

# Globalisation and deglobalisation

Central Bank of Brazil

## Abstract

In the years before the global financial crisis, emerging market economies (EMEs) saw robust global demand, substantial improvements in terms of trade and abundant capital inflows. Nevertheless, trade growth has been weak after the financial crisis, and whether this movement is permanent or transient is still an open question. This note discusses trends in globalisation, the macroeconomic and distributional effects of globalisation in EMEs, and complementary policies that may enable countries to better seize the benefits of globalisation, highlighting the Brazilian experience.

Keywords: globalisation, emerging market economies, complementary policies.

JEL classification: F15, F60.

## Determinants of globalisation in EMEs: trade, GVCs and financial integration

**The growth of international trade in emerging market economies (EMEs) over the last two decades was driven mainly by favourable external conditions.** Before the Great Financial Crisis (GFC), EMEs saw robust global demand, substantial improvements in terms of trade and abundant capital inflows from advanced economies (AEs), which helped to finance trade and production. Higher global demand for commodities, especially from 2000 to 2011, boosted prices and trade volumes, increasing the share of EMEs in international trade. More recently, the long-lasting AE policy responses to the GFC have also benefited EMEs. Abundant liquidity has financed consumption, exports and investments in these economies, leading to more globalisation.

**Nevertheless, trade growth has been weak post-crisis, and whether this shift is permanent or transitory is still an open question.** Before the GFC, global trade frequently grew faster than GDP. After the crisis, trade recovered during 2010–11, but slowed again from 2012 onwards. The annual growth rate of global trade during the 2012–15 period (roughly 3%) was smaller than the pre-crisis average (7% for the 1987–2007 period) and slightly smaller than the world GDP growth rate, in real terms.<sup>1</sup>

**Recent studies have highlighted the composition of global GDP growth to explain the slow pace of trade growth after the GFC.**<sup>2</sup> During the past 20 years, the share of EMEs in global growth roughly doubled, as well as their participation in trade, which increased from 20% to almost 40%. As EMEs have lower trade-income elasticities compared to AEs, the upsurge of EMEs in international trade and GDP lowered global trade-income elasticity. However, elasticity is not a constant parameter. In the long run, EME growth can lead to higher trade-income elasticity, strengthening trade growth.

**The declining growth of global value chains (GVCs) may also be driving the slowdown in trade growth. Despite the rapid expansion from 1995 to 2011, the growth of GVCs has stalled in recent years.**<sup>3</sup> Although this result is partially due to cyclical factors, notably a slowdown in central economies, there are structural reasons that may lead to a long-lasting stagnation in GVCs, such as the rise in labour costs in EMEs, the tightening of global financial conditions and the development of intermediate input sectors in China. Concerning the latter, a recent study points out that China's domestic content in exports increased from 65% to 70% in the 2000–07 period, due to the substitution of domestic for imported materials by exporters. These results indicate that China is relying less on foreign materials and becoming more competitive in intermediate input sectors.<sup>4</sup> In addition, greater complexity and large capital demands make GVCs more vulnerable to global financial conditions.

**Looking forward, the response to possible protectionist measures in some AEs is also a source of concern.** In a scenario of increased protectionism, a new suboptimal equilibrium might emerge, in which affected countries could react,

<sup>1</sup> Constantinescu et al (2015).

<sup>2</sup> ECB-IRC Trade Task Force (2016) and Deutsche Bundesbank (2016).

<sup>3</sup> ECB-IRC Trade Task Force (2016).

<sup>4</sup> Kee and Tang (2016).

leading to further protectionist measures and potentially damaging global trade. In response to more protectionism, firms could postpone or even cancel long-term investments, or lose their inclusion in trade chains, which would take time to be rebuilt in the future.

