would expect reversed effects from *positive* shocks from FDI like employment gains, such as lower authoritarian values).

A set of related studies documents a relation between trade and labour force participation. Reductions in labour force participation – which could also happen after FDI shocks when foreign firms outcompete local firms – plausibly render mistrust of government, magnify group identities, or reduce civic participation, because it evokes an exclusion from the formal labour market. Sauré and Zoabi (2014) show for the US that if trade expands sectors that are relatively female-labour intensive, it results in a rise in the gender wage gap and reduces female labour force participation. They show that this occurs through factor reallocations, whereby male-intensive sectors contract and its labour relocates to female-labour intensive sectors. Autor et al. (2013) find that labour force participation decreases with increasing Chinese import competition in the US. They show that reductions in labour force participation account for three-quarters of employment reductions. Gaddis and Pieters (2017) find evidence that trade liberalisation in Brazil reduced both male and female labour force participation rates, mainly among low-skilled individuals. In the same setting, Menezes-Filho and Muendler (2011) show that the liberalisation episode resulted in displacement of workers into unemployment and informality.

On the reverse relation between cohesion and globalisation, there is limited evidence, although there is literature on “trust in the market” (e.g., Guiso, Sapienza, & Zingales, 2005).[20] Conceptually, this could be thought of as trust in firms or financial transactions, which is a different type of trust that tends to be associated with social cohesion. Massa, Wang, Zhang, and Zhang (2015) show that higher trust between investors and mutual funds in the same countries is positively related with the activeness of a mutual fund. They also find that trust between an investor country (in which funds are raised) and the investee country (where funds are invested) matter for cross-border investments. They find that a one-standard-deviation increase in trust of the investee-country is associated with a 7 per cent higher active share (i.e., the investor takes on more discretionary actions and more risk). Zingales, Sapienza, and Guiso (2009) find that lower relative levels of trust (towards individuals within a country) lead to less trade with (and less portfolio and direct investment in) that country. Their results show that a one standard deviation increase in the trust of the importer (country) towards the exporter (country) raises exports by 32 per cent and they confirm trust as an exogenous determinant of trade. They also show that additional to trust, cultural aspects – such as religion, a shared history, or genetic similarities – have a similar effect on trade. Algan and Cahuc (2010) study interpersonal trust and economic development, and offer causal evidence that changes in trust during the 20th century can explain a significant part of the evolution of economic development (and these results hold after adding several country fixed-effects, such as institutions and geography). If the level of economic development is a determinant of FDI and trade, this infers that trust indirectly drives globalisation. Similarly, Knack and Keefer (1997) and La Porta, Lopez-de-Silanes, Shleifer, and Vishny (1997) show a correlation between social capital and economic

20 For a discussion of the distinction between trust as generalised trust and in transactions (or relational contracts), see Macchiavello and Morjaria (2022).

performance. On identity, Akerlof and Kranton (2000) show different ways in which identity leads to economic repercussions – for example, Human capital acquisition, labour market participation and poverty – hinting that, in addition to trust, identity affects FDI and trade flows.

3.2 Earnings and cohesion

Main findings

Reductions in worker earnings (and employment) negatively affect trust, values and attitudes, and positively affect political cooperation. A reversed, positive relation exists between interpersonal trust, interpersonal cooperation, identity and virtues, and earnings.

Research gaps

Table 2: Earnings and cohesion

	Earnings effects on cohesion	Cohesion effects on earnings
Trust	Negative (interpersonal and institutional)	Positive (interpersonal)
Identity	Negative (i.e., less democratic values, attitudes)	Ambiguous
Cooperation	Positive (political)	Positive (interpersonal)

Note: Green, orange and yellow indicate evidence, some evidence and no direct evidence on the dimension, respectively.

Source: Author

In addition to the evidence on the effect of trade on cohesion through labour markets, as discussed above, related literature studies the association between economic recessions, income reductions and cohesion. Although not on trade or FDI shocks, it offers useful insights on effects of earnings and employment shocks on social cohesion. Algan, Guriev, Papaioannou, and Passari (2017) show descriptively a relationship between increases in unemployment after the Great Recession in 2007 and declines in trust towards national and political institutions in the EU. They find that income reductions do not lead to decreases in interpersonal trust. Decreased trust then reduces voting behaviour; a 1 pp increase in the unemployment rate is associated with an increase in voting for anti-establishment parties by 2-4 pp. Ananyev and Guriev (2019) study the relation between the Great Recession and social trust (i.e., answering affirmatively to “most people can be trusted”) in Russia. They find that a 10 per cent decline in earnings was associated with a 5 pp decline in interpersonal trust. Using an own survey, they find that this effect persisted even when income recovered after the Recession and that trust only recovered in regions where declines in trust after the Recession were small, hinting at the persistence of effects on trust. Alesina and La Ferrara (2002) study the determinants of trust in the US and find that low absolute income and high relative income disparity within a community are associated with lower levels of social trust, suggesting that distributional effects of globalisation on earnings can affect cohesion in addition to absolute reductions on earnings. Chen (2020) uses quasi-experimental variation to explore the association between unemployment and attitudes in the US. He finds that unemployment during the Great Recession raised the probability of attitudes being formed against wealthy elites by 15 pp, through increases in perceived economic unfairness. He points to the role of distributional effects in shaping social cohesion, but also in addition to the importance of perception rather than actual

effects. Di Tella and Rodrik (2020) similarly show for the US that people do not only care about the outcome of shocks (e.g., job loss), but also fairness of that shock. They study the policy preferences from different types of labour market shocks and find that trade elicits relatively strong protectionism responses compared with other shocks. In their experimental setting, they find that the probability of individuals thinking that government should restrict imports from overseas is on average 0.09 in the control group (where no shock occurred), 0.13 for participants primed with a non-trade shock, 0.23 for those exposed to a trade shock from an advanced country, and 0.29 for those exposed to a shock form a developing country (which might offer unfair competition). On the dimension of identity, Grossman and Helpman (2021) provide a theory in which increased income inequality affects social identification (or identity), which in turn affects policy preferences (towards trade). Taken together, this evidence suggests there are negative repercussions of the earnings channel on cohesion at the *intensive* margin (e.g., reductions in earnings) and the *extensive* margin (reduction in employment), although evidence on the former, and on the dimensions of identity and cooperation specifically, is limited.

In terms of the reverse relation between cohesion and earnings, several studies provide insights. Algan and Cahuc (2009) study the relation between civic virtues (i.e., those answering negatively to the question “is it justified to claim benefits to which you have no rights?”) and labour market institutions. They show that those countries with stronger civic virtues are more likely to provide insurance through unemployment benefits, as opposed to through job protection. Given that labour market institution changes are related to changes in the wage structure (and rising wage inequality in some settings), it suggests an indirect link between cohesion and earnings (e.g., Machin, 1997). In a related paper, Aghion, Algan, and Cahuc (2011) examine the association between cooperation and minimum wage regulation. They find that distrust creates public demand for regulation, while regulation in turn discourages social capital accumulation. Dincer and Uslaner (2010) explore the effect of social trust on employment in the US and find that a 10 pp increase in trust increases the growth rate of employment by 2.5 pp and per capita income by 0.5 pp over a decade.

Some studies show a link between minority groups, their identity and labour market outcomes. Dilmaghani (2017) finds descriptive evidence that males belonging to the least religious group in highly a religious region earn significantly below otherwise identical individuals. Cornwell, Rivera, and Schmutte (2017) show that wages differ with subjective racial identity (even after controlling for individual characteristics), hinting at a relation between racial diversity and income inequality. Nekby and Rodin (2007) also find that identification with a majority culture affects labour market outcomes, although only for males. In contrast, Casey and Dustmann (2010) show that the identity of migrants – measured as the feeling of belonging to a particular ethnic group – to the “residential” or “home” country is only weakly related to labour outcomes (although migrants’ *children’s* identity is strongly linked to labour outcomes). Pendakur and Pendakur (2005) find a correlation between association with ethnic identity and informal job access. This suggests an ambiguous link between identity and earnings, where group identity is inversely related to wages, although group identity may also positively affect employment access.

