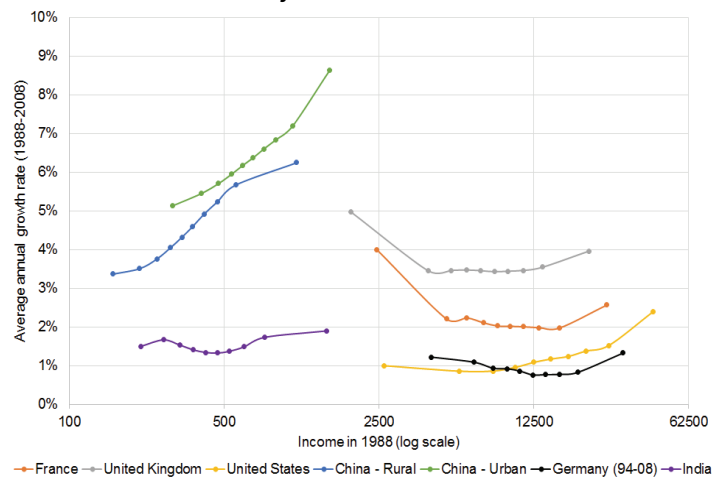


Globalisation, growth and inequality: implications for economic policy

- Trade globalisation has accelerated since the early 1980s, generating substantial economic gains globally. However, these gains have not been distributed evenly either across or within countries. Some emerging countries have notably benefited from globalisation and have narrowed their development gap with developed countries, reducing inequality globally.
- In the developed countries, high-income groups seem to have benefited more than the middle-to-lower-income classes from trade openness, and this has contributed to the increase in within-country inequality. Trade openness can even create losers - at least in the short to medium run - by destroying some categories of jobs, while gradually adding other, more productive jobs in other sectors.
- Nevertheless, the main driver of the increase in inequality in the developed countries appears to be technological progress. Automation has also powerfully stimulated world growth during the period while destroying many low- or middle-skill jobs.
- Without giving up gains from trade and technological progress, our economies must learn how to better cushion trade-related and technological changes. This analysis leads to formulating recommendations for economic policy, particularly at the national level, aimed at improving workforce training and job mobility.
- A better regulated globalisation and fairer international competition would also contribute to this goal. At the level of the European Union (EU), further economic integration should go hand in hand with a greater convergence of social standards, notably through establishing social key principles and rights. In its relations with the rest of the world, the EU must strengthen multilateral cooperation and seek to obtain greater reciprocity from trade partners that are less open than the Union. Such cooperation should be increased most notably as regards taxation so as to avoid unfair competition while preserving the right of every State to choose the level of redistribution compatible with its social preferences.

Annual average growth in real income per capita, by income decile



Source: Lakner-Milanovic - World Panel Income Distribution database. Incomes are deflated by national inflation and expressed in 2005 purchasing power parity (PPP) terms.

Note to the reader: In France, persons in the first income decile had an average income of \$2,437 (in 2005 PPP terms) in 1988, and their income rose by an average of 4% a year between 1988 and 2008.

1. International trade has supported economic activity and average living standards globally

1.1 Trade integration has increased sharply since the early 1980s

Trade has grown substantially faster than world production since 1980, despite a slowdown in recent years (François *et al.*, 2016¹). This acceleration of globalisation has been fostered by trade facilitation policies (in particular tariff reductions), the gradual integration of China and other emerging countries into the global economy, and the diffusion of information and communication technologies (ICTs), which have lowered transport costs and allowed a more efficient division of production processes. Reciprocally, trade openness has contributed to a greater diffusion of technological progress by facilitating knowledge-sharing.

1.2 In theory, international trade generates long-term gains in growth, productivity and welfare

From Ricardo's theory of competitive advantage all the way to the latest trade theories incorporating firm heterogeneity (Melitz, 2003² and Bernard *et al.*, 2003³), there is a consensus among economists that, over the long run, trade liberalisation procures net aggregate gains in welfare and economic activity across all countries. International trade theories differ in regard to the trade categories that they explain (in particular trade in different products or in homogeneous products) and with respect to the underlying mechanisms. However, all agree that trade increases aggregate welfare by improving the allocation of the factors of production. These theories argue that factor reallocation

makes it possible (1) to exploit each country's comparative advantages in terms of productivity (Ricardo) or in terms of the relative abundance of factors of production (Heckscher-Ohlin), or (2) to make the most of returns to scale (new trade theories promoted by Krugman and others), or (3) to raise the average productivity of a country's firms, thanks to greater competition and a better diffusion of innovation ("new-new" trade theories, Melitz's theory).

The long-term horizon over which these gains fully materialise may be fairly distant, since gains require a sectoral reallocation of labour which may be hindered by problems related to skills or geographic mobility. Under an extreme scenario, a country may need to wait for a complete renewal of its labour force (approximately forty years) before realising all the gains.

