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Friendshoring: Who will benefit?

A good look at 'friend-shoring' from China

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Summary

- There is a lot of talk about 'friend-shoring' production from China. Some believe this will never happen due to China's cost and network advantages; others say it will happen with a lag. Neither side specify the scale on which it could happen - we try to do so
- We estimate the number of Chinese jobs reliant on Western export demand; where they are located; and their \$ cost per job by product category - low, medium, and high tech. This is taken as potential friend-shoring 'supply'
- We then look at geopolitics, domestic stability, infrastructure, labour potential, and its cost, dismissing countries above/below key thresholds. The remainder is friend-shoring 'demand'
- We then assess whether an economy would want to make the trade-off between potential jobs gained, at income level X, vs. potential jobs lost at income level Y, if more trade with the West means less trade with China
- The results are clear: up to 28m critical jobs could theoretically leave China, and this could see China's trade surplus decline from 3.0% to -0.6% of GDP, with huge side effects. Beijing will likely do all that it can to retain its trade MySpace. Inflation would also likely rise during the transition process.
- However, the list of potential winners could reshape geoeconomics and geopolitics

Friends Reunited?

On 13 April, US Treasury Secretary Yellen gave a [speech](#) to The Atlantic Council in which she stressed:

"Going forward, it will be increasingly difficult to separate economic issues from broader considerations of national interest, including national security..."

On some issues, like trade and competitiveness, this will involve bringing together partners that are committed to a set of core values and principles..."

Favouring the friend-shoring of supply chains to a large number of trusted countries, so we can continue to securely extend market access, will lower the risks to our economy as well as to our trusted trade partners."

UK Foreign Secretary Truss then proposed a 'Network of Liberty', adding *"For too long many have been naïve about the geopolitical power of economics,"* China's rise *"isn't inevitable... We represent half of the global economy. And we have choices,"* and the West should use the G7 as an *"economic NATO"* and commit to *"collective economic defence... all for one and one for all."*

Japan has long advocated onshoring some production and is openly subsidising firms that want to bring supply chains home.

Even the EU is getting cold feet about China's backing for Russia's position on Ukraine and its economic coercion of Lithuania, and is talking of both diversification and supply chain resilience.

However, talk, like Chinese imports, is cheap. Many in markets remain rightly sceptical whether firms or consumers will really be willing to pay the higher structural cost of production outside China, or the frictional cost of moving supply chains away from it.

Yet the tide does seem to be turning. Even free trade advocates The Economist note that *'The structure of the world's supply chains is changing'*. The Financial Times, equally opposed to the idea of geopolitical trade blocs and friend-shoring, warns that despite their hopes for the opposite, *"It is possible --perhaps even probable-- that the world system will shatter."*

As such, friend-shoring is something worth looking at in more detail.

Ketchup with the trend

The US recently launched a new Indo-Pacific Economic Framework (IPEF), which while a place-holder could be fleshed out into a trade bloc that does not lower tariffs between members but *raises* them against China.

The US has also signed a '21st century deal' with New Zealand including greater defence co-operation; passed the Uyghur Forced Labor Prevention Act to block imports from Xinjiang; agreed the 'Blue Pacific' partnership for Pacific Island nations to push-back against China; and the G7 has announced a \$600bn infrastructure fund to rival China's Belt and Road. The US CHIPS act to boost domestic semiconductor production also looks close to the finish line, alongside a slew of investment.

On the other hand, US President Biden has suggested removing some tariffs on China - though his Trade Representative wants to keep "strategic" ones as "leverage" for negotiations, and major changes are unlikely to occur.

In short, the direction of trade travel is clear, but perhaps not the speed, nor the final destination. Yet two steps forward, one step back is still one step at a time out of China and towards other markets.

Firms also appear keen to move supply chains to reduce rising logistical and geopolitical risks of different forms.

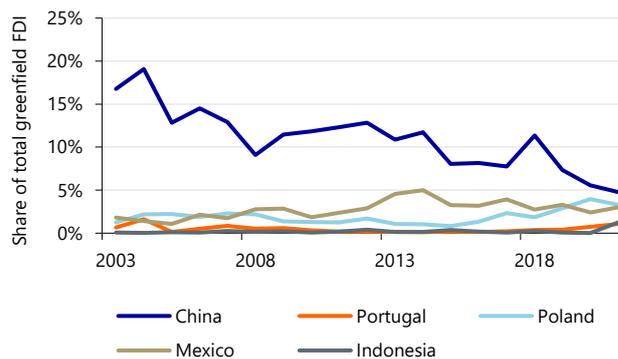
- Even the benchmark Apple is shifting some production to Vietnam and India.
- [Kearney's annual reshoring index](#) for 2021 --pre-Ukraine and the energy crisis-- showed only 8% of US manufacturing executives surveyed had *not* considered some reshoring vs. 47% who already had reshored in the past three years, and 29% who planned to do so in the next three.
- A [2022 ABB poll](#) of 1,610 manufacturing executives saw 70% of US-based firms planning to invest in new capacity closer to home.