Related literature examines social capital and labour market outcomes. Social capital is often defined as social networks and connections but can also be seen as individuals’ efforts to promote cooperation, which indirectly contributes to cohesion (Oxoby, 2009). Aguilera and Massey (2003) show that Mexican immigrants that have friends and relatives with migratory experience have improved efficiency and effectiveness in their job search and the ability to obtain a job with higher wages. For documented migrants, for example, having a near family tie (as one component of social capital) resulted in a 4 per cent higher wage. Aguilera (2002) shows that there are significant social capital differences between race (or ethnicity) groups and genders, suggesting that if differences in social capital determine economic outcomes, such as earnings, this may lead to social cleavages. Related to this, Barr and Oduro (2002) provide evidence on ethnic fractionalisation and labour outcomes in Ghana and find that in a setting of high fractionalisation, employers tend to favour their ethnic groups in terms of pay and job

allocations, suggesting that fractionalisation combined with differences in social capital has economic repercussions. David, Janiak, and Wasmer (2010) study the effect of social capital on spatial mobility. They find that regions with high social capital (measured as club membership and friends' and neighbours' contact) are related to low between-region mobility. Related to this, the trade and FDI literature has shown negative effects of globalisation shocks for those that are less mobile (Méndez-Chacón & Van Patten, 2021a; Topalova, 2010), which suggests that social capital may mitigate some of these negative effects by enhancing mobility.

3.3 Expenditures and cohesion

Main findings

There is no evidence of an association between expenditure and cohesion, but some information on the reversed link between group membership (cooperation) and trust, and household expenditure.

Research gaps

Table 3: Expenditures and cohesion

	Expenditures effects on cohesion	Cohesion effects on expenditures
Trust	?	Positive (interpersonal, institutional)
Identity	?	Ambiguous
Cooperation	?	Positive (group membership)

Note: Green and orange indicate evidence and some evidence on the dimension, respectively.

Source: Author

There is no direct evidence of the association between household expenditure and cohesion. In the marketing literature, Johnson, Tariq, and Baker (2018) show that consumers may use consumption to *signal* pro-social behaviour, suggesting an association between expenditure and an individual's perception of the importance of cohesion. Korndörfer, Egloff, and Schmukle (2015) find that pro-social behaviour increases with social class, which, if social class and expenditure are connected, points to a link between expenditure and cohesion. This lack of evidence is somewhat surprising in that one would suspect shocks to expenditures – whether from trade, austerity policy or following a recession – to raise unease with government or raise political cooperation, or – if it includes changes in relative expenditures with respect to others – to reinforce group identity such that it is not conducive to cohesion. This is what studies on austerity measures hint at. Similarly, Bellemare (2015) shows how rising food prices led to social unrest.

On the reverse relation between cohesion and household expenditure, a larger literature points to an association between group membership (as a proxy for social capital) and household welfare (typically measured as household expenditures). Grootaert and Narayan (2004) measure social capital as memberships in local associations, which are institutions that represent the interests and priorities of local people in local decision making. They show that in Bolivia social capital raises household spending, and that gains from social capital are 2.5 pp higher than from human capital. The authors use an instrumental variable (IV) strategy to study reverse causation (i.e., richer households may have more leisure time which they can spend on community memberships) and show that social capital is an exogenous determinant of

household welfare. The link between cohesion (in particular, community membership, and interpersonal and institutional trust) and expenditure is confirmed by Narayan and Pritchett (1999) and Haddad and Maluccio (2003). Grootaert, Oh, and Swamy (2002) find a positive link between club membership and per capita household expenditures in Burkina Faso but cannot confirm the exogeneity of social capital. Fontes and Fan (2006) provide some evidence that ethnic identity and expenditure allocation are correlated, which suggests that affiliation with a particular group identity may affect consumption.

3.4 Development and cohesion

Main findings

There is some evidence on the association between development outcomes (mainly education) and cohesion and on the reversed relation between cohesion and development (mainly health, public services).

Research gaps

Table 4: Development and cohesion

	Development effects on cohesion	Cohesion effects on development
Trust	Positive (education)	?
Identity	?	?
Cooperation	Positive (education)	Positive (health, public services)

Note: Green indicates evidence on the dimension.

Source: Author

The relation between development outcomes and cohesion is relevant as earning and expenditure outcomes have been shown to have development effects (e.g., health), while there is evidence that development outcomes also have economic repercussions. A few studies document an association between development outcomes – such as health, education and poverty – and cohesion. Gradstein and Justman (2001) examine the relation between education and growth and highlight the role of education as a socialising tool; education reduces the "social distance" between individuals, which reduces transaction costs. Other studies also find that more educated individuals tend to join more associations, have greater interest in politics, participate in more political activities, are more likely to express trust in others (social trust) and in institutions (institutional trust), and are more cooperative (see the review by Green & Preston, 2001). It seems plausible, although we lack evidence, that deteriorations of health or falling into poverty results in exclusion from society and in turn may lead to lower civic cooperation and distrust of government or specific groups.

In terms of the reversed relation, between cohesion and development outcomes, low cohesion is found to lead to reduced health outcomes (e.g., isolation), to affect health related behaviours (e.g., adopting healthy norms) and to determine access to health services (Kawachi & Berkman, 2000). For instance, Kim and Kawachi (2017) study cohesion and healthcare uptake in the US and find that each standard-deviation increase in their measure of neighbourhood social cohesion (defined as the degree of connection among neighbours and willingness to contribute to the common good) was related to a 9 per cent increase in individuals obtaining an influenza vaccination and a 10 per cent increase in uptake of cholesterol tests. This points to another

causal mechanism: given that worker health is correlated with worker productivity (Dollard & Neser, 2013), increased social cohesion, which then affects worker health, may indirectly enhance worker productivity and thus earnings. Alesina, Baqir, and Easterly (1999) find that more racially heterogeneous communities (which one could assume are less cooperative, both between groups and for the common good) in the US spend less on public services (e.g., education and healthcare), which then determines development outcomes.

3.5 Firm productivity (and its underlying channels) and cohesion

Main findings

There is no evidence on the relation between productivity and social cohesion (except indirectly through the earnings and expenditure channel), but there is some indirect data on the link between trust and cooperation, and firm productivity.

Research gaps

Table 5: Productivity and cohesion

	Productivity effects on cohesion	Cohesion effects on productivity
Trust	?	Positive (interpersonal)
Identity	?	?
Cooperation	?	Positive (civic)

Note: Orange indicates some evidence on the dimension.

Source: Author

There is no evidence on the association between firm productivity and cohesion, and it would also be difficult conceptually to think of a mechanism by which productivity is conducive to cohesion (other than through indirectly enhancing labour earnings or reducing cost of living). In contrast, as discussed, a larger strand of literature offers evidence on the reversed association between trust and financial transactions (e.g., Guiso et al., 2005). Given that trust in economic transactions is in theory close to social trust (e.g., trustworthiness of an economic agent) and institutional trust (e.g., enforcement of contracts and property rights), and greater efficiency in transactions is favourable to productivity growth, an association between trust and productivity is indicated. In support of this, Knack and Keefer (1997) show that interpersonal trust and civic cooperation are correlated with stronger economic performance at the country level; trust and cooperation reduce transaction costs, raise investment and increase the quality of policies, which in turn may raise firm productivity. La Porta et al. (1997) find that trust is important for the efficient functioning of large organisations, such as governments and professional societies, which, through increased quality of policies and support for businesses, may also contribute to productivity growth among firms. While this evidence offers some insights as to the role of trust in affecting firm productivity, we lack similar evidence on the link between identity (group or national) and cooperation (civil or political), and firm productivity, while one would anticipate that national identity or civil cooperation, in some form, would be supportive of productivity growth.