As a rule, according to these theories, every country involved in trade benefits from openness⁴. The magnitude of the gains depends on the characteristics of the trading economies, and they may be unevenly distributed across countries. This will be the case, in particular, if a country can take advantage of a monopoly or oligopoly in a market - a situation that can occur, for example, in the event of increasing returns to scale or if national competition rules or international trade rules are inadequate. For instance, a firm receiving massive public subsidies could secure dominance in a global market and then exploit it, particularly if entry costs are high (such as the need for substantial fixed investments) that make it hard for competitors to challenge the firm.

(1) François, L., Lecumberry, J. and Shimi, L. (2016), "Why is world trade so weak?", *Trésor-Economics*, no. 166.

(2) Melitz, M. J. (2003), "The Impact of Trade on Intra-Industry Reallocations and Aggregate Industry Productivity," *Econometrica*, vol. 71, no. 6, pp. 1695-725.

(3) Bernard, A.B., Eaton, J., Jensen, J. B. and Kortum, S. (2003) "Plants and Productivity in International Trade", *American Economic Review*, vol. 93, no. 4, pp. 1268-90.

(4) However, for a large country—i.e., a country large enough to influence world price levels—theory suggests that the (non-cooperative) optimum consists in preserving relatively weak barriers rather than moving to full openness.

1.3 The size of gains from trade is hard to assess

The size of aggregate gains from trade is hard to estimate empirically owing to the many methodological difficulties, including the existence of reverse causality (i.e., the fact that economic growth contributes, in return, to trade

intensification). Several empirical studies on macroeconomic data have shown a significant, long-term positive direct effect of greater trade openness on GDP per capita (Table 1) – with, however, a high degree of uncertainty over the size of the effect⁵.

Table 1 : Long-term elasticity of GDP per capita to trade openness

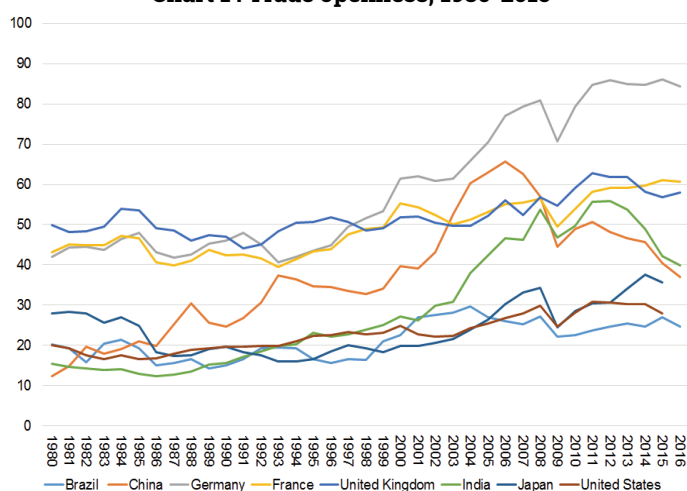
	Low estimation	Single estimation	High estimation
Egert and Gal (2017) ^a		0.29	
Ahn <i>et al.</i> (2016) ^{b*}		2	
Alcala and Ciccone (2004) ^{c*}		1.23	
Feyrer (2009a) ^d	0.15		0.25
Feyrer (2009b) ^e	0.5		0.75
Frankel and Rose (2002) ^f	0.17		0.33
Frankel and Romer (1999) ^g	0.5		2

- a. Egert, B. and Gal, P. (2017), "The quantification of structural reforms in OECD countries: A new framework", *OECD Journal: Economic Studies*, Vol. 2016, no. 1. Ten-year elasticity.
- b. Ahn, J., Dabla-Norris, A., Duval R., Hu, B. and Njie, L. (2016), "Reassessing the productivity gains from trade liberalization", *IMF Working Paper* Vol. 16, no. 77.
- c. Alcalá, F. and Ciccone, A. (2004), "Trade and productivity". *The Quarterly Journal of Economics*, Vol. 119, no. 2, pp. 613-46.
- d. Feyrer, J. (2009), "Distance, Trade, and Income - The 1967 to 1975 Closing of the Suez Canal as a Natural Experiment", *NBER Working Paper* no. 15557.
- e. Feyrer, J. (2009), "Trade and Income: Exploiting Time Series in Geography" *NBER Working Paper* N° 14910.
- f. Frankel, J. A. and Rose, A. (2002), "An Estimate of the Effect of Common Currencies on Trade and Income", *The Quarterly Journal of Economics*, Vol. 117, no. 2, pp. 437-66.
- g. Frankel, J. A. and Romer, D. (1999), "Does trade cause growth?", *American Economic Review* Vol. 89, no. 3, pp. 379-99.

* These two papers estimate the effect on labour productivity instead of GDP per capita.

Note to the reader: For Frankel and Romer (1999), an additional point of trade openness (ratio of imports plus exports to GDP) would increase GDP per capita by 0.5-2 points in the long term.

Chart 1 : Trade openness, 1980-2015



Source: World Bank, World Development Indicators.

With an elasticity of 0.75 (in the middle of the range in Table 1), the 18-point rise in France's trade openness since 1980 (Chart 1) would entail a long-term gain in GDP per capita of approximately 13 points.