FDI data shows China's share of total new inward investment has dropped from around 14% to just 5% (Figure 1), while US imports from Vietnam and India are rising compared to those from China.

In some cases a production shift is slowed by related industries also needing to. Anecdotally, Indian textile firms are seeing inquiries about taking production from China, yet they are turning it down due to a lack of looms... which China produces and will not sell to them. Once new loom supply chains are also set up, a much larger shift in overall production from China to India may be seen.

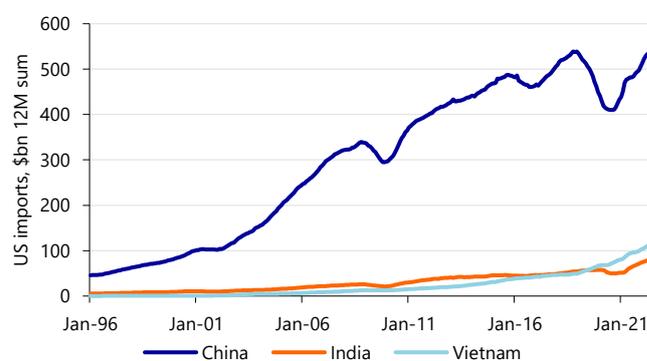
This points to a so-called "J" curve, or "ketchup effect".

Figure 1: China is losing its attractiveness



Source: UNCTAD

Figure 2: A long way behind, but closing the gap?



Source: Macrobond

In short, the argument that friend-shoring will not happen does not reflect what the leading trend of data already suggests: and that was pre-Ukraine, China lockdowns, and geopolitical tensions raised by NATO's latest [Strategy Concept](#) declaring that China's "stated ambitions and coercive policies challenge our interests, security, and values," which hardly argues for more trade and investment.

Indeed, if we do see a friend-shoring trend ahead it is likely to be rapidly non-linear. Things would undoubtedly accelerate were Western governments to offer financial incentives to do relocate, as in Japan or with US semiconductors; or even to give clearer guidance on the emerging geopolitical architecture, rather than forcing each firm to read those strategic tea leaves for themselves.

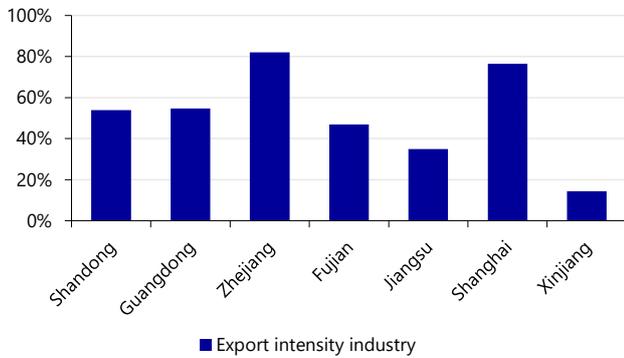
This report will attempt to 'front-run' such potential geoeconomic shifts to estimate the potential for friend-shoring globally.

(The full methodology we use is described in detail in the Technical Appendix, with a summary here.)

Chinese export engines

China produces the goods it exports in mainly six key provinces: Fujian, Guangdong, Jiangsu Shandong, Shanghai, Zhejiang, and, to a much lesser degree, Xinjiang. The export intensity is remarkable, reaching over 80%. (Figure 3.)

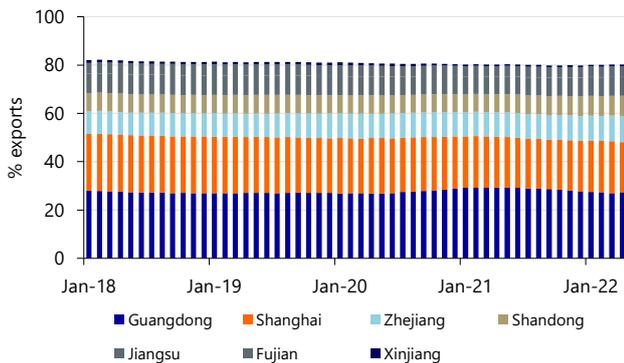
Figure 3: China, the factory of the world



Source: Macrobond, NBS

Taken together, these seven locations are responsible for 80% of China's total exports. (Figure 4.)

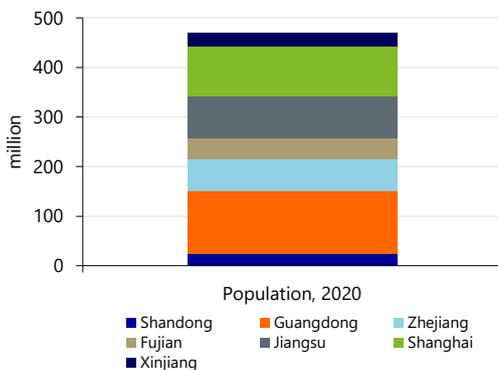
Figure 4: 7 provinces of 31 produce 80% of Chinese exports



Source: Macrobond, NBS

These seven provinces account for 469m people, a little over a third of China's official population. (Figure 5.)