**Technological innovations, on the other hand, may influence GVCs and spur the growth of global trade in the years ahead. The digital revolution has promoted the access of small and medium-sized enterprises (SMEs) to foreign markets and expanded global services trade.** Digital platforms have changed market structures and promoted higher competitiveness in cross-border trade, as it has reduced the cost of international interactions and transactions that used to preclude SMEs from supplying goods and services abroad. Not only are more firms engaged in international trade currently, but also the nature of trade has changed over time, including the expansion of global trade of digitally deliverable services, such as financial services, IT support, customer services, engineering and design. However, services trade is still a small fraction of global trade.<sup>5</sup> In Brazil, 48 million consumers made at least one virtual purchase in 2016, representing an increase of 22% over 2015. The amount that Brazilian e-consumers spent in cross-border purchases also increased 17% in the same period, and is expected to continue to grow in the coming years.<sup>6</sup>

**In addition to trade integration, globalisation has also led EMEs to higher financial integration.** Besides the direct benefit of providing more access to financing capital from abroad, financial integration also promotes the improvement of institutions, the enhancement of market discipline and the depth of the financial sector. However, these indirect benefits are not easily measured and are only accomplished in the medium term. Overall, the literature supports the view that EMEs have on the whole benefited from financial integration, although this has also increased their exposure to financial crises. In this sense, there are preconditions that lead EMEs to obtain better outcomes from financial liberalisation, such as robust macroeconomic policy framework, financial sector development, and openness to trade.<sup>7</sup> In any case, domestic and international macroprudential policies are important in building a sound and resilient financial sector to counteract possible exposure effects.

**Besides, there is evidence that trade openness decreases countries' vulnerability to financial crisis<sup>8</sup>.** Trade integration has helped EMEs to manage financial crises associated with sudden stops of capital inflows, through balance sheet effects. After cut-offs in external financing, economies that are less open to trade generally need larger real exchange rate depreciations to improve their trade balance. As a result, they may experience an increase in firms' liabilities denominated in foreign currency, an increase in default probabilities, and a reduction in the country's output growth rates. Trade balance adjustments in more open economies do not require larger depreciations and, thus, are likely to be less costly. Studies also claim that trade openness decreases the probability of reversals in capital inflows, as exchange rate

<sup>5</sup> McKinsey Global Institute (2016).

<sup>6</sup> Webshoppers (2017).

<sup>7</sup> Kose et al (2006) and Obstfeld (2009)

<sup>8</sup> Calvo et al (2004), Frankel and Cavallo (2004) and Cavallo (2005).

depreciations may boost export revenues and increase the country's ability to service its external debt.<sup>9</sup>

## Globalisation: macroeconomic effects

**There is an open debate regarding the benefits and costs of globalisation for developing countries, but the most accepted view is that, over the last two decades, globalisation has indeed been a positive driving force for growth in EMEs.** The results are, however, very dependent on the group of countries considered and the domestic policies in place. EME growth now represents close to 80% of total global growth, and EMEs' increased participation is linked to the expansion of international trade.<sup>10</sup> In the case of Latin America, the evidence indicates that the impact of trade openness on growth was positive but mostly small.<sup>11</sup> It also suggests that episodes of trade liberalisation were significantly correlated with macro and micro reforms.<sup>12</sup>

**In 1988–90, Brazil experienced a singular episode of trade openness through tariff reductions that withdrew market protection quite abruptly from several manufacturing industries. Evidence shows that there were positive effects on productivity growth after the elimination of trade barriers.** On average, total factor productivity grew at a 3% yearly rate, while labour productivity grew above 5%.<sup>13</sup> Higher productivity growth after trade liberalisation resulted from two mechanisms: more competition in domestic markets and access to foreign inputs that embodied better technology.<sup>14</sup>

**However, a more competitive environment does not necessarily lead to higher output in all sectors. In the case of Brazil, there was a change in the economy's sectoral composition.** The production share of the manufacturing sector fell, while the impact was positive on services. Some factors were important in this context: (i) low growth in advanced countries depressed the international prices of manufacturing products; and (ii) currency appreciation reduced the relative competitiveness of the Brazilian manufacturing sector. The third and fourth factors concern the domestic policy response to the GFC: (iii) reduced interest rates; and (iv) more flexible fiscal policy and credit to stimulate domestic demand. Expanded demand for services increased real wages, while the combination of higher real wages and stagnating labour productivity in the manufacturing sector led to a fall in production.<sup>15</sup>

<sup>9</sup> Kose et al (2006) and IMF (2002).

<sup>10</sup> IMF (2017).

