The Causes of Trade Tensions and their

Consequences for Financial Stability

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November 6, 2019

I have two objectives in this short paper. First, I explore some of the reasons why the world is currently experiencing so much tension associated with international trade. Second, I discuss some of the consequences of this trade tension for financial stability.

Why is International Trade Weakening? Some Long-Run "Natural" Causes

I begin with some long-run reasons for the weakening of international trade. During this febrile time, one is tempted to ascribe everything to causes that are both immediate and man-made. But while the ongoing tariff war is indeed largely both short-run and policy-driven, a number of other factors are both "natural" (as opposed to the "artificial" barriers to trade posed by protectionist policies) and long-run in nature.

One important long run feature is that growth in tradeable goods tends to slow in rich economies. As countries become richer, they tend to consume disproportionate amounts of

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services; the fraction of spending on goods falls with income, a characteristic most clearly identified by Simon Kuznets. From the supply side, productivity gains in secondary production have slowed over time. There is no reason to expect that either the demand or supply trends will change. Indeed, that is especially true since populations tend to age as income rises, and older people consume disproportionate amounts of (health care) services. These trends are relevant since most international trade is currently in goods (whether finished or not).

Many services are hard to trade because they are intrinsically non-tradeable. Services that are tradeable are often much harder to trade than goods because standards must be harmonized and regulations made consistent, something that is often harder to do with services than goods. Indeed, the rising importance of regulatory harmonization is one of the reasons for the ongoing proliferation of regional trade agreements; the manifest difficulty of removing such artificial barriers to trade through RTAs is one of the reasons that the growth in trade has slowed.

One of the most important reasons that trade grew faster than income for the last half of the twentieth century was technological progress in transportation. But such advances seem to be slowing, much as productivity growth in the economy as a whole has slowed down as we approach the technological frontier. There have been few developments comparable to containerization, and indeed it is hard to imagine them.² Indeed, climate change is emerging as an enormous – perhaps existential – challenge to humanity, and policies that respond

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² That said, communication costs are clearly falling rapidly, and this manifestly facilitates the international trade of services.

effectively to climate change could well raise the transport costs of international trade enormously, especially air transport (which is notoriously bad for the environment).

One interesting reason why international trade rose during the post-war period was the creation – indeed, the proliferation – of new countries. That is, trade that had been intranational became international when countries split. As Alberto Alesina has pointed out in his work, over a hundred countries exist now that did not at the end of WW2, and the vast majority are small. Small countries trade more than the large, and the typical size of a country has shrunk over the last decades. Alesina argues that this is precisely because pieces of countries can accommodate their idiosyncratic preferences (which have long been present) with the benefits of free trade, because of ... economic integration. Indeed the Alesina point is that political disintegration is partly driven by economic integration; here I simply note that political disintegration further boosts international trade. Since countries like the Soviet Union, Yugoslavia, Czechoslovakia, and Sudan, can only be dissolved once, the boost to international trade from shrinking country size is likely to taper off or end altogether.

Policy-Driven Long-Run Causes of Trade Tensions

It is hard to see any of these long run forces reversing themselves anytime soon; all are reasons to expect trade to wither for natural reasons. But some long-run forces are "artificial" and represent man-made policy-induced barriers to trade.

One of the most identifiable trends of relevance is the slowing pace of trade liberalization. Consider the successive multilateral GATT "rounds" of negotiated trade

agreements; they occurred in: 1947 (Geneva); Annecy (1949); 1950-51 (Torquay); 1956 (Geneva); 1960-61 (Dillon); 1964-67 (Kennedy); 1973-79 (Tokyo) and 1986-94 (Uruguay).³ The frequency of successive rounds slowed as their duration increased. Perhaps most strikingly, the WTO – which was created in 1995 to replace the GATT – has never concluded even a single round. The Doha round, launched in 2001, has not (yet) been concluded.⁴ Of course a slowdown in the pace of international trade liberalization may be inevitable as more countries are drawn into negotiations and as increasingly complex barriers to trade are considered. Nevertheless, to understand this trend is not to deny its existence. And trade liberalization is often compared to riding a bicycle; staying still is not an option, so if the world is not moving forward, it's moving backwards.