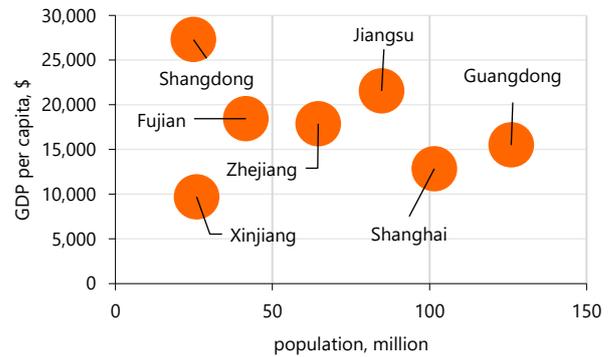
Figure 5: Export regions account for 1/3rd of the population



Source: Macrobond, NBS

GDP per capita varies sharply but may surprise those who still associate China with low-cost production. (Figure 6.)

Figure 6: GDP per capita and production differs per region



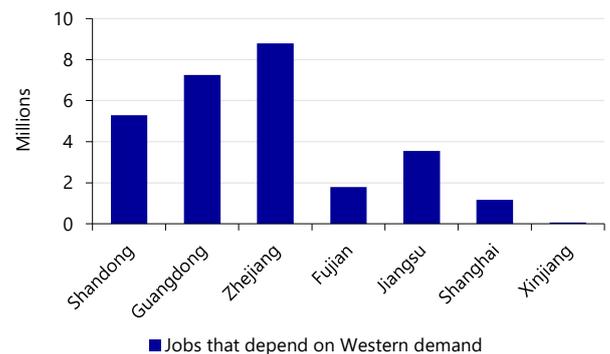
Source: Macrobond, NBS

While Xinjiang's GDP per capita is around \$10,000, Shanghai's is over \$27,000, and Guangdong in the industrial heartland of the Pearl River Delta is around \$15,500.

Of course, labour does not capture 100% of GDP, and China's labour share is far lower than in most other markets. We include that lower adjusted figure in our computations.

So, we know where China produces exports; that OECD data show 52% of imported trade value-added (TVA) in the West originates in China; how many people live in China's exporting provinces; the relative numbers employed in export-related industry there; and how much they 'cost' on average in dollar terms.

Figure 7: Lots of Chinese jobs depend on Western demand



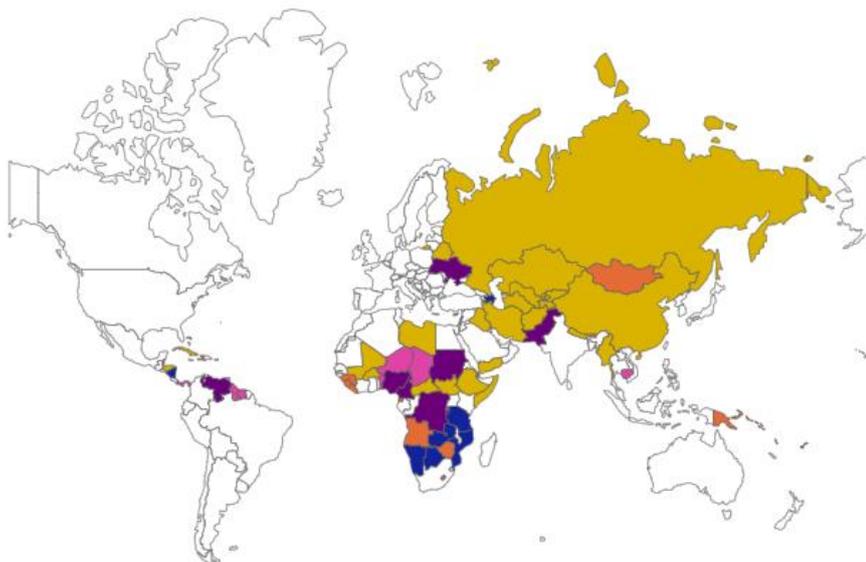
Source: Macrobond, NBS

This means we can put this together to estimate that **28m Chinese jobs directly rely on exports to the West.** (Figure 7.)

We can now look at where this pool of friend-shoring supply might be demanded, were this trend to emerge.

Figure 8: My mum said I can't be friends with you

Reason for exclusion ● Data ● Infrastructure ● Labor potential ● Political stability ● Unacceptable country



Source: RaboResearch

Friend me!

First, we filter all global countries on a variety of factors:

- Geopolitics (is the country a friend of Russia/China?);
- Domestic political stability (is it safe?);
- The level of infrastructure (does it suffice?);
- Its labour potential (is the country too small or unable to offer spare workers?); and
- Its labour-share-of-GDP-adjusted costs relative to China's (is it too expensive?) in three different export product sectors, low, medium, and high technology, using the World Bank's [definition](#).