<sup>11</sup> Giordano and Li (2012).

<sup>12</sup> Rodriguez and Rodrik (2001).

<sup>13</sup> Ferreira and Rossi (2003).

<sup>14</sup> Lisboa et al (2010) and Schor (2004).

<sup>15</sup> Pastore et al (2012).

**Increased international trade and financial integration have also resulted in more synchronised business cycles**, as shocks are transmitted between countries through their trade flows. Earlier evidence supported the view that there was convergence of business cycles among industrial countries and among EMEs, but divergence between the two groups.<sup>16</sup> More recently, evidence has emerged suggesting a rise in global business cycle synchronisation from 2000 onwards.<sup>17, 18</sup> In the case of Brazil, the business cycle seems to be synchronised with the global economy, but less so at the regional level.<sup>19</sup>

**In Brazil, the results from an estimated DSGE model indicate that trade globalisation has reduced inflation via imported goods.** The mechanism goes as follows: since imported and local produced goods are complementary to each other on average, trade globalisation reduces artificial import costs and then jointly improves imports, local production and terms of trade, while reducing marginal production costs. The improvement in terms of trade again increases goods imports, lifting the local goods supply and putting additional downward pressure on domestic inflation. Conversely, imposing trade barriers – for instance increasing import taxes – positively affects the inflation rate.<sup>20</sup>

**It also seems that financial openness has contributed to external stability, by enhancing resilience.** In Brazil, improvements in the balance of payments since 2005 have allowed the Central Bank of Brazil (BCB) to accumulate a sizeable amount of foreign reserves, currently in excess of USD 380 billion, around 20% of Brazilian GDP. Likewise, foreign direct investment (FDI) continues to be the main source of external financing to Brazil.<sup>21</sup> In addition to increasing the capital stock and the level of technology, FDI tends to be more stable and less correlated to debt or portfolio flows, and hence less prone to sudden reversals.<sup>22</sup>

## Globalisation: distributional effects

**Another key issue is the impact of trade integration on wage inequality. There is evidence that, when trade opening induces technological change, it tends to introduce comparative gains for higher skilled workers in both skill-abundant and skill-scarce countries.<sup>23</sup> Evidence also indicates that trade opening contributes to a skill-biased technological change in a wide sample of countries,**

<sup>16</sup> Kose et al (2008).

<sup>17</sup> Ductor and Leiva-Leon (2017).

<sup>18</sup> Such an increase in business cycle synchronisation is mainly attributed to EMEs, and more specifically to a group comprising Argentina, Brazil, Bulgaria, Chile, China, Malaysia, Mexico, the Philippines, Romania, South Africa and Venezuela. Data also indicate that business cycle co-movements are explained by financial openness, government expenditure, bilateral trade, human capital, liquid liabilities and similarities between countries' industrial composition.

<sup>19</sup> Gutierrez and Gomes (2009) and Correa (2003).

<sup>20</sup> Santos and León (2010).

<sup>21</sup> Goldfajn and Minella (2005) and Central Bank of Brazil (2017).

<sup>22</sup> Goldfajn and Minella (2005).

<sup>23</sup> Acemoglu (2003).

**including those of Latin America.**<sup>24</sup> Considering that protectionist policies shield export sectors that heavily employ unskilled labour in EMEs, it is not surprising that, initially, trade opening negatively affects these workers' wages. Nevertheless, evidence shows that, in some cases, trade liberalisation has not caused wage inequality.

**In Brazil, trade reforms did not induce an increase in wage inequality between skilled and unskilled workers.** No effect on informality was found either.<sup>25</sup> In fact, there is evidence that trade liberalisation reduced earnings discrepancies in Brazil.<sup>26</sup> The mechanism is that pre-liberalisation tariffs adjusted by import penetration were higher in skill-intensive sectors and fell more than in other protected industries. This led to a decline in their relative prices after the tariff reduction process and, consistent with Stolper-Samuelson theorem, this decline produced a decrease in skilled wages and an outflow of workers from these protected sectors.