As alluded to in Section 2, while shocks to firm productivity may modify cohesion, the latent channels through which globalisation shocks affect productivity (specifically factor reallocations

and between-firm selection) are more indicative of how cohesion is affected. The labour displacement into unemployment and informality following trade liberalisation (but similarly plausible if foreign firms outcompete domestic firms without generating new employment), likely leads to disgruntled voters, xenophobic outbursts and reduced cooperation through withdrawal from society. This is what the evidence of Autor et al. (2013) and others, as discussed, points towards. Pressures on cost of living – for example, if a trade or an FDI shock inflates prices or slashes product offerings – may also result in negative cohesion outcomes, although we lack evidence of this particular mechanism.

3.6 Globalisation shock and development outcomes

Main findings

There is substantial evidence of the link between globalisation (mainly on trade) and development outcomes (mainly on health).

Research gaps

A large body of trade literature reports negative health effects of globalisation. In what is likely the most extensive study, Autor, Dorn, and Hanson (2019) show that increased Chinese import competition elevates premature mortality among young males, reduces male marriage and fertility, and raises the share of mothers unwed, the share of children living below-poverty, and the share of single-headed households. A one-unit increase in the trade shock adds 74.3 male relative to female deaths per 100,000 adults per decade. A similar increase in trade shock reduces births by 2.0 per 1,000 women and a one-unit reduction in male-intensive employment following the shock results in the share of young adult women ever married to decline by 4.2 pp. Greenland, Lopresti, and McHenry (2019) also show that increased Chinese import exposure led to a relative reduction in population growth, with particularly large effects among men, under-35-year-olds and those with no college degree. Feler and Senses (2017) show that import competition reduces property and sales taxation (through reductions in economic activity), which decreases local government income and reduces public good provision, such as education. They show that a USD 1,000 increase in Chinese imports per worker results in a substantial decrease in per capita expenditures on public welfare (by 7.7 per cent), public transport (2.4 per cent), public housing (6.8 per cent) and public education (0.9 per cent). Given the earlier evidence on education and cohesion, their findings suggest that globalisation shocks negatively affect cohesion in part through reductions in education provision. Complementary to these findings, Adda and Fawaz (2020) show that Chinese import competition reduces physical and mental health, which in turn decreases healthcare utilisation and increases hospitalisation. They show that a USD 1,000 decrease in income following the shock is associated with a decrease of at most 0.5 units of their health factor (which, for comparison, they show is equivalent to 3-5 times a USD 1,000 loss of income in terms of the associated health deterioration). Pierce and Schott (2020) find that those US counties that are more exposed to an exogenous change in international trade policy exhibit higher rates of suicide and related causes of death, which leads to an uptake of disability insurance. They study the trade liberalisation that followed from the passing of the Permanent Normal Trade Relations (PNTR) bill in the US and show that an interquartile shift in exposure was related to an increase in overall deaths of despair of 2-3 per 100,000 (or 10-15 per cent of the average mortality rate). While we only have evidence that cohesion is affected through the education channel (see above), what can be inferred from this evidence is that a decrease in wellbeing and public good expenditure (but an increase in uptake of public goods) may negatively affect cohesion, such as raising dissatisfaction within society or with government. Given that the above health effects mainly run through the earnings channel – and FDI shocks may similarly negatively influence earnings when they displace domestic jobs – these health effects are also likely to occur with FDI entry.

3.7 Cohesion and policy preferences

Main findings

There is evidence of the link between identity, attitudes and cooperation, and policy preferences (which in turn affects voting behaviour); it is unlikely that there is a reversed link between preferences and cohesion (other than through voting behaviour, which may regulate the globalisation shock).

Research gaps

Table 6: Cohesion and preferences

	Cohesion effects on preferences	Preferences effects on cohesion
Trust	?	?
Identity	Positive (group, national)	?
Cooperation	Positive (civil)	?

Note: Green and orange indicate evidence and some evidence on the dimension, respectively.

Source: Author

Previously, we discussed evidence that interpersonal trust may affect trade or FDI flows. Related literature shows that identity determines individuals' attitudes and policy preferences towards trade (Akerlof & Kranton, 2000), which in turn may regulate the exogenous trade shock. This also suggests that if *perceptions* of globalisation impacts are important, the response that people have to shocks on the earnings or expenditure channel may depend on the initial attitudes that people have towards increasing trade or entry of foreign firms. Beaulieu (2002) studies attitudes towards trade and finds they align with economic interests as predicted by theory, while Sabet (2016) finds that symbolic sources of trade preference (e.g., nationalism) are important and economic interests are less relevant in setting preferences. In support of the last study, Di Tella and Rodrik (2020) show that in the US, Trump supporters were on average more protectionist than Clinton supporters, which suggests that (group) identity is important when deciding on policy preferences. Jardina (2019), in a book project, provides evidence that those who adopt a "white identity" are more likely to have protectionist and anti-immigration attitudes (compared with those less solidary with their identity group). Mayda and Rodrik (2005) likewise show that socio-demographics (additional to economic motivations and non-economic factors, for example, values, identity and attachments) explain heterogeneity in trade attitudes. Nannicini, Stella, Tabellini, and Troiano (2013) document that voters who share values and beliefs that are in support of cooperation (among people) are more likely to vote based on criteria of social welfare than personal interest. This links to the studies discussed previously by Ballard-Rosa et al. (2021), Algan et al. (2017) and Grossman and Helpman (2021), which identify a causal link between cohesion, policy preference and voting behaviour. Easterly, Ritzen, and Woolcock (2006) point to a supplementary channel that may affect policy; they find that social cohesion (measured as the level of income inequality and ethnic fractionalisation) affects the efficiency of institutions and the policies those institutions enact, suggesting that cohesion affects both people's preferences and – as also suggested by La Porta et al. (1997) – the quality of institutions and its policies.

In line with Di Tella and Rodrik (2020), who show that preferences depend on the perceived fairness of a trade shock, there is increasing evidence that preferences are based on local and own experiences, suggesting that identity with a particular group or with a nation influences

preferences for policy. Sapienza and Zingales (2013) find that people evaluate preferences on the basis of experiences of people familiar to them whose employment may have been affected by a trade shock (as opposed to evaluating average welfare effects, as economists would). Stantcheva (2022) shows that people tend to consider personal rather than societal impacts of trade when setting attitudes. She finds that those with positive or neutral experiences of trade shocks are more likely to say trade makes firms more competitive, increases innovation and raises GDP growth. Flaherty and Rogowski (2021) find that attitude and policy preference effects depend on the setting in which shocks occurs. They show that political parties that promote anti-globalisation policies receive increasing votes after a trade shock, but only when initial income inequality is high. In other words, the effect of a trade shock on cohesion (and in turn voting behaviour) depends on the groups with which people identify and how those groups are affected vis-à-vis other groups in society (as also pointed out by Alesina and La Ferrara (2002) and Chen (2020)). This points to another strand of literature, reviewed succinctly in Appendix A, which suggests globalisation may have aggravated existing grievances from inequality. A larger strand of literature shows how trade shocks affect policy preferences directly through the earnings and expenditure channel. Méndez-Chacón and Van Patten (2021b), for example, study a referendum on a free trade agreement in Costa Rica and find that a firm's exposure (measured as change in tariffs if the free trade agreement is accepted) changes the attitudes and voting behaviour of its workers in favour of the policy.

3.8 Time-invariant factors

Main findings

There is evidence of the effect of institutions on cooperation, while some studies (as discussed previously) suggest an association between cohesion and the quality of institutions.

Research gaps

Table 7: Time-invariant effects and cohesion

	Time-invariant effects on cohesion	Cohesion effects on time-invariant factors
Trust	Positive (interpersonal)	Positive (trust, on institutions)
Identity	Ambiguous (group)	?
Cooperation	Positive (from institutions)	?

Note: Green and orange indicate evidence and some evidence on the dimension, respectively.