The microeconomic and sectoral empirical literature on the effects of trade openness on productivity relies in particular on the pioneering studies by Melitz (2003)⁶ and Bernard *et al.* (2003)⁷, who introduce firm heterogeneity in the analysis of international trade. These studies circumvent some of the methodological difficulties due to reverse causality and show significant positive effects on productivity when trade openness increases in some sectors. These productivity gains are observed in advanced countries as well as in emerging or developing economies (Pavcnik, 2002⁸ on Chile, Muendler, 2004⁹ on Brazil). The results of these

(5) For a critical discussion of the robustness of these studies, see the analysis by F. Rodriguez and D. Rodrik (2000), "Trade Policy and Economic Growth: A Skeptic's Guide to the Cross-National Evidence", *NBER Macroeconomics Annual*, vol. 15, pp. 261-325.

(6) *Op. cit.*

(7) *Op. cit.*

(8) Pavcnik, N. (2002), "Trade Liberalization, Exit, and Productivity Improvement: Evidence from Chilean Plants", *Review of Economic Studies*, vol. 69, no. 1, pp. 245-76.

(9) Muendler, M. A. (2004), "Trade, Technology, and Productivity: A Study of Brazilian Manufacturers, 1986-1998", *CESifo Working Paper*, no. 1148.

partial-equilibrium analyses cannot be generalised to the macroeconomic level, but they offer support for the relevance of some theoretical channels through which gains from trade materialise. These notably include productivity gains generated by a better allocation of resources based on comparative advantage, by economies of scale, and by the transfer of activity from the least productive firms (which exit the economy) to the most productive ones, which are able to incur fixed export costs (Trefler, 2004¹⁰). Productivity gains can also be fostered by greater competition - which provides an incentive to innovate and adopt foreign technologies, improving knowledge diffusion (Aghion *et al.*, 2005¹¹) - or by an improvement in the quality and variety of intermediate inputs available to domestic firms (Grossman and Helpman, 1991¹²).

Additional analyses show that international trade openness also improves consumers' living standards by widening the

variety of goods and services available (Hausman, 2003¹³) and lowering their prices. Prices are reduced thanks to a better allocation of the factors of production and for a few years to tariff cuts. These effects of openness are particularly beneficial to the poorest households, who spend a relatively larger share of income on imported goods (Fajgelbaum and Khandelwal, 2016¹⁴), especially in the developed economies. Furman *et al.* (2017)¹⁵, for example, argue that import tariffs in the U.S. can be viewed as regressive taxes that weigh more heavily on households at the low end of the distribution scale, most notably single women and single parents. Similarly, Russ (2017)¹⁶ estimates that a 20% rise in U.S. import prices – assuming a constant basket of goods – would cause a loss in purchasing power of 5% for the lowest income decile and about 2% for the next two deciles, versus only 1% or so for the high end of the distribution scale (8th, 9th and 10th deciles).

2. The benefits of growth have not been distributed evenly between countries or within countries

Together with technological progress, globalisation has contributed to world growth in recent decades. The benefits of this growth, however, have not been distributed evenly.

2.1 Between country income inequality has decreased in recent decades

Since the 1980s, emerging and developing countries have experienced far faster average growth than advanced economies, helping to narrow income inequality between countries.

Economic growth has supported a reduction in global poverty: the share of people living below the poverty line has

fallen from 50% in 1980 to 10% today (*IMF Fiscal Monitor*, April 2017).

This convergence between countries has been strong enough to reverse the dynamics of income inequality in the world population: the Theil "world" inequality index (i.e., measuring inequalities in the global distribution of personal income), calculated back to 1870, was rising until 1990 but has since started falling – despite rising inequality within countries (Chart 2).

(10) Trefler, D. (2004), "The Long and Short of the Canada-US Free Trade Agreement", *American Economic Review*, vol. 94, no. 4, pp. 870-95.

(11) Aghion, P., Bloom, N., Blundell, R., Griffith, R. and Howitt, P. (2005), "Competition and innovation: An inverted-U relationship", *Quarterly Journal of Economics*, vol. 120, no. 2, pp. 701-28.

(12) Grossman, G. M. and Helpman, E. (1991), *Innovation and Growth in the Global Economy*, MIT Press

(13) Hausman, J. (2003), "Sources of Bias and Solutions to Bias in the Consumer Price Index", *Journal of Economic Perspectives*, vol. 17, no. 1, pp. 23-44.