Another big persistent issue that is made, at least in part, by policy, is that of global imbalances. A number of important countries like China and Germany produce more savings than they invest domestically; this savings glut is doing a number of things. At the macro level, the excess savings is pushing down real and thus nominal interest rates. This reduces the room that key central banks have to maneuver; the European Central Bank and Bank of Japan (among others) have been levying negative nominal interest rates for years, while the policy rates of the Bank of England and the Federal Reserve are low. All are constrained in their ability to respond to negative shocks by the levels of nominal rates; this generates instability in both the real economy and the financial sector. Central banks are responding by

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³ https://www.wto.org/english/docs e/gattbilaterals e/indexbyround e.htm

⁴ https://www.wto.org/english/thewto e/history e/history e.htm

rethinking their monetary frameworks, quite appropriately.⁵ But another aspect is also of relevance: the global imbalances are necessarily translated into massive international flows of trade and capital that are, by definition, unbalanced. These flows have themselves generated a populist backlash that is providing the backdrop against which protectionism flourishes.

Global imbalances mean global trade tensions.

Short Run Causes of Trade Woes

While there are a number of significant long-term trends that have caused a slowdown in the growth of trade, most of the causes are more immediate.

One issue that has been brewing for a few years is the rise of US dollar; Gopinath has extensively discussed the negative effect of dollar appreciation on international trade even outside the United States.⁶ The dollar's rise has in in turn been caused in part by the American monetary tightening (recently reversed, at least in part). The rise of the American dollar has been dramatic and sustained, as shown in Figure 1 below. It has been caused by a number of factors including the Trump fiscal expansion and the fact that uncertainty has risen because of European (Brexit) and Asian (Chinese growth slowdown) woes when the United States remains the primary global issuer of safe assets.

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⁵ In passing: since the need for further nominal flexibility is motivating this drive towards new monetary frameworks, it seems clear that exchange rates are likely to become even more flexible in the future.

⁶ This is caused in part because the US dollar is used to invoice international trade; there may also be an effect through tighter credit. Boz et al. (2017) provide more detail.

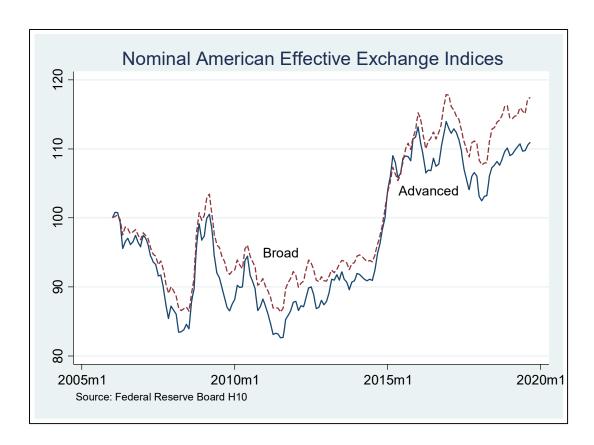


Figure 1

<u>Protectionism and Trade Policy Uncertainty</u>

Of course, while the rise of the US dollar has added fuel to the fire, the most obvious reason for the trade slowdown has been the protectionism engineered by President Donald Trump, who has nicknamed himself "a tariff man". Trump thinks that "trade wars are good, and easy to win." He has certainly been consistent in this, having imposed tariffs on a range of goods (both specific – including among many others solar panels, washing machines, steel, aluminum – and broad-based) and countries (including Canada, EU, India, and Mexico). The

⁷ https://twitter.com/realdonaldtrump/status/1069970500535902208?lang=en

⁸ https://twitter.com/realdonaldtrump/status/969525362580484098?lang=en

most dramatic focus of the Trump trade war is obviously China. The American tariff rate on Chinese imports is on track to rise from 3.1% in 2017 to 26.6% in Dec 2019, and will cover 96.8% of American imports, up from 8.1% in 2017.

The rising level of protectionism is the most immediate and apparent cause of the slowdown in international trade. But perhaps even more important is the way that the trade war has been conducted. President Trump is a man notorious for his fickleness and lack of strategic focus. The war is being conducted in a haphazard manner; no one –certainly not his team, but probably not he himself – knows what could happen to end Trump's trade war. What would "victory" in the American trade war with China look like? A halving of the bilateral trade deficit? A reduction in the aggregate American current account deficit? An apology? An appreciation of the RMB? As a result, policy-induced uncertainty, is large; two standard measures are shown in the figure that follows.¹¹

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⁹ These data are taken from Chad Bown's blog; https://www.piie.com/blogs/trade-and-investment-policy-watch/us-china-trade-war-guns-august .