Source: Author

In this paper's framework, time-invariant factors may affect the mechanisms through which a trade or FDI shock affects social cohesion. A larger strand of literature presents evidence that culture and institutions are important determinants of economic development (Alesina & Giuliano, 2015; Bisin & Verdier, 2017). Guiso, Sapienza, and Zingales (2008) study the specific link between institutions and social capital (measured as the number of non-profit associations, referenda turnout and presence of organ donation associations). Their results suggest a positive association between institutions and civil cooperation (i.e., presence of non-profit and organ donation associations) and political cooperation (higher referenda turnout). On institutions,

Lowes and Montero (2021) evaluate the government concessions in the Democratic Republic of the Congo during the colonial period, which were characterised by collection quotas and included violence to enforce quotas. They find that weakened institutions and violence increased pro-social behaviour. They show that when local institutions failed to function, the returns to investing in social capital increased and cooperation became more important. Their results show that, because of their legacy, former concession areas provide fewer public goods, although people have greater interpersonal trust, stronger group identity and higher propensity to share income (i.e., civic cooperation). Given that government concessions are often part of FDI, and may likewise conflict with local perspectives (e.g., land grabs), it is not unlikely that FDI entry similarly increases cooperation among locals. The above studies hint at a two-way correlation between institutions and cohesion, where local institutions are vital in shaping trust and cooperation but lacking institutions may also forge cohesion.

A range of additional studies also show an association between culture and labour outcomes. Brügger, Lalive, and Zweimüller (2009) find that culturally determined attitudes (in their study on willingness-to-work) affect unemployment duration. They find that those individuals that signal a readiness to work even if they do not need additional income have lower unemployment durations. Furthermore, there is some (although minimal) evidence on the link between culture and household expenditure; Fontes and Fan (2006) show that identity and expenditure allocation are interlinked, while Nowak and Kochkova (2011) argue that culture affects consumer behaviour. These studies suggest that institutions and culture, in addition to a globalisation shock, regulate worker earnings and expenditures. Earlier in this paper, evidence was discussed that showed that the quality of institutions is determined by social cohesion (captured by income inequality and ethnic fractionalisation) (Easterly et al., 2006) and interpersonal trust (La Porta et al., 1997).

4 Summary of empirical evidence and gaps

This section reviews the proposed causal framework (Figure 1) against the empirical evidence with the aim to summarise the evidence and identify research gaps. Figure 2 summarises the evidence on the causal mechanisms between globalisation and cohesion. Note that it implicitly assumes that a globalisation shock *negatively* affects earnings and expenditures (both directly and indirectly by means of factor reallocations and between-firm selection). Below we discuss what reverse effects we expect from the evidence when *positive* shocks occur, for example, If FDI raises wages or trade lowers the cost of living.

Several main observations can be made regarding the evidence. First, there is growing evidence – both on the direct causal relation and its intermediate causal channels – that FDI and trade shocks affect cohesion, although evidence on FDI effects is limited. Second, there is a two-way relation between globalisation and cohesion, for example, Trade and FDI shocks negatively affect interpersonal trust, but interpersonal trust also affects globalisation. This means that there are economic costs to social cohesion repercussions, that is, social disintegration influences investment flows, which has economic implications.

Third, some causal links seem more important than others. Most evidence we have is on the link between earnings and cohesion; a negative shock to wages negatively influences interpersonal and institutional trust and values, and positively influences political cooperation. On the reverse link, evidence suggests that interpersonal trust, identity and civic cooperation modify labour earnings. On the association between expenditures and cohesion there is comparatively less information; interpersonal and institutional trust, identity and civic cooperation may alter expenditures, yet it remains unclear how an adverse expenditure shock can change cohesion (even though, in theory, the price inflation or reductions in product variety one would anticipate to lower trust in government, strengthen nationalism or enhance political

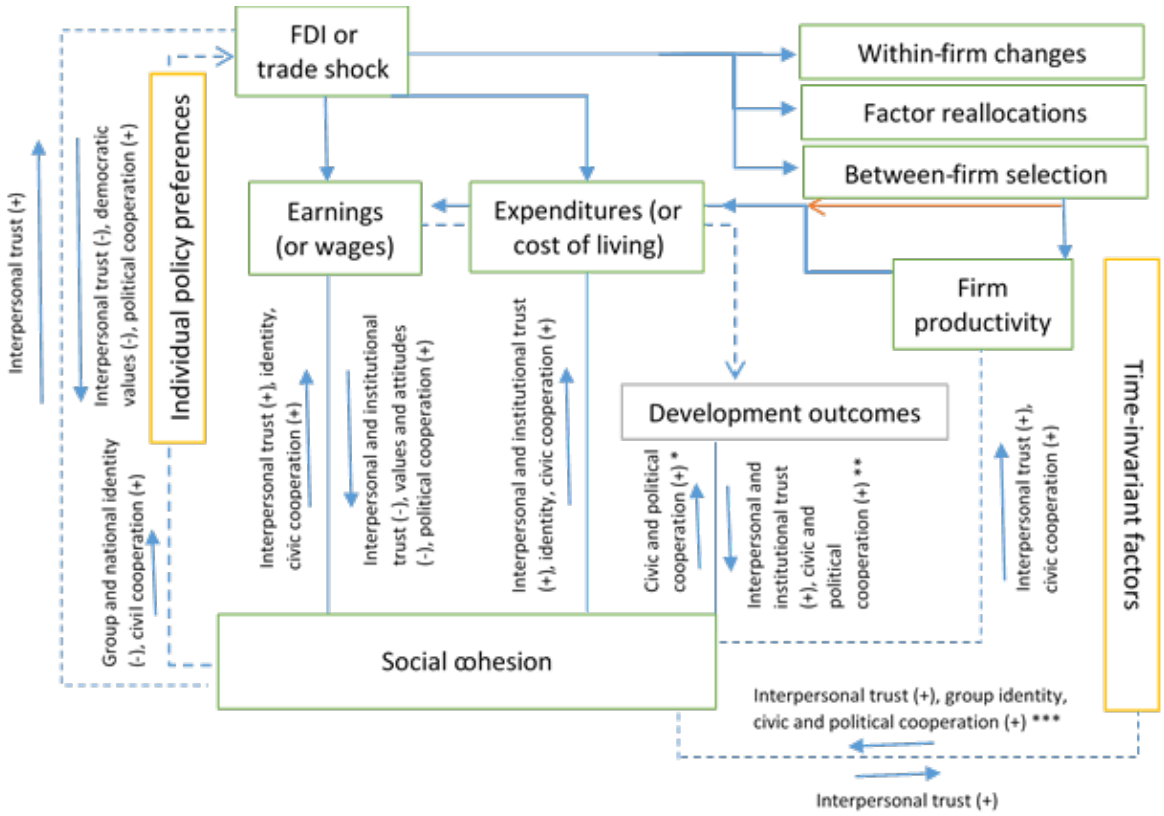
cooperation). Firm productivity – the classic outcome variable in economic theory – is found to be less relevant as a causal mechanism; interpersonal trust and civil cooperation affect firm productivity, but there is no suggestion of a reversed link between productivity and cohesion (aside from indirectly through the earnings channel). While changes in productivity after a globalisation shock may influence wages or prices at domestic firms, it seems more plausible that factor reallocations and between-firm selection – which may lead to changes in earnings and employment – have much larger social repercussions (as shown by the orange line in Figure 2).

Fourth, for each causal link, available evidence points to particular components through which the globalisation shock operates. Most evidence on the earnings channel is actually on employment rather than wages. This makes sense given that shocks in employment are often sharp, while shocks on expenditure are diffuse and, therefore, less observed (Stantcheva, 2022). Evidence hints at positive effects of civic and political cooperation on development outcomes, but only for *health*. Further, development outcomes positively affect interpersonal and institutional trust, and civic and political cooperation, but only through the *education* channel. For time-invariant factors, evidence is mainly on institutions; interpersonal trust boosts the quality of institutions, while the quality of institutions positively affects interpersonal trust, group identity, and civic and political cooperation.