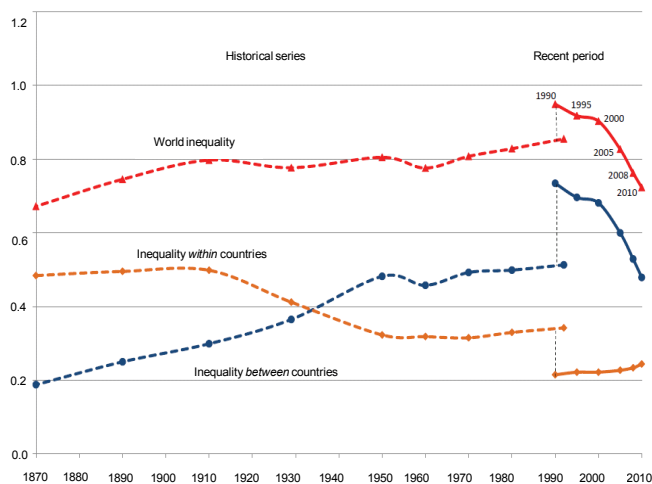
(14) Fajgelbaum, P. D. and Khandelwal, A. K. (2016), "Measuring the unequal gains from trade", *Quarterly Journal of Economics*, vol. 131, no. 3, pp. 1113-180.

(15) Furman, J., Russ, K. and Shambaugh, J., "US tariffs are an arbitrary and regressive tax", January 2017, VOXEU Column.

(16) Post by K. Russ on Econbrowser blog: "Distributional Implications of the Border Adjustment Tax for U.S. Households: Lower- and middle-income households may be hard hit", January 2017.

<http://econbrowser.com/archives/2017/01/guest-contribution-distributional-implications-of-the-border-adjustment-tax-for-u-s-households-lower-and-middle-income-households-may-be-hard-hit>

Chart 2 : Historical change in world income inequality (Theil coefficient, 1870-2010)



Source: *sse.ens-lyon.fr*, based on François Bourguignon, with data from A. Maddison, OECD and World Bank. The break between the dotted lines and solid lines is due to a change in data bases.

2.2 At the same time, income inequality has increased in many advanced countries – but has remained virtually stable in France

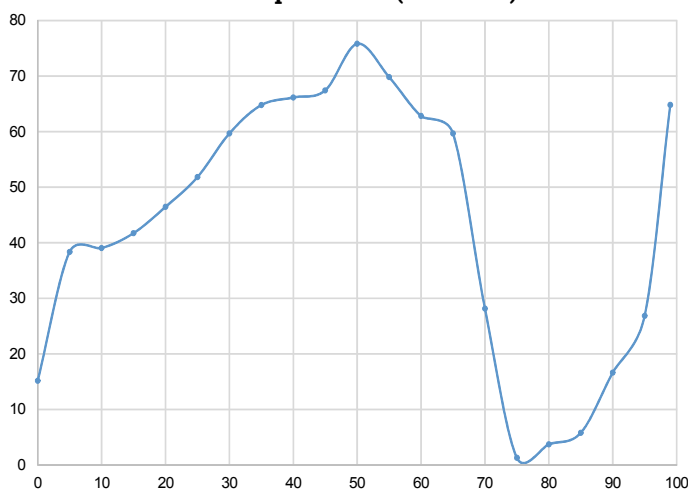
Income inequality has widened in many advanced countries since the 1980s. France is a case apart: its post-redistribution income inequality has remained nearly stable since 1985 (see Box 1 on changes in inequality in France).

Deepening inequalities in many advanced countries reflect the steep growth in high and very high incomes and the weak growth of income at the low end and the middle of the distribution scale. Milanovic's "elephant" curve (2016)¹⁷ (Chart 3) suggests that the income of the middle-lower class in certain advanced countries – most notably

Germany, the U.S., and Eastern European countries – has posted relatively weak gains since the late 1980s, by comparison with the wealthiest categories in those countries and the fast-growing middle class in the emerging countries. However, significant income gaps persist between the upper-middle class in the emerging countries and the lower-middle class of the advanced countries, implying that the economic catch-up is far from complete.

The increase in income inequalities also reflects the downtrend in the share of labour income in value added in most countries (but not in France)¹⁸ and the concurrent growth of capital, whose income goes mainly to higher-income households¹⁹.

Chart 3 : Cumulative growth (%) in real income per capita, by income percentile (2005 PPP)



Source: Milanovic (2016)²⁰.

How to read this chart: Real average income for the 5th percentile of the world income distribution rose 15% between 1988 and 2008.

(17) Milanovic, B. (2016), *Global inequality: a new approach for the age of globalization*, Cambridge (Mass.): Harvard University Press.

Regarding the construction of this "elephant" chart, the following points should be noted : (1) as the income curve is plotted by cohort, these results should not be interpreted as the change in individual wages; (2) the year-to-year comparison is not performed all other things being equal, for the panel of countries analysed changes over time; in consequence, some countries are not included every year. Alternative versions of the curve, however, suggest that these assumptions do not radically alter the results.

(18) See IMF World Economic Outlook, April 2017, chapter 3, "Understanding the Downward Trend in Labor Income Shares".

(19) In France, asset income accounted for 4% of household disposable income in the first income decile as against 26% for the top decile in 2013 (source: DREES).

(20) *Op. cit.*

3. Technological progress has been the main factor in the rise in inequality in advanced countries, but trade has contributed as well

Several factors are responsible for the uptrend in inequality in the advanced countries, including technological progress, international trade and institutional changes such as the decrease in the redistributive effect of tax and social-transfer systems.