¹⁰ A difficult target, given the fact that American savings has declined as a result of the Trump tax cut.

This uncertainty is exacerbated by the lack of American support for a rules-based trading system; the clearest evidence for the latter is the American refusal to allow the WTO to name appellate judges for its dispute resolution system.

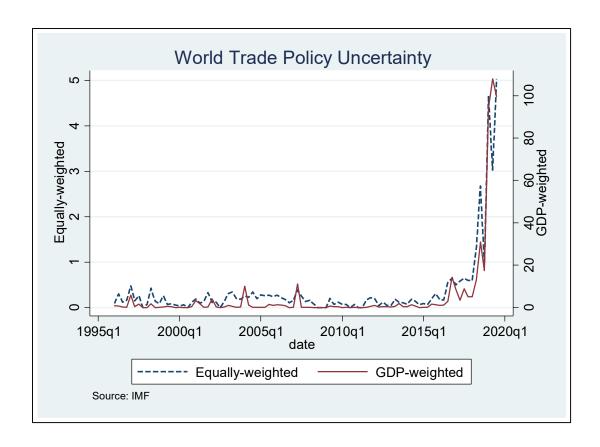


Figure 2

The uncertainty apparent in Figure 2 is induced, primarily because President Trump is an unstable and unreliable protectionist. He has not carried through on a number of his threats; further, protectionism has been used for reasons unrelated to international trade (such as his temporary sanctions on Turkey associated with the Kurdish invasion, not to mention his threats on Mexican tariffs associated with immigration ... conducted shortly after the USMCA was concluded). And while the level of protectionism is relevant, uncertainty about the level is costly as well; that is, both first and second moments matter. Bloom and co-authors have shown that uncertainty has a substantial effect in lowering firm investment, which is part of the reason for the current slowdown in growth; the uncertainty is also manifest in corporate

spreads. Since capital goods are disproportionately traded, this further lowers trade, adding to the vicious cycle. But more importantly, over a longer period of time, the unraveling of firms' supply chain lowers productivity and welfare; more on that soon.

The Erosion of Soft Power

Donald Trump is a controversial and divisive figure within America; he is even more so outside the United States. Part of this comes from his ideological and political incoherence; perhaps the only belief Trump has held consistently is that exports are good while imports are bad. Part of Trump's unpopularity stems from his volatile and poisonous style of leadership. Moreover, these two phenomena are linked; Trump's nativist style lowers American exports. This is one final short-term cause for current trade tensions.

The export consequences of a country's leadership style are one manifestation of "soft power." Soft power is a term first used by Joseph Nye (1990) to describe the ability of a country to do what it wants by means of persuasion rather than means of force; Nye (2004) provides more detail. Hard power is the ability to coerce, and grows out of a country's military or economic might; soft power arises from the attractiveness of a country's culture, political ideals, and policies. "Soft power is ... the ability to attract, [since] attraction often leads to acquiescence ... soft power uses a different type of currency (not force, not money) to engender cooperation – an attraction to shared values ..." (Nye, 2004, pp 6-7). With an enormous economy and the most powerful military in the world, America currently has plenty

of hard power. But what of American soft power, especially of late? Do tweets enhance American soft power? And is this consequential?

The first issue one confronts is the very measurement of soft power. Luckily however, this problem is easily solved via surveys. Since 2006, Gallup's World Poll has annually asked about a thousand survey participants in each of over a hundred countries a series of questions "Do you approve or disapprove of the job performance of the leadership of China/Germany/Russia/the United Kingdom/ the United States?" The Gallup data give a clear and intuitive picture of the soft power of these countries, that is the attractiveness of their leadership to foreigners.

The popularity of the Obama presidency *outside the United States* appears clearly in Figure 3 below. The three plots presents average views of non-Americans about American leadership between 2006 and 2017. Approval of American leadership has swung dramatically; it improved substantially between 2006 and 2012, and declined markedly between 2012 and 2017. Obama was a popular president, especially by way of comparison with both his predecessor (George W. Bush) and his successor (Donald Trump). Job approval of American leadership jumped from less than 40% under Bush in 2008 to over 50% under Obama in 2009; similarly, it declined by over ten percentage points when Trump succeeded Obama in 2017.

Consistently, average disapproval of American leadership fell sharply with Obama's accession 2009 before rising sharply in 2017, as shown in the middle panel.