Fifth, globalisation shocks influence social cohesion through both the intensive and extensive margins; a negative shock leads to negative changes in *absolute* earnings and expenditures, as well as *relative* changes in earnings and expenditures across the worker and household distribution. The available studies show that earnings and expenditure effects might be regressive (on the poor and low-skilled), suggesting that relative losses may be relevant in explaining changes in cohesion. In addition, studies find that the *perception* of whether the absolute and relative gains are fair given the origin of the shock is important in shaping preferences, and thus potentially affects cohesion.

Finally, the proposed framework hints at several equilibrium effects that may occur following a globalisation shock. For example, a trade shock may negatively influence expenditures on public goods (through reduced general economic activity) while simultaneously raising demand for public goods (through health effects from the shock). Likewise, foreign entry may *directly* affect worker earnings when MNEs offer a wage premium and *indirectly* affect the market wage when firm entry leads to between-firm selection and reallocations in the domestic market.

Figure 2: Evidence (gaps) on globalisation, cohesion and its mechanisms



Notes: *only on health and public service delivery outcomes, **only from education outcomes, ***only from and on institutions.

Source: Author

A main caveat is that evidence is thin; some causal links may seem irrelevant because there is limited evidence. In terms of *trust*, most studies evaluate interpersonal trust. It is not clear whether globalisation shocks broadly or by means of the expenditure channel affect institutional trust. For *cooperation*, studies find that development outcomes and time-invariant factors affect both civic and political cooperation, while we do not know how cooperation affects, or is affected, in other causal links. On the link earnings and cohesion, there is evidence that negative shocks from globalisation influence political cooperation, and civil cooperation affects earnings, but there is no evidence how expenditure shocks may alter either civic or political cooperation. The least evidence is available on *identity*; there are some insights that a globalisation shock can modify values and attitudes, and there is preliminary evidence of how group identity affects worker earnings, expenditures and policy preferences.

Another remark is that most evidence is on trade shocks. What does this evidence tell us about the link between FDI and cohesion? As described, negative effects on earnings, expenditures and firm productivity from trade shocks are theoretically similar to those of FDI shocks. Foreign entry may also negatively affect labour earnings and employment at domestic firms, reduce cost of living through price increases (e.g., when firms have market power and can set price markups) and affect product variety negatively (e.g., if foreign firms outcompete domestic firms, which in turn exit the market together with their product offerings). FDI may also lead to negative effects from between-firm selection and factor reallocations (e.g., if an MNE is more productive, it outcompetes domestic firms, and domestic firms' labour and capital are reallocated), which affects wage and expenditures in a similar fashion to trade. What is less clear from the evidence is how cohesion outcomes change with *positive* globalisation shocks or events. Most of the evidence examines cohesion and negative shocks, while positive shocks are very plausible;

trade may reduce consumer prices (through reductions in price markups among domestic firms) or raise product variety (by providing products that are new to the market). To a similar extent, FDI entry can reduce prices and increase product variety, while in addition, entry of foreign firms may create new employment and allow workers to obtain a wage premium. In other words, what cannot be concluded from the evidence is if elasticities of negative shocks are similar to elasticities of positive shocks. For example, whether with evidence that a reduction in earnings leads to a decline in interpersonal trust one can expect a similar *gain* in interpersonal trust following a *positive* shock.

As pointed out, what matters when studying FDI is the nature of these shocks. In the event of "cost-advantage-seeking" (vertical FDI), shocks mainly affect cohesion by means of the labour channel, while "market seeking" (horizontal FDI) is more likely to occur through the expenditure channel. Given that most studies fixate on trade effects on labour, the available documentation allows us to make some inferences on what social repercussions vertical FDI has and to a lesser extent that of horizontal FDI (although one expects *positive* labour effects from FDI). In addition, whether and what level of market power global firms have also matters. Although we do not have evidence, one expects that if foreign firms have market power in the product market (meaning firms are able to mark up prices), the negative effects (positive gains) that occur through the expenditure channel are expected to be greater (smaller). If foreign firms have market power in the labour market (i.e., firms can mark down wages of workers) one would expect that the negative effects (gains) from a globalisation shock through the labour earnings channel increase (decline). Finally, the nature of the sector informs the social repercussions of a trade or an FDI shock. A negative trade shock on the manufacturing sector – the event on which most evidence is available – likely shows the upper-bound of social cohesion repercussions, because other sectors are less tradable (and therefore less exposed) and absorb disproportionally less labour. That is, the negative effects on identity and on political cooperation are probably less pronounced in trade shocks to retail and agriculture. In the case of a positive shock (e.g., buyer-supplier linkage) one expects the manufacturing sector to gain disproportionally more – and, therefore, see larger gains in cohesion among its workers – than other sectors.

A final caveat is that the evidence is limited to higher-income economies – most data is on the US and the EU (see Appendix A). The estimates shown in the literature might be different for lower-income countries for several reasons. First, trade liberalisation or foreign firm entry may for low-income countries entail a more dramatic shock, because of differential economic structures and policies. Broda, Leibtag, and Weinstein (2009) show that Walmart's expansion on household welfare was pro-poor in the US, while Atkin et al. (2018) find that Walmart's entry in Mexico had regressive effects and that those effects were larger than those found for developed countries. In particular, three distortions that are common in low-income countries (inefficient institutions, market imperfections, firm distortions) likely regulate globalisation effects. From the evidence on distortions (as discussed in Section 2), one expects it to reduce *absolute* gains from FDI and trade and enlarge *distributional* effects across household and worker distributions. In the labour channel, frictions are biased against older workers and those less geographically mobile; in the expenditure channel, intra-national trade costs reduce gains for most remote consumers.

Furthermore, initial perceptions on whether trade or FDI is beneficial to firms and households likely regulates the effect of globalisation shocks on cohesion. As shown by Pavcnik (2017), public views on whether trade is good for a country differ between developed and developing countries; people in developing countries often see trade as more beneficial for employment. The effect of a negative globalisation shock on social cohesion may then be absorbed if workers and households are inclined to believe that FDI or trade usually offers gains rather than harms. These two facts suggest that estimates on *negative* globalisation shocks may both be at the lower and upper bound for developing countries; if indeed repercussions of a globalisation shock on earnings, expenditure or productivity are larger in a low-income country, one expects greater

cohesion consequences; at the same time, the perception that globalisation offers gains may, at least temporarily, dilute some of the social repercussions from globalisation.

A final point to state is that – at the time of publication – no study examines the effect of globalisation shocks on social cohesion simultaneously through the three channels of our framework: earnings, expenditure and firm productivity. Atkin et al. (2018) suggest in their study of Walmart's entry in Mexico that shocks may propagate by means of different channels simultaneously; they show how foreign entry negatively affected labour earnings but had positive effects on cost of living. Given that FDI and trade affect multiple parameters (such as the product price, product variety, worker earnings, firm employment and productivity) and the causal links in our framework may not be isolated but amplify each other (e.g., declines in earnings may add to reductions in expenditures), it is relevant for future studies to examine these different ways in which cohesion may be affected.

5 Conclusion

This paper examined the effects of economic globalisation on social cohesion and reviewed its underlying mechanisms. Based on economic theory and evidence, this paper proposed a framework that links economic outcomes to cohesion outcomes, identifying three mechanisms through which cohesion is affected: worker earnings, household expenditure and firm productivity. The general finding from the evidence on globalisation shocks is that globalisation affects different dimensions of social cohesion, modifying it by means of absolute and relative changes in employment and expenditure (and people's perception thereof). Distortions, which tend to be common in low-income economies (e.g., inefficient institutions, imperfect markets and firm distortions), most likely reduce *absolute* gains from globalisation and enlarge *distributional* effects among households and workers. A main caveat is that evidence is thin; we lack information on (i) effects of FDI, (ii) some dimensions of cohesion, and (iii) how *positive* globalisation events affect cohesion. In addition, most of the evidence is on high-income economies and few studies examine how globalisation affects cohesion simultaneously through the different causal channels.