3.1 Rising competition from emerging countries has caused job losses in some sectors and employment areas

Gains from trade are partly due to a better allocation of the factors of production, which means that at least a portion of the factors is not used in the same places before and after trade opening. Trade thus destroys certain jobs and allows the creation of others in new sectors, regions or firms. The persistence of the resulting unemployment will depend on the economy's capacity to reallocate resources; this, in turn, is determined by such factors as labour market characteristics, the labour force's access to lifelong learning, and the degree of workers' geographic mobility. In some cases, trade openness can therefore generate relatively long-term unemployment in some regions or sectors.

Empirical sectoral studies highlight job destructions in sectors highly exposed to competition from imports from low-wage countries. For example, Autor (2004, 2013 and 2016)²¹ finds that U.S. regions whose economies were more vulnerable to Chinese imports experienced a sharper reduction in employment and wage levels, and a greater demand for federal welfare benefits. According to these studies, 25% of gross job losses in U.S. manufacturing are due to exposure to Chinese competition. The same factor is also responsible for an estimated 13% of the total decline in

manufacturing employment in France between 1995 and 2007, or 90,000 local jobs lost during the period (Malgouyres, 2017)²².

This job destruction can last particularly in the manufacturing sector. In the U.S., for example, job losses due to competition from Chinese imports have taken at least a decade to offset (Autor *et al.* 2016)²³. According to the general equilibrium model proposed by Bellon (2016)²⁴, calibrated on French data, the pace of job destruction associated with trade openness exceeds that of job creation for at least ten years after a liberalisation measure is enacted. This finding reflects both the creation of new jobs in sectors benefiting from trade openness and the disappearance of jobs that have failed to withstand international competition.

In the long run, the effects of trade on the aggregate employment level are uncertain, for the theoretical models generally assume that the economy ultimately reaches full employment. In practice, long-term employment and unemployment levels will be determined mainly by the capacity of labour supply to adjust to changes in labour demand. This will depend especially on the characteristics of the education system and the labour market, as well as on the economy's use of trade-induced productivity gains.

International trade can also contribute to inequality through other channels. For example, it can erode employees' bargaining power facing international competition and risks of production offshoring²⁵. It can also raise the highest wages to the extent that managers in multinational firms benefit from productivity gains generated by economies of scale.

(21) Acemoglu, D., Autor, D., Dorn, D., Hanson, G. H. and Price, B. (2016), "Import Competition and the Great US Employment Sag of the 2000s", *Journal of Labor Economics*; Autor, D., Dorn, D. and Hanson, G. (2013), "The China Syndrome: Local Labor Market Effects of Import Competition in the United States", *American Economic Review*; Autor, D., Katz, L. and Kearne, M. (2006), "The Polarization of the U.S. Labor Market", *American Economic Review*.

(22) Malgouyres, C. (2017), "The impact of Chinese import competition on the local structure of employment and wages: evidence from France", *Journal of Regional Science*, vol. 57, no. 3, pp. 411-41.

(23) Autor, D., Dorn, D. and Hanson, G. H. (2016), "The China Shock: Learning from Labor-Market Adjustment to Large Changes in Trade", *Annual Review of Economics*, vol. 8, pp. 205-40.

(24) Bellon, M. (2016), "Trade liberalization and inequality: a dynamic model with firm and worker heterogeneity", *Essays in Economics on Liberalization and Reallocation*, Columbia University Academic Commons.

(25) Ebenstein, A., Harrisson, A. and McMillan, M. (2015), "Why are American workers getting poorer? China, trade and offshoring", *NBER Working Paper*, no. 21027.

3.2 Technological progress contributes to inequality by polarising labour demand

Beyond trade-induced effects, technological progress—a key driver of productivity during the period—has also contributed to the increase in inequality. One of the main causes of the rise in income inequality is labour-market "polarisation" in many advanced countries, i.e., the destruction of routine intermediate jobs. At the same time, the demand for high-skill occupations has risen and the demand for lowest-skill occupations (sometimes hard to automate) has broadly persisted, with differences between countries. This polarisation of jobs and wages has been documented in recent decades in the U.S. (Autor *et al.*, 2008²⁶) and Europe²⁷.

Empirically, it is hard to disentangle the respective effects of technological progress and trade openness on inequality. Technological progress has, for example, reduced production and transport costs—notably thanks to telecoms innovations, the development of financial markets, lower machinery costs, and faster robotisation—and this has helped to expand trade. Conversely, trade openness can

stimulate the diffusion of technological progress (Bloom *et al.*, 2015²⁸).