We dismiss countries above/below key thresholds in these regards, which immediately removes a swathe of potential friend-shoring locations across Africa and central Asia, with a few in Southeast Asia and Latin America also excluded. (Figure 8.)

We then score all remaining countries based on:

- Political stability;
- Local labour costs;
- Local labour market potential in particular industries, including projected population growth;
- Infrastructure, including the distance to the nearest largest export market;
- Low, medium, and high-tech manufacturing as a percentage of national TVA; and
- The national tariff structure vis-à-vis the West.

The trade trade-off

We fully recognise that in the 'geopolitical' world driving friend-shoring, China will not be pleased with countries 'stealing' its manufacturing jobs. Consequently, we account for potential Chinese repercussions. We assume that in the worst case scenario, China halts trade with specific countries.

That implies that countries are only willing to take 'Chinese' jobs and export more to the West if the added value of the jobs they receive is larger than their current net TVA from trade with China.

This approach doesn't factor in any reliance on Chinese key technology, or any risks of non-trade retaliation. However, it should be a fairly reliable indicator for the 'trade trade-off' that countries must make.

Additionally, even though China is more than capable of coercing smaller countries individually, it might choose not to do so when it has to fight a number of smaller countries simultaneously.

An indicative, but not exhaustive, list of how key potential friend-shoring economies are currently exposed to China -- in terms of their exports to it as a share of total exports, and their imports as a share of their total imports-- is shown in Figure 9.

Figure 9: A China trade heat-map



Note: Red indicates that China is a net importer of goods from the countries specified in the column, whilst blue indicates the opposite.
 Source: WTO

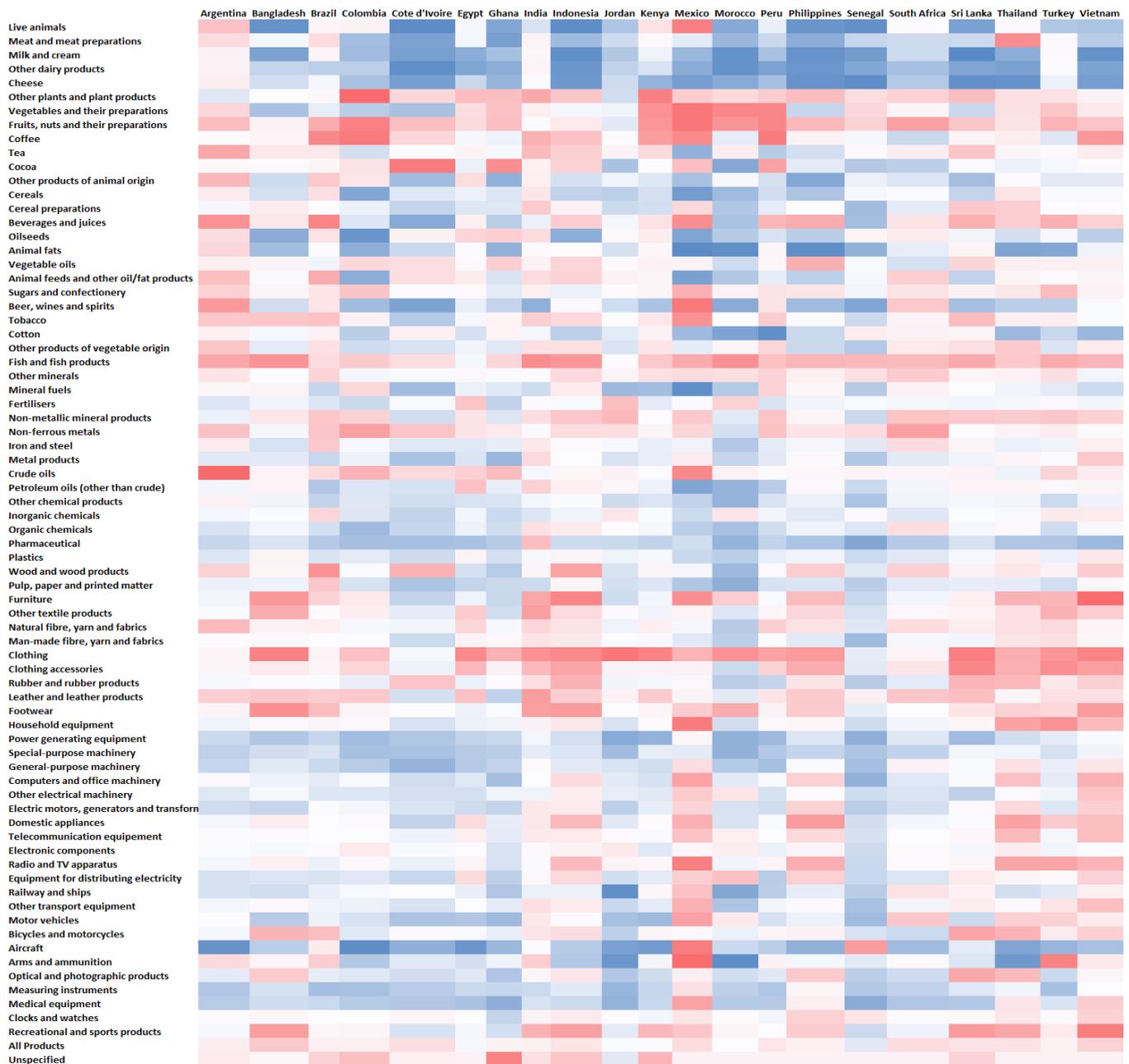
What can be seen is that for many Western ‘friends’, China is actually not a large net buyer of their goods. The obvious exceptions are Argentina and Brazil on meat; Thailand on fruits; Senegal on oil seeds; and many economies on minerals, energy, or pulp, etc. This is the well-established pattern that China buys raw or semi-processed commodities. Indeed, the red in the chart above is clustered at the top, which is the lowest value-added.