From the available evidence, several policy conclusions emanate:

1) Past policy prescriptions to address *absolute* losses in labour and expenditure remain valid. Introducing social benefits to temporarily mitigate income or cost-of-living losses (i.e., bridge firm, worker and household adjustments towards new sectors, firms and products), investment policies that stipulate employment and wage gains, or programmes that cap price hikes, are still relevant.

2) Address *relative* losses from globalisation shocks.
To address distributional effects, institutions and policies should tailor to those most affected, that is, according to the evidence base, workers and households at the lower end of the income and skills distribution.

3) Acknowledge the *economic* costs of social repercussions.
The policies that governments use to enhance or liberalise trade and investment should also include in their calculation potential social repercussions (and the economic costs thereof).

4) Take on underlying *cyclical* or *secular trends* that may amplify globalisation shocks.
If globalisation is exacerbating existing grievances (e.g., inequality), it requires broader and more long-term policies to address the structural problems that underlie grievances (e.g., boost education policy to reduce inequalities within society).

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Appendices

A1 Other cyclical and secular trends

The main section of the paper examined the empirical evidence of economic globalisation shocks on social cohesion. Of course, a range of other secular or cyclical trends may affect cohesion – for example, technological advances (e.g., automation, online platforms), rising inequality, reconfiguration of labour markets – and globalisation may not be the most important factor driving changes in social cohesion. Also, this paper studies economic globalisation, while immigration and dispersion of culture and norms may have also contributed to changes in cohesion. The aim of this section is not to offer a complete account of these trends and their literature, but to evaluate major trends and infer from some relevant studies the importance of such trends in accounting for variation in cohesion. The driving questions are: did shocks other than globalisation affect labour, expenditure or firm productivity? If so, at what magnitude relative to globalisation shocks?

In terms of the labour channel, automation has been identified as an important driver of labour decline. Acemoglu and Restrepo (2019) show that for the US automation led to productivity increases but also had on average negative effects on the share of labour-intensive tasks in production. While automation introduced new labour-intensive tasks into production, the labour displacement effect that occurred simultaneously has been far greater. Autor and Salomons (2018) similarly show for the US that automation displaced employment (although losses are reversed by gains in consumer industries and increases in aggregate demand) and reduced the labour share (which, in contrast, are not recouped), which points to an overall negative effect through the labour channel. There is also evidence that automation led to increasing wage inequality, suggesting that, as with globalisation, there are distributional effects of automation. Dauth, Findeisen, Suedekum, and Woessner (2018) find that the adoption of robots in Germany did not lead to aggregate employment reductions, but resulted in job losses in manufacturing, and raised wages for highly skilled workers (while it decreased wages for low- and medium-skilled workers). Giuntella and Wang (2019) also find a large negative impact of robot exposure on employment and wages of Chinese workers, with effects concentrated among low-skilled, male, and older workers.

In one particular study of interest, Anelli, Colantone, and Stanig (2019) examine the effect of exposure to automation (measured as the pace of robot adoption) on electoral outcomes in the EU. They find that automation exposure raises support for nationalist and radical-right parties, showing (similar to the evidence on trade shocks) that automation affects policy preferences. Furthermore, they show that this effect operates through declines in household income, the probability of having a permanent contract and of being unemployed, and reduced government satisfaction, pointing out that automation (as with trade shocks) affects earnings, expenditures and institutional trust. The authors also include Chinese import exposure as an independent variable to capture a trade shock and find that *both* import and automation exposure are significantly related to voting behaviour. This suggest that changes in cohesion are driven simultaneously by globalisation and automation. Dauth et al. (2018) also study automation and globalisation and find a significant effect of Chinese *export* exposure (i.e., an increase in exports vis-à-vis China) on these dimensions; while automation had distributional effects on employment and labour earnings, export opportunities offered gains through the labour channel. This submits that while automation may have negatively influenced cohesion, positive trade shocks may have reversed any social disintegrations. Notably, both papers control for investments in ICT, which they show do not affect results, suggesting that repercussions of automation are distinctly different from other technological advances.

Another secular trend that may have affected cohesion is policy changes, and austerity policies in particular. A large body of literature documents negative labour and income effects from

implementing World Bank and International Monetary Fund (IMF) programmes (Lang, 2021; Reinsberg, Stubbs, Kentikelenis, & King, 2019). Ponticelli and Voth (2020) offer evidence that austerity policies have been associated with public unrest (e.g., riots); they find that cuts in expenditure enhance protests (which could be seen as a form of political cooperation), while tax increases have small and insignificant effects. In a similar study, Fetzer (2019) examines budget cuts implemented by the UK in 2010, in which welfare spending per person declined on average by 23.4 per cent between 2010-2015. He finds that budget cuts resulted in increased support for the right-wing party UKIP and reduced institutional trust (i.e., the share of people that say "their vote does not make a difference" or that they "do not have a say in government policy"). He also finds that polarisation in the labour market prior to the policy change is relevant in explaining the effect, which suggests that the reductions in welfare support activated existing grievances.

Finally, migration and its accompanying norms and values may have affected cohesion. Using cross-country evidence, Mayda (2006) finds that immigration affects people's attitudes through the labour channel; individuals in occupations that experience a bigger increase in relative supply due to immigration (a higher ratio of immigrants to domestic workers), are less likely supportive of immigration. On the topic of policy preferences, Mayda, Peri, and Steingress (2022) show that in the US the inflow of high-skilled (low-skilled) immigrants reduced (raised) policy preferences for the Republican party. Albarosa and Elsner (2022) study the effects of the 2015 refugee inflow in Germany on cohesion. They find a negative effect on attitudes towards immigrants, but no effect on trust or "perceived fairness", although anti-immigrant violence temporarily rose with increases in refugee inflows. They, too, find that migration aggravated existing discontent (as with austerity measures, above); the effect of refugee inflow on violence is stronger in regions characterised by high unemployment and policy preferences for right-wing politicians. In line with the evidence by Mayda et al. (2022), Groeger, León-Ciliotta, and Stillman (2022) show how the 2017 inflow of Venezuelan immigrants (who are seen as culturally similar to and more highly skilled than Peruvians) into Peru led to better labour outcomes for locals, decreased crime rates, improved the quality of local services, enhanced trust in neighbours and reinforced perceived community quality.

Altogether, this small but representative collection of studies suggests that changes in cohesion may in part be driven by secular trends (e.g., automation, immigration), while globalisation shocks may have fuelled existing grievances (e.g., inequality). A general observation is that while there is increasing evidence of how cyclical and secular trends affect voting behaviour and political outcomes (e.g., Rodrik, 2020), we know much less about the repercussions on cohesion (with the exception of institutional trust as shown above).