Nevertheless, technological progress appears to have been the main factor behind the rise in income inequality in the advanced countries, more so than trade opening²⁹. Braconnier and Ruiz-Valenzuela (2014)³⁰ estimate that the technological bias towards skilled workers increased wage dispersion by 0.9% a year in 1980-2010 and that a 1% rise in multifactor productivity increases income inequality (measured by the D9/D1 ratio) by an average 0.31% in the OECD countries. The authors argue that, by comparison, trade opening had little impact on wage dispersion, employment and income inequality. Similarly, Jaumotte *et al.* (2013)³¹ see technological progress as the main cause of the increase in the Gini coefficient in 51 economies between 1981 and 2003

3.3 Redistribution has not offset the rise in inequality

Economic policies have not slowed the rise in inequality generated by technological progress and trade. The intensity of redistribution mechanisms has actually weakened in many OECD countries (Chart 5)³², contributing to the rise in inequality in post-redistribution disposable income.

(26) Autor, D. H., Katz, L. F. and Kearney, M. S. (2008), "Trends in U.S. wage inequality: revising the revisionists", *Review of Economics and Statistics*, vol. 90, no. 2, pp. 300-23.

(27) Particularly in the U.K. (Goos and Manning, 2007), Germany (Daught *et al.*, 2014), Denmark (Keller and Utar, 2016) and Europe (Goos *et al.*, 2014).

(28) Bloom, N., Draca, M. and Van Reenen, J. (2016), "Trade induced technical change? The impact of Chinese imports on innovation, IT and productivity", *Review of Economic Studies*, vol. 83, no. 1, pp. 87-117.

(29) One of the authors to have reached this conclusion is E. Helpman in "Globalization and wage inequality" (2016), *NBER Working Paper*, no. 22944, where he provides a review of the recent literature.

(30) Braconnier, H. and Ruiz-Valenzuela, J. (2014), "Gross Earning Inequalities in OECD Countries and Major Non-member Economies", *OECD Economics Department Working Papers*, no. 1139.

(31) Jaumotte, F., Lall, S. and Papageorgiou, C. (2013), "Rising Income Inequality: Technology, or Trade and Financial Globalization?", *IMF Economic Review*, vol. 61, no. 2, pp. 271-309.

(32) MCM Update report 2017 - Inclusive Growth, OECD, 2017.

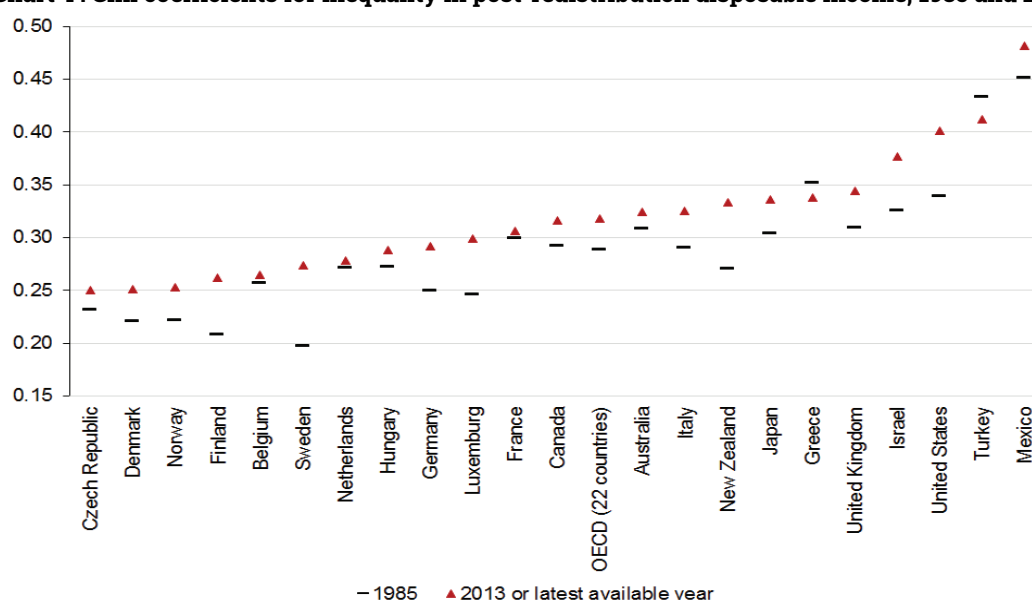
Box 1 : The distinctive pattern of changes in inequality in France

In 2013, the main indicators of disposable income inequality stood roughly at the same levels as in 1985 in France, by contrast to their uptrend in the other OECD countries. The Gini coefficient for disposable income gained an average of 3 Gini points (0.03) in the OECD countries between 1985 and 2013, as against a modest rise of 0.6 points (0.006) in France (Chart 4). The inter-decile ratio (D9/D1) rose from an average 7.4 in 1985 to 9.9 in 2012 in the OECD countries; in France, by contrast, it remained stable, edging up from 7.3 to 7.4.

The stability of France's disposable income inequality reflects the intensity of the national redistribution system, whose impact in the fight against inequality has remained constant in the past two decades, unlike the pattern observed in many other OECD countries^a.