By contrast, almost all of the economies listed see clusters of blue further down the table, showing they are reliant on China for low, medium, and high-tech manufactured imports.

Yet industrial production can move - as it did from the US to China. Here we are talking about countries not buying from China, but making things locally and selling them to Western ‘friends’ – or even back to China.

As such, there is a potential friend-shoring ‘trade-off’ for the recipient: can a country gain more higher-paying industrial jobs than it risks losing in lower-paying commodity exports to China? Moreover, China has no other option than to buy commodities apart from eating/doing less, so many ‘friends’ could arguably keep old jobs *and* get new ones

Figure 10: A Western trade heat-map



Note: Red indicates that the West is a net importer of goods from the countries specified in the column, whilst blue indicates the opposite.
Source: WTO

The heat-map for potential 'friends-reunited' trade with the West --defined here as the US, Canada, the EU-27, the UK, Australia, New Zealand, and Japan-- looks significantly different to that of China. (Figure 10.) Rather than a gradual increase from net importer to net exporter, the West is a very mixed picture of blue and red.

It buys commodities, but also low value-added products such as textiles, and electronics and leisure goods, as can be seen in the preponderance of red further down the table.

China might sit further back along those particular value chains – but if the entire supply chains shifts, it doesn't

necessarily have to stay that way, as with looms and Indian textiles.

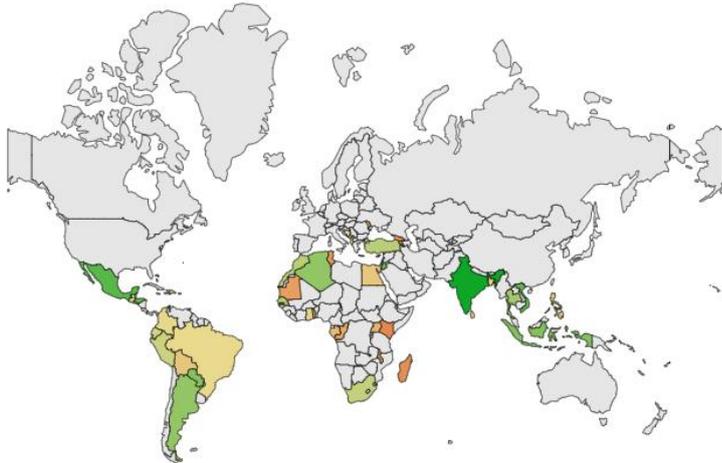
For many countries, the potential gains may easily outweigh the potential losses and aggravation from the collapse, or shift, in the patterns of the current global trading system.

Indeed, for some countries it could mean a rapid move up the development and value-added ladder away from reliance on purely commodity exports.

As stated, we include this concept in our methodology. Figures 11-13 on the next page highlight the attractiveness of ex-China production by each country and sector.

The new social networks?

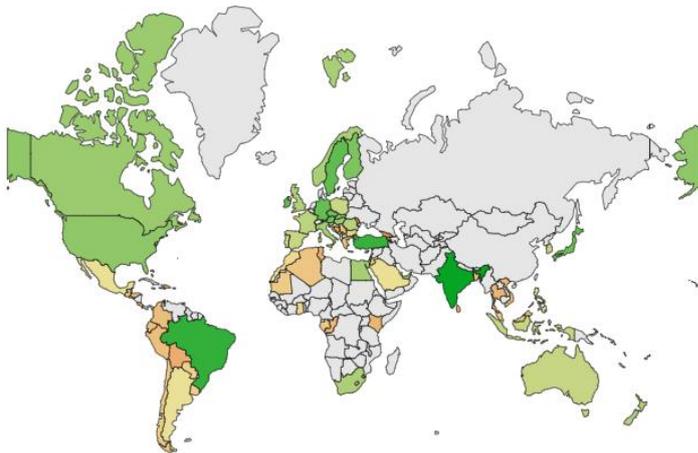
Figure 11: Potential low-tech friends



India is a strong contender to take some of China's low-tech jobs because of its vast labour force and cheap labour. So is Mexico. So are ASEAN, parts of Latin America, and even Northern and South Africa