**However, the evidence suggests that displaced workers from more protected industries were not absorbed by exporting firms or those industries with comparative advantages.**<sup>27</sup> After Brazilian trade liberalisation, evidence based on micro-data indicates that production shifted to more productive firms, but displaced labour did not follow. As a side effect of the trade reform, Brazilian economy observed higher rates of failed labour reallocations and longer durations of complete reallocations.

**On the other hand, simulations of additional trade liberalisation reforms in Brazil show that the expansion in investment and production could provide significant employment gains.** Moreover, the sectoral analysis of these results indicates that employment growth would be higher for low-skilled workers, helping those at the lower end of the income distribution.<sup>28</sup>

**Regarding the effects of openness on poverty, the literature has not reached a consensus.** It is not clear which indicators would be more appropriate to measure openness nor what its causal relationship to poverty standards is. Export measures are associated with decreasing poverty, while reductions of import content are related to rising poverty.<sup>29</sup> Studies for Latin America are not conclusive as to the role of openness in explaining changes in poverty and income inequality.<sup>30</sup> The findings usually depend on domestic policies and institutions.<sup>31</sup> Similar inconclusive results arise for Brazil in a study that focuses on trade liberalisation.<sup>32</sup>

<sup>24</sup> Berman et al (1998), Berman and Machin (2000) and Sanchez-Páramo and Schady (2003).

<sup>25</sup> Goldberg and Pavcnik (2003).

<sup>26</sup> Gonzaga et al (2006) and Ferreira et al (2007).

<sup>27</sup> Menezes-Filho and Muendler (2011).

<sup>28</sup> Araújo and Flaig (2016).

<sup>29</sup> Harrison (2005).

<sup>30</sup> Bouzas and French-Davis (2003).

<sup>31</sup> Behrman et al (2003).

<sup>32</sup> Ventura-Dias (2005).

## Policy implications and final remarks

**Adequate complementary policies help to promote the positive impact of trade opening on growth**, particularly for higher investment in human capital, deeper financial markets, lower inflation, and greater availability of public infrastructure. These features provide the necessary conditions for improving the competitiveness of domestic firms by supporting the development of a better-educated labour force, a stable macroeconomic environment with less expensive credit, and better-quality infrastructure.<sup>33</sup>

**Structural reforms have the potential to harness the benefits of globalisation and boost growth.** Removing trade barriers helps to reduce the cost of imported inputs and to strengthen incentives to enhance productivity. Besides, stronger trade integration benefits low-income earners in particular, as an expansion of the export sector has a larger impact on the demand for low-skilled labour. Improvements in infrastructure could also reduce transportation costs, particularly for exporters. Further improvements in educational attainment would not only raise productivity, but also allow more low-income households to join Brazil's growing middle class.<sup>34</sup>

**In this regard, Brazil has improved its policy framework and implemented new structural domestic policies aiming at improving macro and micro fundamentals.** Among these recent reforms and adjustments, it is worth mentioning labour reform, educational reform, the constitutional spending ceiling, reforms in the oil and gas sector, privatisations, and the reform of the Brazilian Development Bank's interest rates.<sup>35</sup>

**Countries can best take advantage of globalisation and mitigate its harmful effects by adopting an appropriate complementary policy mix.** As globalisation generates losers and winners, especially across sectors, policies should support natural winners and facilitate labour transition among different sectors. At the same time, appropriate safety nets can be put in place to protect the most vulnerable workers and potential losers.<sup>36</sup> Active labour market programmes should be set up to help unemployed workers find new jobs. Training, counselling, placement services, and assistance in job searches are among the most common examples.<sup>37</sup> In this regard, Brazil has recently approved a labour reform to increase the flexibility and efficiency of its labour market.

**The more dynamic environment brought by globalisation calls for new types of social protection.** To get reforms under way may require one-time compensation schemes for workers who would otherwise lose out, such as well designed unemployment insurance and severance pay systems. Social protection is important not just to support families that may stand to lose in the more dynamic economy, but also to create a solid social foundation from which people feel

<sup>33</sup> Chang et al (2009).

<sup>34</sup> OECD (2017).

<sup>35</sup> Goldfajn (2017).

<sup>36</sup> Harrison (2005).