The relative stability of income inequality should not conceal the polarisation of the French labour market, although the phenomenon is less pronounced than in the other European countries or in the U.S.. Goos *et al.* (2014)^b estimate that the shares of high-skill and low-skill jobs rose by 4 points each, while the share of intermediate jobs fell by nearly 8 points. This polarisation is mainly due to a distortion in labour demand towards the highest-skilled workers and away from intermediate labour^c. The rise in low-skill jobs is chiefly due to the growth in personal services and to policies aimed at lowering employers' social contributions for the least-skilled workers

Chart 4 : Gini coefficients for inequality in post-redistribution disposable income, 1985 and 2013

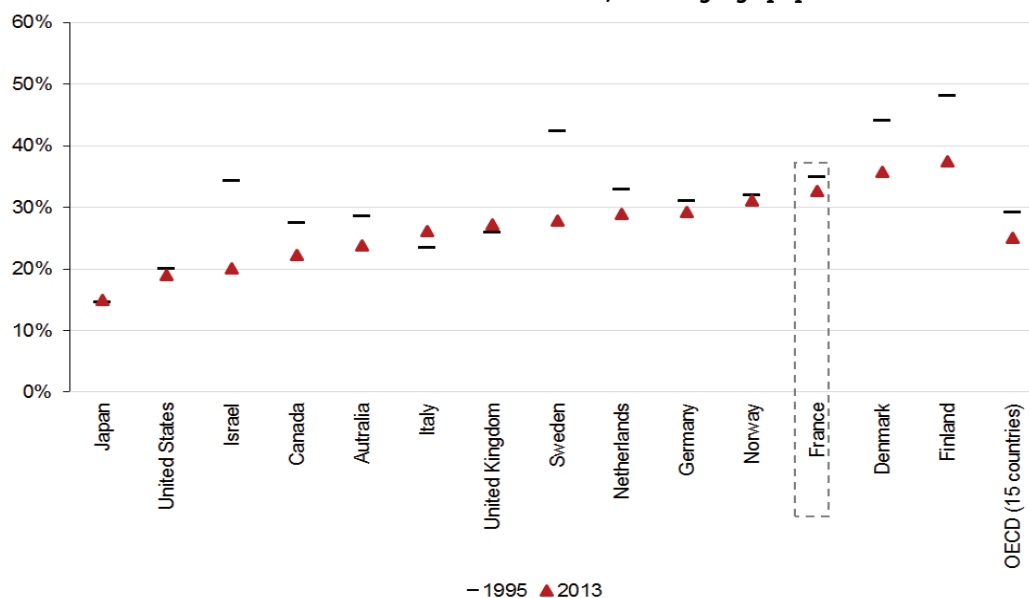


Source: OECD 2015, *In It Together: Why Less Inequality Benefits All*.

While income inequality has remained broadly stable in France during the period, and is generally lower than in the other main OECD countries, other types of inequality need to be taken into account. For example, several categories of the population – such as the long-term unemployed and low-skilled young people – experience difficulties finding work. Moreover, inequality in educational attainment has increased: educational attainment is closely correlated with socio-demographic origin, and the correlation is growing stronger^d. Lastly, access to housing can be difficult for the lowest-income residents of areas where housing market pressures are greatest.

- a. *Ibid.*
- b. Goos, M., Manning, A. and Salomons, A. (2014), "Explaining job polarization: Routine-biased technological change and offshoring", *American Economic Review*, vol. 104, no. 8, pp. 2509-26.
- c. See, among other studies: DARES-Analyses, no. 28, "En 30 ans, forte progression de l'emploi dans les métiers qualifiés et dans certains métiers peu qualifiés de services" (2015); Charnoz, P. and Orand, M., "Qualification, progrès technique et marchés du travail locaux en France, 1990-2011" (INSEE, forthcoming); Pak, M. and Poissonnier, A., "Accounting for technology, trade and final consumption in employment: an input-output decomposition" (INSEE, G2016/11).
- d. OECD, PISA 2003, 2015. See also Anne-Braun, J., Lemoine, K., Saillard, S. and Taillepied, P. (2016), "Initial and continuing education: the implications for a knowledge-based economy", *Trésor-Economics*, no. 165.

Chart 5 : Percentage reduction in market income inequality through taxes and social transfers in the OECD countries, working-age population



Source: OCDE; DG Trésor calculations.

3.4 Reducing inequality would foster social cohesion and growth

The impact of income inequality on growth has long been debated. Some authors argue that a tradeoff between equality and economic efficiency is inevitable (Okun, 1975³³). Some kinds of inequality may thus be intrinsically linked to the innovative capacity and may promote social mobility (Aghion *et al.*, 2016³⁴). According to these theories, excessive vertical transfers – i.e., from the highest-income groups to the lowest – could hinder growth, since they could generate economic distortions such as tax-related distortions, disincentives to work, and administrative costs.

Conversely, inequality may hamper growth through a negative effect on short-term demand through an income distribution unfavourable to individuals with the highest marginal propensity to consume (the least well-off). Too high inequality could thus lead to excess saving, increasing the risk of permanently weak growth (Jaubertie and Shimi, 2016)³⁵. In the longer run, inequality can inhibit the growth

of human capital, if the poorest cannot access a minimum level of education for economic or social reasons. Moreover, when inequality exceeds the population's social preferences – which differ between countries – it can trigger political instability.