Source: RaboResearch

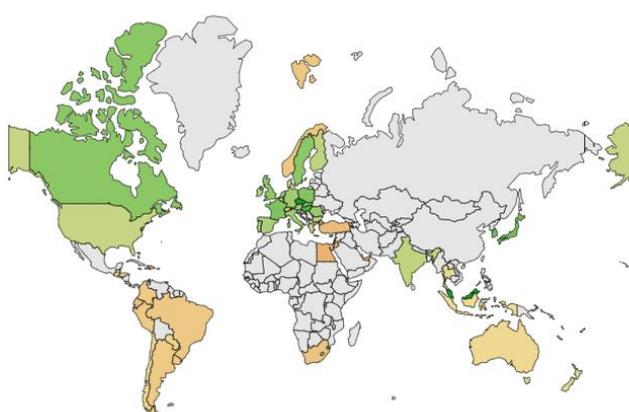
Figure 12: Potential medium-tech friends



Medium-tech manufacturing jobs are likely to move to India, Brazil, and Turkey. These countries have plenty of spare labour, are relatively cheap, and already produce medium-tech goods. However, even parts of Europe and North America are in the mix

Source: RaboResearch

Figure 13: Potential high-tech friends



For high-tech goods, upper middle-income emerging markets and even some western countries are likely to take the jobs, since labour costs are less important. Malaysia, Singapore, Ireland, and Canada stand out, as do eastern EU members. The US will of course also see a shift helped by subsidies

Source: RaboResearch

How many friends can I invite?

However, we have yet to divide up the 28m 'Chinese' jobs that are up for grabs between the actual contenders.

As just noted, some countries will be reluctant to pursue Chinese manufacturing jobs in fear of repercussions. Others will only be able to handle a small jobs shift due to capacity constraints.

Moreover, firms will not want to put all their eggs in one basket again so readily. In short, we will not see *all* China's Western export-related move to just India or Vietnam, even if we will see new clustering effects.

The number of jobs we 'allocate' to friend-shoring per country depends on its attractiveness based on the factors that we mentioned earlier.

We then divide the jobs *between* contenders by assuming the most attractive countries get the jobs first.

Each country then hits its near-term 'absorption capacity', which varies, but is based on the heuristic base of how quickly China managed to absorb Western jobs when they were shifted to it. (Which many economists said would not happen at the time!)

The 'China jobs' then continue to flow on to the second most attractive country, which has its absorption limit, then the third, with its, and so on.

For a graphical metaphor, imagine pouring liquid from a large container into a variety of smaller containers that fill slowly, starting from the most attractive and working down the preference scale.

Figure 13: A great taste for some; a bad hangover for China?



Source: Getty Images

We capture the actual job numbers, and their net 'flows' from China in Figures 14-16 on the following pages.

A China effect... in China?

At a total of 28m jobs, we are only talking about a very small slice of China's total labour force of 784m. Indeed, it is just 3.6% of total employment.

However, besides implying an equivalent increase in the unemployment rate, those jobs have a disproportionately large impact on the overall economy.

As a comparator, US manufacturing employment declined from 15.7m to 12.6m from 2001, after China joined the WTO, in the so-called 'China effect'. Yet compared to the 154m total US labour force, this was proportionately a smaller impact than being contemplated for China, because the US economy was and is less focused on industry and exports than China's.

Even so, a growing body of analysis (including early voices such as Autor, 2011) show how corrosive the 'China effect' has been on the US regional economies and its overall political economy.

In China's case, we have examples from the recent US-China trade war and Covid which indicate the real pain that can be felt when its export sector is hit. Moreover, there is a *far* larger problem for Beijing.

The implied dollar value of exports that would be lost via friend-shoring would be the equivalent of China's trade surplus dropping from 3% of GDP to a deficit of -0.6%.

That means lower GDP growth given China's structural problems shifting to consumer spending from a growth model based on over-investment and exports.

Worse, it would mean a potential balance of payments deficit, exacerbated if the government responded to the growth slowdown with more unproductive borrowing and state over-investment, and if capital outflows accelerated to match.