<sup>37</sup> World Bank (2002).

comfortable taking risks and pursuing entrepreneurship.<sup>38</sup> Globalisation also calls for social protection for immigrants. In this respect, the Brazilian government published in 2017 a new immigration law that promulgates new rights for immigrants, such as free access to social and public health programmes. The law also guarantees broad access to judicial institutions and free legal support for poor immigrants.<sup>39</sup> Having said that, immigration flows into Brazil are still small. By December 2015, there were 0.7 million non-native people living in Brazil, or 0.3% of the country's population.<sup>40</sup>

**In recent decades, Brazil has also successfully put in place a set of policies to support the most vulnerable population.** The literature suggests that the increasing level of human capital accumulation and the expansion of conditional cash transfer programmes has led to a great fall in inequality. Brazil should therefore continue to expand its investment in education and to improve its cash transfer mechanisms with the aim of helping recipients find a way out of poverty by participating in the labour market. Finally, it is important to promote institutional reforms to speed up the process of creating new firms, to reduce the tax burden levied on small firms, and to make the cost of hiring formal employees less expensive.<sup>41</sup>

**The degree of openness to the global economy has not changed much in Brazil over the last two decades.**<sup>42</sup> Although trade flows have greatly increased over this period, this has had more to do with the commodities supercycle than with trade openness. In fact, the favourable economic environment in the 2000s led to more protectionism in Brazil. In recent years, however, the incentives have changed, and the government has started to remove some protectionist measures. The recent decision to ease local content rules is one step towards reducing trade barriers.<sup>43</sup> The literature using computable general equilibrium (CGE) models suggests that there is room for trade expansion with a positive impact on growth. Reductions in import tariffs and local content requirements, along with other structural reforms, could lead to stronger industrial development and higher export competitiveness.

**Despite the widespread impact of globalisation, the implications for monetary policy seem to be much more contained.** The general objective of monetary policy – price stability – remains unchanged, as do the main strategies for achieving it, such as inflation targeting. Most importantly, central banks have retained their ability to meet their targets in both AEs and EMEs.

**Macroprudential measures have played an important role in guaranteeing financial stability as well as in addressing external shocks.** One of the distinguishing features of the Brazilian economy is its prudential regulatory framework. The vigilant stance of the central bank has prevented the development of disequilibria and excesses in Brazil.<sup>44</sup>

<sup>38</sup> World Bank (2002).

<sup>39</sup> KPMG (2017).

<sup>40</sup> United Nations (2015).

<sup>41</sup> Menezes-Filho and Scorzafave (2012).

<sup>42</sup> Neves (2014).

<sup>43</sup> OECD (2017).

<sup>44</sup> Meirelles (2009).



**The Central Bank of Brazil has also contributed to important reforms of the financial system through its BC+ public agenda.**<sup>45</sup> Structured in four pillars, the Agenda BC+ aims at (i) increasing financial citizenship; (ii) improving the central bank's legal framework; (iii) increasing the efficiency of the financial system; and (iv) reducing credit costs. Examples of actions of the Agenda BC+ include contributions for the regulation of electronic registration of collateral and guarantees; the law setting a market-oriented interest rate (TLP) for the Brazilian Development Bank; and the establishment of a new credit bureau.

**In summary, it seems that globalisation forces are weakening, given slow trade growth, tighter immigration policies and the increased risk of protectionist measures in AEs. However, it is too early to conclude that these changes represent a trend to deglobalisation rather than a cyclical decline. In any case, EMEs should take advantage of international liquidity and low financing costs to fuel globalisation.** Policy reforms, such as reductions in import tariffs, along with other structural reforms would increase EMEs' inclusion in global trade, positively affecting exports, investment and production. **This is the right way to take advantage of globalisation and mitigate its negative impacts.** The global outlook is challenging, but there are also prospective opportunities for EMEs. Rather than fomenting a backlash, EMEs should reinforce the engine of globalisation, especially by filling trade gaps and strengthening trading relationships.

<sup>45</sup> Central Bank of Brazil (2016).