There is no consensus among empirical analyses regarding the nature of the link between inequality and growth. However, the latest studies seem to suggest that a reduction in inequality in the main advanced countries is more likely to stimulate growth than to slow it. Ostry *et al.* (2014)³⁶, for example, suggest that an intensification of redistribution policies would not restrain economic activity, and that growth would be higher and more sustainable at a lower level of inequality, both in the developed countries and in the developing countries. Cingano (2014)³⁷ corroborates these results and suggests concentrating redistribution efforts on the lower 40% of the income distribution in each country. These results should, however, be interpreted with caution because of the inherent limitations of the analytical methods used.

(33) Okun, A. M. (1975), *Equality and Efficiency: The Big Tradeoff*, Brookings Institution.

(34) Aghion, P., Akcigit, U., Bergeaud, A., Blundell, R. and Hémous, D. (2016), "Innovation and Top Income Inequality", *NBER Working Paper*, no. 21247.

(35) Jaubertie, A. and Shimi, L. (2016), "The debate on secular stagnation: a status report", *Trésor-Economics*, no. 182.

(36) Ostry, J. D., Berg, A. and Tsangarides, C. G. (2014), "Redistribution, inequality and growth", *IMF Staff discussion note* 14/02.

(37) Cingano, F. (2014), "Trends in income inequality and its impact on economic growth", *OECD Social, Employment and Migration Working Papers*, no. 164.

4. Public policies must meet the challenges posed by globalisation

The review of the complex stakes and implications of globalisation makes it possible to identify potential orientations for public policies, both domestic and multilateral. Policies should seek to preserve the gains from globalisation and technological progress in terms of growth, productivity and living standards, while improving the distribution of the gains within our economies. The declaration of the G20 leaders in Hamburg (July 2017) calls for the implementation of such policies.

4.1 Globalisation should be accompanied by national policies to facilitate adjustment by those who experience its negative effects

At the national level, the priority should be to increase the economy's capacity to adjust to trade and technological shocks. This involves facilitating the occupational, sectoral and geographic mobility of the labour force by improving support for the unemployed, offering better access to lifelong training, and implementing policies that encourage geographic mobility, such as housing policy and the modernisation of some of everyday transport infrastructures. Improving the quality of initial education would also make it easier for the labour force to adjust to future changes in the structure of employment, but the results of this improvement would be visible only in the medium or long term. Meanwhile, policies are needed to support jobs for people most vulnerable to unemployment (in France, the least skilled persons); this could be achieved, for example, by containing labour costs. Regarding the capital market, two approaches should be followed: encourage innovation and risk-taking to allow emerging technologies to develop; design efficient procedures to restructure unprofitable activities in the event of economic difficulties.

4.2 European and multilateral measures are needed to ensure fair international competition

At the European Union level, further economic integration—particularly a deepening of the single market for services—should be accompanied by a convergence of social standards to narrow the gaps that distort competition in the internal market. Several priorities have been identified in this area, such as greater control of posted workers and the implementation in all EU Member States of a minimum wage with common rules for review. Moreover, as trade policy is a unique competence of the EU, and as this policy creates imbalances in the labour market across all EU countries, a consistent approach would be to finance a portion of active employment policies at the EU level. The European Globalisation Adjustment Fund (EGF) set up for this purpose is under-used and not sufficiently aimed at small and medium-sized enterprises (SMEs) employees. Its mechanisms could therefore be improved to address the various issues described above³⁸.

At the multilateral level, the main priorities should be to:

- i. Preserve the World Trade Organisation, which constitutes the legal foundation of globalisation, and to strengthen its mechanisms for settling trade disputes, which limit the risk of trade wars. The G7 and G20 have a leading role to play here.
- ii. Pursue liberalisation in areas where the removal of obstacles to trade offers the prospect of substantial marginal gains; improve international trade rules to ensure fairer competition and greater reciprocity in trade openness.

(38) The French government's action plan for CETA (Canada-EU Comprehensive Economic and Trade Agreement) implementation outlines several paths for EGF reform.

- iii. Continue to examine the advisability of using trade policy as a lever to enforce certain international commitments with the aim of fostering fairer competition with third countries, particularly in regard to environmental agreements (Paris Agreements), International Labour Organisation agreements and the fight against tax evasion³⁹.
- iv. Lastly, policy-makers should take advantage of the current political momentum in favour of multilateral initiatives promoting inclusive growth to support international actions, particularly those aimed at combating tax avoidance such as the BEPS (Base Erosion and Profit Shifting) and CCCTB (Common Consolidated Corporate Tax Base) projects.

Valentin COHEN, Louise RABIER, Linah SHIMI

(39) Some approaches are discussed in Sébastien Jean's post of 13 October 2017 on the CEPII blog, "*Mieux lier les accords commerciaux à des clauses non commerciales: pourquoi et comment?*".

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Jean-Luc Schneider
(01 44 87 18 51)
tresor-eco@dgtresor.gouv.fr

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