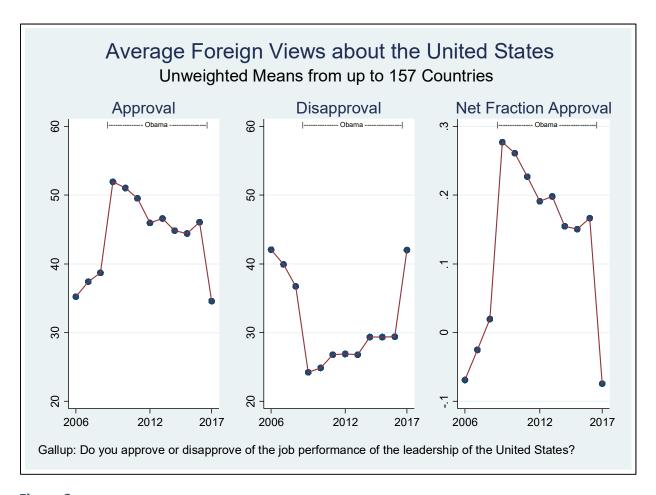


Figure 3

So the Gallup data seem to provide a reasonable picture of soft power. But while the intuitive patterns in the data are reassuring, there is little reason to presume that there is any quantifiable link between exports and soft power. My research, presented in Rose (forthcoming), asks whether countries are affected in any tangible way by fluctuations in soft power. In particular, I test whether changes in foreign perceptions of soft power affect actual

export sales, all else equal. To do this, I use a standard data set of aggregate international trade and a plain-vanilla "gravity" model of international trade to account for other influences on bilateral exports besides soft power; details are available online). In an econometric way, this enables me to ask whether a country whose leadership is considered appealing by potential importers experiences systematically higher exports than countries whose leadership is repellent, *ceteris paribus* (using the gravity model to hold other things constant). As my measure of soft power, I use the Gallup survey results.

When I estimate the econometric model, it works well; most variation in exports is well and sensibly explained by the underlying gravity model. This means that the threshold for any additional export determinant is high. But, it turns out that the *additional* effect of soft power is still strong. Very strong. An increase in net Gallup approval has a large positive effect, and is statistically precise. This effect of soft power on exports is big; a decline in net fraction approval of one standard deviation (.33) lowers exports by around (.33*.91≈) .3%. Average net approval by foreigners of the American leadership declined from +16.6% in 2016 (Obama's final year in office) to -7.4% in 2017 (the first year of the Trump presidency). This swing of 24 percentage points in net approval would be expected to lower American exports by (.24*.91*\$1.45tn≈) .22% or \$3.3 billion. Even this calculation is conservative if countries that are large importers of American products also disapprove of Trump disproportionately, as seems relevant. Net approval of American leadership in both Canada and Mexico fell by more than 60 percentage points, and these are America's two largest importers, together accounting for over a third of American exports.

To summarize: the evidence points to a powerful role of soft power in export determination, even after holding other effects constant through the gravity model.

Exporters sell more exports to countries which approve more of the job performance of their leadership, even after accounting for other factors. Canada is likely to buy more from the United States if American exerts soft power over Canada. The effect of soft power on exports is economically large, given that swings in leadership approval are often dramatic. I conclude that Trump's unpopularity outside the United States dampens the demands for American exports. More generally, the emergence of populist leaders who are remarkably unpopular outside their home countries (and who currently lead the UK, Hungary, Poland, as well as the United States) has led to a decline in international trade caused by the erosion of soft power.

Summary: Causes of Trade Tension

Let me summarize the causes of the tension in international trade succinctly. There are at least four longer run determinants: a) changes in technology (stalled technological progress in both manufacturing production and transport costs); b) changes in preferences (increasing demand for non-tradeables such as healthcare); c) stalled trade liberalization; and d) tensions associated with global imbalances and the global savings glut. There are also short run issues, most obviously: a) the appreciation of the American dollar; b) explicit protectionism; c) policy-induced uncertainty; and d) the loss of soft power and rise of nationalism. All these phenomena seem likely to be persistent, so trade tensions are going to be with us for a while.

What about their effects? In particular, what effects do these trade tensions have on financial stability? I next turn to these topics.

Effects of Trade Tensions on Financial Stability and Welfare

The most visible and immediate macroeconomic consequence of trade tension is slower growth. Indeed, much of the current global slowdown has been driven in part by the Trumptriggered protectionism and resulting trade policy uncertainty. This is both widely acknowledged and significant; the IMF lowered its projections of GDP growth in Oct 2019 by .4% in the last six months, heightening the possibility of a macro downturn or recession. And any downturn in the real economy naturally raises the prospects of financial instability.