## References:

- Acemoglu, D (2003): "Patterns of Skill Premia", *Review of Economic Studies*, vol 70.
- Araújo, S and D Flaig (2016): "Quantifying the effects of trade liberalisation in Brazil: a CGE model simulation", *OECD Working Papers*, no 1295.
- Behrman, J, N Birdsall and M Szekely (2003): "Economic Policy and Wage Differentials in Latin America", *Center of Global Development Working Paper*, no 29.
- Berman, E, J Bound and S Machin (1998): "Implications of skill-biased technological change: international evidence", *Quarterly Journal of Economics*, vol 113.
- Berman, E and S Machin (2000): "Skill-biased technology transfer around the world", *Oxford Review of Economic Policy*, vol 16, no 3, September.
- Bouzas, R and R French-Davis (2003): "Globalization and equity: a Latin American perspective", paper presented at the Fourth Annual Conference on Global Development, Cairo.
- Calderon, C, A Chong and E Stein (2007): "Trade intensity and business cycle synchronization: are developing countries any different?", *Journal of International Economics*, vol 71.
- Calvo, G, A Izquierdo and L Mejia (2004): "On the empirics of sudden stops: the relevance of balance-sheet effects", *NBER Working Papers*, no 10520.
- Cavallo, E (2005): "Output volatility and openness to trade: a reassessment", manuscript, Kennedy School of Government, Harvard University.
- Central Bank of Brazil (2017): "Inflation Report", vol 19, no 3, September.
- (2016): "Agenda BC+", December, [www.bcb.gov.br/pec/apron/apres/Apresenta%C3%A7%C3%A3o\\_Presidente\\_Ilan\\_Goldfajn\\_Agenda\\_BC\\_Mais\\_20122016.pdf](http://www.bcb.gov.br/pec/apron/apres/Apresenta%C3%A7%C3%A3o_Presidente_Ilan_Goldfajn_Agenda_BC_Mais_20122016.pdf).
- Constantinescu, C, A Matoo and M Ruta (2015): "The global trade slowdown: cyclical or structural?", *IMF Working Papers*, no 2015/6.
- (2016): "Does the global trade slowdown matter?", *Policy Research Working Papers*, no 7673, World Bank Group.
- Correa, A (2003): "Diferenças e Semelhanças entre Países da América Latina: Uma Análise de Markov Switching para os Ciclos Econômicos de Brasil e Argentina", Central Bank of Brazil, *Trabalhos para Discussão*.
- Chang, R, L Kaltani and N Loayza (2009): "Openness can be good for growth: the role of policy complementarities", *Journal of Development Economics*, vol 90.
- Deutsche Bundesbank (2016): *Monthly Report*, March.
- Ductor, L and D Leiva-Leon (2016): "Dynamics of global business cycle interdependence", *Journal of International Economics*, no 102.
- Ferreira, P and J Rossi (2003): "New evidence from Brazil on trade liberalization and productivity growth", *International Economic Review*, vol 44.
- Ferreira, F, P Leite and M Wai-Poi (2007): "Trade liberalization, employment flows and wage inequality in Brazil", *World Bank Policy Research Working Papers*, no 4108.

Frankel, J and E Cavallo (2004): "Does openness to trade make countries more vulnerable to sudden stops or less? Using gravity to establish causality", *NBER Working Papers*, no 10957.

Frankel, J and A Rose (1998): "The endogeneity of the optimum currency area criteria", *Economic Journal*, vol 108.

Giordano, P and K Li (2012): "An update assessment of the trade and poverty nexus in Latin America", *IDB Working Paper Series*, no 4209.

Goldberg, P and N Pavcnik (2004): "Trade inequality and poverty: what do we know? evidence from recent trade liberalization episodes in developing countries", *NBER Working Papers*, no 1059.

——— (2003): "The response of the informal sector to trade liberalization", *Journal of Development Economics*, vol 72, pp 463–96.

Goldfajn, I (2017): "Brazil – the road ahead", Financial Times Conference, New York, September.

Goldfajn, I and A Minella (2005): "Capital flows and controls in Brazil: what we have learned?", *NBER Working Papers*, no 11640, September.

Gonzaga, G, N Menezes Filho and M Terra (2006): "Trade liberalization and the evolution of skill earnings differentials in Brazil", *Journal of International Economics*, vol 68, no 2, pp 345–67.