A2 Overview of study findings and characteristics

Table A1: Globalisation and cohesion

Reference	Outcome variable(s)	Independent variable(s)	Main finding	Setting	Estimation
Iacoella et al. (2021)	Civil protests	Entry of Chinese investment project	Entry of Chinese investment projects increases political participation	2000-2014, cross-cells, Africa	Instrumental variables
Sonno (2020)	Number of violent events	Number of MNE affiliates	MNE affiliate expansion is linked to violence, with heterogeneous effects across sectors	2007-2015, cross-cells, Africa	Instrumental variables
Christensen (2019)	Occurrence of protests, riots and other conflicts	Presence of mining project	New mining projects raise the probability of protests, where effects are lower when transparency on how gains are distributed is increased	1960-2014, cross-cells, Africa	Difference-in-differences
Berman et al. (2017)	Conflict events	Presence of mines, mineral world prices	Volatility in mineral prices explain large part of the effect of mining projects on local conflicts	1997-2010, cross-cell, Africa	Ordinary least squares
Ballard-Rosa et al. (2021)	Authoritarian values (aggression, submission, conventionalism)	Import competition exposure (as in Autor et al., 2013)	Those regions more exposed to import competition from China increased authoritarian values	US regions	Shift-share, instrumental variables
Colantone and Stanig (2018a)	Support for (i) democracy and liberal values, (ii) authoritarian values and (iii) immigration attitudes	Import competition exposure	Those residing in regions that received stronger globalisation shocks are less supportive of democracy and liberal values, and are concerned by the cultural threat posed by immigration	1988-2008, cross-regions (total 143) and cross-country, Western Europe (15)	Shift-share, instrumental variables
Autor, Dorn, Hanson, et al. (2020)	Political expressions, political orientation, finance of electoral campaigns	Import competition exposure	Increased Chinese import competition affected voter turnout and the ideological position of congressional legislators	2002-2016, county-by-congressional-district cells, US	Shift-share, instrumental variables
Fischer (2012)	Political trust (in national parliament)	Globalisation index (Dreher, Gaston, & Martens, 2008).	Increased globalisation lowers trust, particularly for those who have no interest in politics or have low educational levels	1981-2007, cross-country, including developing countries (80)	Two-stage least squares

Reference	Outcome variable(s)	Independent variable(s)	Main finding	Setting	Estimation
Fang et al. (2021)	Society polarisation index, political polarisation index	Globalisation index	Globalisation is negatively related to societal and political polarisation	2000-2017, cross-country, including developing countries (140)	Ordinary least squares
Sauré and Zoabi (2014)	Gender wage gap, female labour force participation	Trade volume	If trade expands sectors intensive in female labour, the gender wage gap widens and female labour force participation falls	1991-2007, US	Gravity equation, instrumental variables
Autor et al. (2013)	Share of working population participating in labour force	Import competition exposure	Rising exposure lowers labour force participation	1991-2007, US	Instrumental variables
Gaddis and Pieters (2017)	Labour force participation, employment rates	Regional exposure to tariff reductions	Trade liberalisation reduced male and female labour force participation rates	1991-2000, Brazil	Difference-in-differences
Menezes-Filho and Muendler (2011)	Worker separation and accessions	Changes in tariffs	Trade liberalisation increases transitions to unemployment and out of the labour force	1986-2001, Brazil	Instrumental variables

Source: Author

Table A2: Cohesion and globalisation

Reference	Outcome variable(s)	Independent variable(s)	Main finding	Setting	Estimation
Massa et al. (2015)	Fund-level activeness (active shares)	Interpersonal trust	Trust between an investor country and the investee country enhances cross-border investments	2002-2009, cross-country, including developing countries	Ordinary least squares
Zingales et al. (2009)	Exports, (portfolio and direct) investment	Trust in citizens of other countries	Trust enhances trade and foreign direct investment	1970-1996, EU	Instrumental variables
Algan and Cahuc (2010)	Income per capita	(Inherited) interpersonal trust	Increases in interpersonal trust positively affects economic development	1935-2000, cross-country (includes some developing countries)	Ordinary least squares
Knack and Keefer (1997)	Income per capita, investment/GDP	Interpersonal trust, norms of civic cooperation	Trust and civic cooperation are associated with stronger economic growth and investment	1980-1992, cross-country (excluding developing countries)	Ordinary least squares
La Porta et al. (1997)	Government effectiveness, participation in civic organisations, size of the largest firms, income per capita	Interpersonal trust	Trust positively affects the performance of large organisations	1970-1993, cross-country (excluding developing countries)	Ordinary least squares
Akerlof and Kranton (2000)	Gender discrimination in the labour market, household division of labour, social exclusion, poverty	Sense of self	Identity affects (discrimination in the) labour market, household division of labour, social exclusion and poverty	Theoretical model	Descriptive evidence

Source: Author

Table A3: Earnings and cohesion

Reference	Outcome variable(s)	Independent variable(s)	Main finding	Setting	Estimation
Algan et al. (2017)	Trust and political attitudes, and beliefs about immigration	Unemployment rate (at national level)	A correlation between the Great Recession and declining trust towards national and European political institutions	2000-2016, cross-region (217) and cross-country (25), EU	Two-stage least squares (instrumental variables)
Ananyev and Guriev (2019)	Generalised social trust ("most people can be trusted"	Income (regional GDP)	The Great Recession resulted in reduced trust, and these reductions persisted even when income recovered	2008-2009 and 2014, regions (66), Russia	Shift-share, instrumental variables
Alesina and La Ferrara (2002)	Generalised social trust	(i) Traumatic experiences (e.g., financial problems), (ii) discrimination, (iii) economically disadvantaged, (iv) community characteristics	Low absolute income, financial misfortune, and relative higher income disparity are associated with low trust	1974-94, US	Ordinary least squares
Chen (2020)	Populist attitudes	Unemployment following Great Recession	The rise in unemployment following the Great Recession increased perceived economic unfairness (attitudes)	2006-2010, US	Difference-in-differences
Grossman and Helpman (2021)	Identification to social groups (or nation as a whole)	Income equality	Increased income inequality may result in changes in social identification patterns (or identity)	Theoretical	

Source: Author

Table A4: Cohesion and earnings

Reference	Outcome variable(s)	Independent variable(s)	Main finding	Setting	Estimation
Algan and Cahuc (2009)	Insurance in labour markets (unemployment benefits versus employment protection)	Civic virtues (in robustness: trust)	Countries with stronger civic virtues are more likely to provide insurance through unemployment benefits	1980-2003, OECD	Probit
Aghion et al. (2011)	Stringency of minimum wage regulation, unionisation	Quality of the relation between workers and managers (cooperation)	Distrust creates public demand for regulation, while regulation in turn discourages social capital accumulation	1980-2003, OECD	Descriptive statistics, theoretical model
Dincer and Uslaner (2010)	Employment growth rate, per capita income	Interpersonal trust	Trust increases the growth rate of employment (by 2.5 percentage points) and per capita income	1990-2000, US	Ordinary least squares
Dilmaghani (2017)	Labour earnings	Composite Religiosity Index (salience of belief, private-worship, religious attendance)	Males belonging to the least religious group in highly religious region earn significantly below otherwise identical individuals	2011, Canada	Descriptive
Cornwell et al. (2017)	Wage premium	Race classification	Subjective racial identity affects worker earnings	2010, Brazil	Ordinary least squares
Nekby and Rodin (2007)	Employment status, labour income	Minority identity, majority identity, acculturation identity	Identification with a majority culture affects labour market outcomes	1995-2002, Sweden	Ordinary least squares
Casey and Dustmann (2010)	Labour wages, participation, employment, unemployment	Identity (Germany, “home”)	Ethnic group identity among migrants is only weakly related to labour outcomes, but more strongly between migrants’ children’s identity and outcomes	1984-2006, Germany	Ordinary least squares
Pendakur and Pendakur (2005)	Use of informal networks to find jobs, quality of job (“occupational prestige”)	Ethnic identity	A positive relation between ethnic minority identity and job quality (occupational prestige)	2000-2002, Canada	
Aguilera and Massey (2003)	Formal employment, hourly wage	Social capital proxies (near family tie, far family tie, friendship tie, participation with institutions)	Immigrants with friends and relatives with migratory experience increases job search success and wages	1965-1997, Mexico	Ordinary least squares

Reference	Outcome variable(s)	Independent variable(s)	Main finding	Setting	Estimation
Aguilera (2002)	Employment, hours worked	Network structure, network quality, network diversity (race, group involvement, religion)	Friendship networks differ by (race and ethnicity) groups and are positively related to increased labour force participation	2000, US.	Logit
Barr and Oduro (2002)	Earnings	Ethnicity of workers' employers	In a setting of high fractionalisation, employers tend to favour their ethnic groups in terms of pay and job allocations	Dates unclear from paper, Ghana	Ordinary least squares
David et al. (2010)	Inter-regional mobility, unemployment	Social capital (club membership, neighbour interactions, friend interactions)	High social capital is related to low between-region mobility, with club membership reducing probability of unemployment	Dates unclear from paper, EU	Logit, instrumental variables