Above and beyond the obvious effect on financial instability through macroeconomic fragility, trade tensions have plenty of more insidious and indirect effects, some of which are persistent and costly. While these effects are not associated with financial fragility, they are sufficiently important that they cannot be ignored. In particular, the most obvious effects of withering trade are real; lower trade integration is costly in income, productivity, and welfare. And the trade war is clearly flattening trade, particularly for economies like China: after rising at double digit rates the year before, the imposition of American tariffs has lowered Chinese exports and imports to basically zero (IMF, 2019). These costs are mostly small now, but will rise with time. In the long run, many of these effects are on the supply-side because reduced international trade means foregone specialization, productivity and competition. As Adam Smith first wrote, the division of labor depends on the extent of the market, and international

trade restrictions limit the extent of the market. However, some effects are on the demand side; more protectionism means higher prices and foregone choices for consumers. These effects are likely to cumulate and could be substantial.¹² Frankel and Romer (1999), Alcalá and Ciccone (2004), and Hall and Jones (1999), all estimate that the effects of international trade on the real standard of living are big.¹³ And these costs are especially important for two vulnerable groups: developing countries and commodity exporters.¹⁴

I now want to explore two less obvious, indirect effects of trade on financial fragility.

The first is the effect on business cycle synchronization (hereafter "BCS"), which is endogenously determined by, among other things, international trade.

Slowing Trade and Business Cycle Synchronization

Frankel and Rose (1998) first established that BCS is affected by trade, both in theory and practice. The logic is straightforward. Consider a world of two economies which engage in trade with each other and are each hit by shocks and hence experience business cycles.

Suppose that for some exogenous reason, there is a decline in the barrier to trade between these countries, which eases and increases trade. What is the effect of this on the degree of

¹² It is interesting to note in passing that the current protectionism is not counter-cyclic; the US is perpetrating protectionism during a long boom with low unemployment and inflation. Protectionist pressures unleashed at such a point in time may be much harder to combat during the next recession; this could lead to bigger future negative welfare consequences.

¹³ But not all such estimates are high; Rodrik, Subramanian and Trebbi, 2004.

¹⁴ A banal point: countries less exposed to international trade are also countries that are less vulnerable to terms of trade shocks.

business cycle synchronization? It's ambiguous in theory. As trade increases, the effect on BCS could in principle be negative. This is plausible if most international trade is driven by comparative advantage, so that more trade enhances specialization; if most shocks are idiosyncratic productivity shocks, then the effect of increased trade and specialization is a decrease in BCS. But the effect could easily be the opposite, for instance if most trade is driven by intra industry motives or if most shocks are common demand shocks which would be shared via trade. So the theoretical effect of international trade on BCS is unclear.

Empirically, however, there is no ambiguity whatsoever; in practice, more trade leads to higher BCS. Frankel and I showed this clearly in our 1998 paper, using gravity determinants as instrumental variables. This result has proven to be robust, as shown by, for instance, Baxter and Kouparitsas (2005). So it seems reasonable to assume the relationship is positive. And indeed, this seems plausible; BCS has grown in the last seventy years coincident with the dramatic rise in international trade.

If trade has a positive effect on BCS, then, by symmetry, lower trade leads to more idiosyncratic business cycles. That is, the historically positive effect of trade on BCS may plausibly be going into reverse; in the future, business cycles – and their associated risks – might become more national. This may not be a bad thing, at least if one looks solely at financial stability. For one thing, if risks are more idiosyncratic they are also more diversifiable; financial stability might rise. Further, a less pronounced global business cycle makes the work of organizations like the G20 and IMF easier; this might further enhance real and financial stability.

Effects on Financial Integration

If lower trade leads to reduced business cycle synchronization, then recessions – and hence financial stability issues – become more idiosyncratic diversifiable. But lower trade may also lead recessions to become fewer and more shallow. The reason is straightforward; lower integration of the real economy – that is, in the markets for goods and services – may well lead to lower integration of the financial sector. And open capital markets are risky.