Gutierrez, C and F Gomes (2009): "Evidence on common feature and business cycle synchronization in Mercosur", *Brazilian Review of Econometrics*, vol 29, no 1, pp 37–58, May.

Harrison, A (2005): "Globalization and poverty", *NBER Working Papers*, no 12347.

Imbs, J (2004): "Trade, finance, specialization, and synchronization", *Review of Economics and Statistics*, vol 86.

International Monetary Fund (2002): *World Economic Outlook*, September.

——— (2017): *World Economic Outlook*, April.

European Central Bank (2016): International Relations Committee (IRC) Task Force, "Understanding the weakness in global trade: what is the new normal?", *ECB Occasional Paper*, no 178, September.

Kee, H and H Tang (2016): "Domestic value added in exports: theory and firm evidence from China", *American Economic Review*, vol 106.

Kose, M, E Prasad, K Rogoff and S Wei (2006): "Financial globalization: a reappraisal", *NBER Working Papers*, no 12484.

Kose, M, C Otrok and E Prasad (2008): "Global business cycle: convergence or decoupling", *NBER Working Papers*, no 14292.

KPMG, *GMS Flash Alert, Immigration Edition*, June 2017.

Lisboa, M, N Menezes-Filho and A Schor (2010): "The effects of trade liberalization on productivity growth in Brazil: competition or technology?", *Revista Brasileira de Economia*, vol 64, no 03.

McKinsey Global Institute" (2016): *Digital globalization: the new era of global flows*, March.

- (2016): "People on the move: global migration's impact and opportunity", December.
- Meltzer, J (2016): "Maximizing the opportunities of the internet for international trade", *The E15 Initiative Policy Options Paper*, January.
- Menezes-Filho, N and M Muendler (2011): "Labour reallocation in response to trade reform", *NBER Working Papers*, no 17372.
- Menezes Filho, N and L Scorzafave (2012): "Employment and inequality of outcomes in Brazil", *Inspere Policy Papers*, no 1.
- Meirelles, H (2009): "Ten years of floating exchange rates in Brazil", speech by the Governor of the Central Bank of Brazil.
- Neves, J (2014): "Brazil's slow and uncertain shift from trade protectionism to free trade", *Inter-American Dialogue Working Paper*.
- Obstfeld, M (2009): "International finance and growth in developing countries: what we have learned?", *NBER Working Papers*, no 14691.
- OECD (2017): *Economic Outlook*, no 1.
- Pastore, A, M Gazzano and M Pinotti (2012): "Por que a produção industrial não cresce desde 2010?", *A.C. Pastore e Associados*, manuscript.
- Ratha, D, S Mohapatra and E Scheja (2011): "Impact of migration on economic and social development", *Policy Research Working Paper*, no 5558, World Bank Group.
- Rodríguez, F and D Rodrik (2001): "Trade policy and economic growth: a skeptic's guide to the cross-national evidence", *NBER Macroeconomics Annual*.
- Sánchez-Páramo, C and N Schady (2003): "Off and running? Technology, trade, and the rising demand for skilled workers in Latin America", *World Bank Policy Research Working Paper*, no 3015, Washington DC.
- Santos, R and M León (2010): "Efeitos da Globalização na Inflação Brasileira", Central Bank of Brazil, *Trabalhos para Discussão*, no 201.
- Schor, A (2004): "Heterogeneous productivity response to tariff reduction. Evidence from Brazilian manufacturing firms", *Journal of Development Economics*, vol 75, December.
- United Nations (2015): Department of Economic and Social Affairs – Population Division, *International migrant stock as a percentage of the population*, [www.un.org/en/development/desa/population/migration/data/estimates2/estimates15.shtml](http://www.un.org/en/development/desa/population/migration/data/estimates2/estimates15.shtml).
- Ventura-Dias V (2005): "Os Aspectos Distributivos das Negociações Comerciais: o Estado do Debate no Brasil", *Latin America Trade Network Working Papers*, no 33.
- Webshoppers (2017): *Relatório*, no 35, February.
- World Bank (2002): *Globalization, growth, and poverty*, World Bank and Oxford University Press.