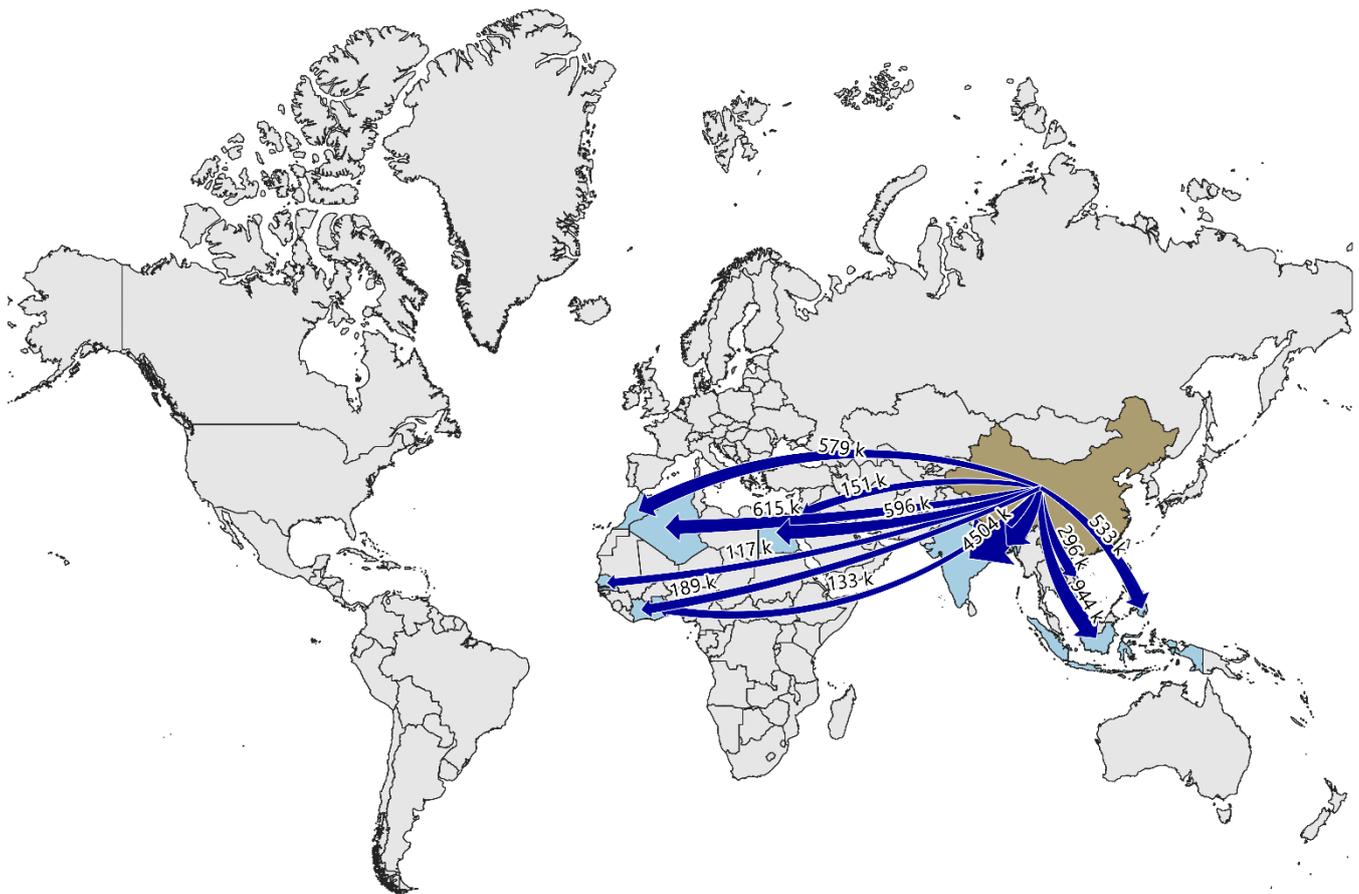
The government's hands on both fiscal and monetary policy could be tied, and CNY stability would be impossible to maintain. In short, China would start to look like a traditional emerging market.

One can see why China will fight to retain its mercantilist 'MySpace' trade position.

(As the PBOC argued should be done previously in a **working paper** on the similar balance of payments risk posed by China's terrible demographic profile: the paper proposed automation as a solution - which won't help at all if friend-shoring happens.)

Low and behold!

Figure 14: Low-tech friend-shoring job flows from China



Source: RaboResearch

Low-tech manufacturing jobs

We expect that a fair share of the jobs at stake will go to India. Its vast potential labour force, low wages, rule of law, improving infrastructure, and geopolitical status within the Quad (despite a legacy friendship with Russia), all make it a very interesting prospect. Overall, it can take 4.5m jobs in these sectors from China.

For Bangladesh (1.2m jobs), Indonesia (0.9m), and some other countries in south-east Asia (Vietnam 0.3m, Philippines 0.5m), the situation is broadly comparable.

Counter-intuitively to some, several African countries are also attractive given their low wages. Senegal and Ghana, for example, but also Algeria, Morocco, and Egypt.

However, the sheer population sizes of India and Bangladesh is likely to dominate the flow of low-tech manufacturing jobs.