Financial integration tends to follow real integration. This point seems eminently clear in a purely empirically sense: goods markets are almost always liberalized before markets for services, while both tend to be liberalized before factor markets (for capital and labor). Most countries in the world have significant restrictions on financial flows, for instance, as measured by the IMF's Annual Report on Exchange Arrangements and Exchange Restrictions. By way of comparison, while formal barriers to international trade in merchandize alas remain pervasive, they also tend to be smaller. Deviations from the law of one price are often big for goods, especially for non-homogeneous and non-tradeable goods. But they are often immeasurably bigger for stocks/bonds, since much trade in financial assets is made illegal by official policy.

A large literature has studied the sequencing of economic reform for decades; while development economists worked on this for decades following the independence of former colonies in the 1950s and 1960s, the transition to capitalism of China and countries in both Eastern Europe and the former Soviet Union have provided a new mass of observations.

Many economists have studied the issue; perhaps the work of McKinnon (1993) looms largest.

Among the less controversial findings is that, in the words of Eichengreen (2015, p9) "most analyses conclude in favor of liberalizing goods markets and the current account first.

Intuitively, if goods markets are heavily distorted, financial liberalization may cause resources to flow into the wrong sectors, where the undistorted productivity of investment is low..."

Now *international* financial liberalization is typically viewed as the final step in the journey of reform, almost always after domestic financial reform. That is, financial integration is a result of policy choices, and almost always follows the reform and liberalization of the real economy, i.e., real integration. Perhaps the most prominent examples are the European Union's Single European Act which came into force in 1992, and added the freedom of movement to capital and labor following that which already existed for product markets.

More generally, goods markets are more liberal than those for services, and both are more liberal than financial flows. So there is reason to believe that a world with less real integrated goods and services markets may also be less financially integrated; it is hard to imagine rising restrictions in the former without more in the latter. That is, financial integration is likely to fall with trade tensions as these inevitably take their toll on international commercial flows of both goods and financial services.

As with goods and services, less financial integration has its costs. For instance, in a less financially integrated world, savings flow less efficiently to good investments, and risks can't be spread as widely across borders. However – and in this respect, unlike real integration – there is considerable skepticism about the gross size of the benefits from financial

integration. For instance, Gourinchas and Jeanne (2006) argue that the gains from international financial integration are small; see also work by Rodrik and Bhagwati. 15

But even ignoring the disputed size of the gross benefits from financial integration, there is little doubt that increased capital mobility has costs. Indeed, there is a quasiconsensus that financial integration poses additional risks of financial crisis. A large literature on contagion followed the currency crises of 1992, 1994, 1997, and 1998. Alternatively, it has been well noted that the countries which experienced more mild downturns during the global financial crisis of 2007-09 were also the countries that were more financially closed. This makes eminent sense; international capital flows are often "hot" and banking booms are both exacerbated by capital flows and risky for the domestic economy. That is, more financially closed countries suffer crises that are both smaller and fewer compared with open economies.

Now financial insulation is not the objective of policy-makers when they keep the financial systems of developing countries closed. These countries also have weaker institutions, including particularly weak monitoring systems, both domestic (e.g., regulatory) and foreign (e.g., rating agencies). Still, the point is that they *are* more financially closed, and thus less prone to imported financial contagion. So trade protectionism may deliver an inadvertent macroeconomic benefit in the form of fewer and less violent business cycles, at a minimal economic cost. The cost of lower trade may thus be partially offset by lower contagion, fewer spillovers from foreign shocks.

¹⁵ Rodrik: https://rodrik.typepad.com/dani-rodriks-weblog/2008/11/international-finance-and-economic-growth.html; Bhagwati, Jagdish (1998) "The Capital Myth: The Difference between Trade in Widgets and Dollars" Foreign Affairs 77, 7-12.

Conclusion

There are many effects of trade tension on financial stability ... and they're not all bad!

Among the short run bad effects are a higher likelihood of recession, which raises the specter of financial instability. The long run effects of lower trade are mostly bad, since less trade is likely to lead to lower income and welfare. But there may also be some good side-effects which may enhance real and financial stability. Business cycles are likely to be less synchronized, and countries are less likely to import real and financial shocks as both real and financial integration falls. Financial repression is bad for welfare but good for stability.

As business cycles become less globally coordinated, risk will become somewhat more easily diversifiable. And financial integration is likely to fall. As a consequence, there will be fewer gains from integration (of a small but uncertain magnitude), and demonstrably fewer risks from financial contagion. All these effects are likely to be progressive in that they will be more dramatic for OECD than developing countries/emerging markets. Two cheers!

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