Source: Author

Table A5: Expenditure and cohesion

Reference	Outcome variable(s)	Independent variable(s)	Main finding	Setting	Estimation
Johnson et al. (2018)	Conspicuous consumption of pro-social products	Pro-social self-concept, need-for-status	Consumers use consumption to signal pro-social behaviour	Own survey, US	Descriptive
Korndörfer et al. (2015)	Donating, volunteering, helping, trust	Social class	Pro-social behaviour increases with social class	Various, Germany-US	Descriptive
Grootaert and Narayan (2004)	Per capita household expenditure	Social capital (e.g., community memberships, attendance, decision-making participation)	Social capital increases household spending	Own interviews and survey (no date), Bolivia	Ordinary least squares
Narayan and Pritchett (1999)	Household income	Social capital (local association memberships)	A one standard deviation increase in social capital (community membership) and trust (through social capital) increases household income by around 20-30 per cent.	1995, Tanzania	Ordinary least squares, instrumental variables
Haddad and Maluccio (2003)	Per capita household income	Social capital (group membership, interpersonal and institutional trust)	Group membership increases household income and trust (which enhances group membership)	1993-1998, South Africa	Ordinary least squares, instrumental variables
Grootaert et al. (2002)	Per capita household income	Association membership	A positive link between association membership and household expenditures	Burkina Faso	Ordinary least squares
Fontes and Fan (2006)	Changes in budget shares for apparel, housing, and home furnishings	Ethnic association	An association between ethnic identity and consumption allocation	1996-2001, US	Descriptive

Source: Author

Table A6: Development and cohesion

Reference	Outcome variable(s)	Independent variable(s)	Main finding	Setting	Estimation
Gradstein and Justman (2001)	Economic growth	Education (social cohesion)	A positive relation between education and growth, whereby transaction costs are reduced through education as it reduces “social distance” between individuals	Theoretical	
Kim and Kawachi (2017)	Medical tests undertaken (flu shot, cholesterol test, x-ray, Pap smear, prostate exam)	Neighbourhood social cohesion (embeddedness, support, trust, friendliness)	Social cohesion positively affects number of individuals obtaining an influenza vaccination and taking cholesterol tests	2006-2008, US	Descriptive
Alesina et al. (1999)	Spending on local public goods	Ethnic fragmentation index (probability of two randomly drawn people are from different ethnic group)	More racially heterogeneous communities spend less on public services (e.g., education and healthcare)	1990, US	Ordinary least squares

Source: Author

Table A7: Globalisation and development outcomes

Reference	Outcome variable(s)	Independent variable(s)	Main finding	Setting	Estimation
Autor et al. (2019)	Mortality, probability of marriage, fertility, share of mothers unwed, share of children in poverty, share of single-headed households	Chinese import competition	Import competition elevates premature mortality, reduces male marriage and fertility, and increases the share of mothers who are unwed, the share of children living in below-poverty, and the share of single-headed households	1990-2014, US	Instrumental variables
Greenland et al. (2019)	Migration, population growth	Chinese import competition	Increased Chinese import exposure led to a relative reduction in population growth, particularly among men, under 35 and non-college graduates	1990-2013, US	Instrumental variables
Feler and Senses (2017)	Property and sales taxes, local government income, public good provision	Chinese import competition	Import competition reduces property and sales taxation (through reductions in economic activity), which decreases local government income and reduces public good provision, such as education	1990-2007, US	Instrumental variables
Adda and Fawaz (2020)	Physical and mental health, healthcare utilisation, hospitalisation	Chinese import competition	Import competition reduces physical and mental health, particularly increasing cardio-vascular diseases (strokes), endocrine diseases (diabetes), respiratory diseases (asthma) and diet (obesity). This in turn decreases healthcare utilisation and increases hospitalisation	1990-2011, US	Instrumental variables
Pierce and Schott (2020)	Deaths of despair	Chinese import competition (following change in Permanent Normal Trade Relations policy)	Import competition increases rates of suicide and related causes of death, primarily among working-age whites, which in turn leads to an uptake of disability insurance	1990-2013, US	Difference-in-differences

Source: Author

Table A8: Cohesion and policy preferences

Reference	Outcome variable(s)	Independent variable(s)	Main finding	Setting	Estimation
Beaulieu (2002)	Trade policy preferences	Interests from industry of employment	Attitudes towards trade align with economic interests	1987-1989, Canada	Logit
Sabet (2016)	Attitude towards international trade	Interests from industry of employment, attitudes towards foreign cultural influences	Symbolic sources of trade preference (e.g., nationalism, ethnocentrism) are more important than material or economic interest in setting preferences	2010-2011, US	Logit
Di Tella and Rodrik (2020)	Attitudes towards government intervention (protectionism)	Technology, demand, bad management, and trade shocks	Trade shocks elicit much larger changes in attitudes than other shocks, and Trump supporters are on average more protectionist than Clinton supporters	2018, US	Probit
Mayda and Rodrik (2005)	Trade attitudes	Socio-demographics, industry of employment, non-economic factors	Socio-demographics, economics interests, and non-economic factors (e.g., values, identity and attachments) explain trade attitudes	1995, cross-country (one developing country)	Ordinary least squares
Nannicini et al. (2013)	Political misbehaviour by political incumbents	Social capital (blood donations per capita)	Voters who share values and beliefs that foster cooperation are more likely to vote based on criteria of social welfare rather than narrow personal interest	1948-2001, Italy	Ordinary least squares and probit
Easterly et al. (2006)	Quality of institutions (e.g., rule of law), per capita growth	Level of income inequality, ethnic fractionalisation	Cohesion affects the efficiency of institutions and the policies those institutions enact	Unclear years, cross-country	Descriptive
Sapienza and Zingales (2013)	Perspective on policies (e.g., macroeconomic, labour, education)	Economic experts, average Americans	People evaluate preferences on the basis of experiences of people familiar to them whose employment may have been affected by a trade shock	2011-2012, US	Descriptive

Reference	Outcome variable(s)	Independent variable(s)	Main finding	Setting	Estimation
Stantcheva (2022)	Attitudes towards trade	Trade exposure (e.g., sector, occupation, skill, local labour market)	Those with positive or neutral experiences of trade shocks are more likely to say trade made firms more competitive, increased innovation and enhanced GDP growth	2019-2020, US	Descriptive
Flaherty and Rogowski (2021) (replicating Colantone and Stanig (2018b))	Populist vote shares	Chinese imports, top 1 per cent shares of post-tax income (at country level)	Political parties that promote anti-globalisation policies receive increasing votes after a trade shock, but only when initial income inequality is high	1988-2007, EU	Two-stage least squares
Méndez-Chacón and Van Patten (2021b)	Attitudes, voting behaviour	Firm exposure (change in tariffs if the free trade agreement is accepted, combined with firm input-output structure) and worker exposure	A firm's exposure changes the attitudes and voting behaviour of its workers in favour of the trade policy	2005-2017, Costa Rica	Ordinary least squares, instrumental variables

Source: Author

Table A9: Time-invariant factors and cohesion

Reference	Outcome variable(s)	Independent variable(s)	Main finding	Setting	Estimation
Guiso et al. (2008)	Social capital (non-profit associations, referenda turnout, presence of organ donation association)	Institutions (measured as whether towns experienced a period of independence as a free city)	Institutions positively affect social cohesion	2000, Italy	Instrumental variables, difference-in-differences
Lowes and Montero (2021)	Trust index (e.g., trust others within village, other tribe, nationality), closeness index (e.g., how close do you feel to people from village, other tribe), sharing index (e.g., share money from work)	Within former concession area or not	Weakened institutions and violence enhanced pro-social behaviour	2007-2015, DRC	Regression discontinuity

Source: Author