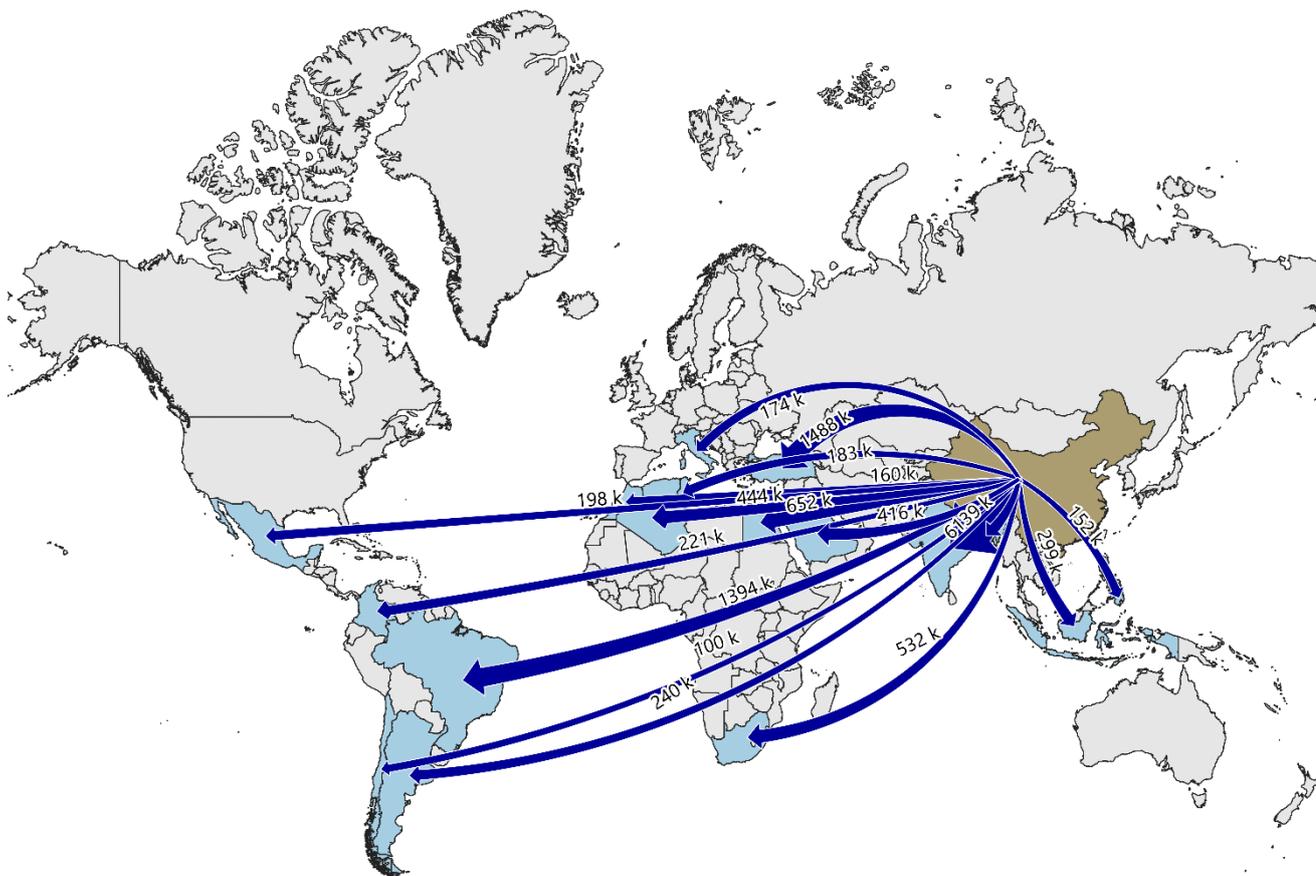
Table 1: Low-tech jobs move to ...

Country	No. Jobs	Country	No. Jobs
India	4.5m	Philippines	0.5m
Bangladesh	1.2m	Vietnam	0.3m
Indonesia	0.9m	Côte d'Ivoire	0.2m
Egypt	0.8m	Jordan	0.2m
Algeria	0.6m	Ghana	0.1m
Morocco	0.6m	Senegal	0.1m

Source: RaboResearch

Literally new middle classes

Figure 15: Medium-tech friend-shoring job flows from China



Source: RaboResearch

Medium-tech manufacturing jobs

India (6.1m jobs), Turkey (1.5m), and Brazil (1.4m) are the top contenders for medium-tech manufacturing jobs.

First, each of those countries still has considerable untapped manufacturing potential. Secondly, wage costs are relatively low, especially compared to Western standards.

African countries can also profit from an exodus of Chinese jobs. Egypt, Morocco, Algeria, Tunisia, and South Africa all stand to benefit. Even though those countries do not head the ranking in terms of attractiveness (they have a relatively small medium-tech manufacturing sector, whilst their political systems are not always the most stable historically), there are plenty of jobs up for grabs - and there are only a limited number of countries that meet the criteria we have elaborated upon earlier.

Of course, Mexico also sees job gains, and so do Chile, Colombia, and Argentina. Even Italy enters this arena.

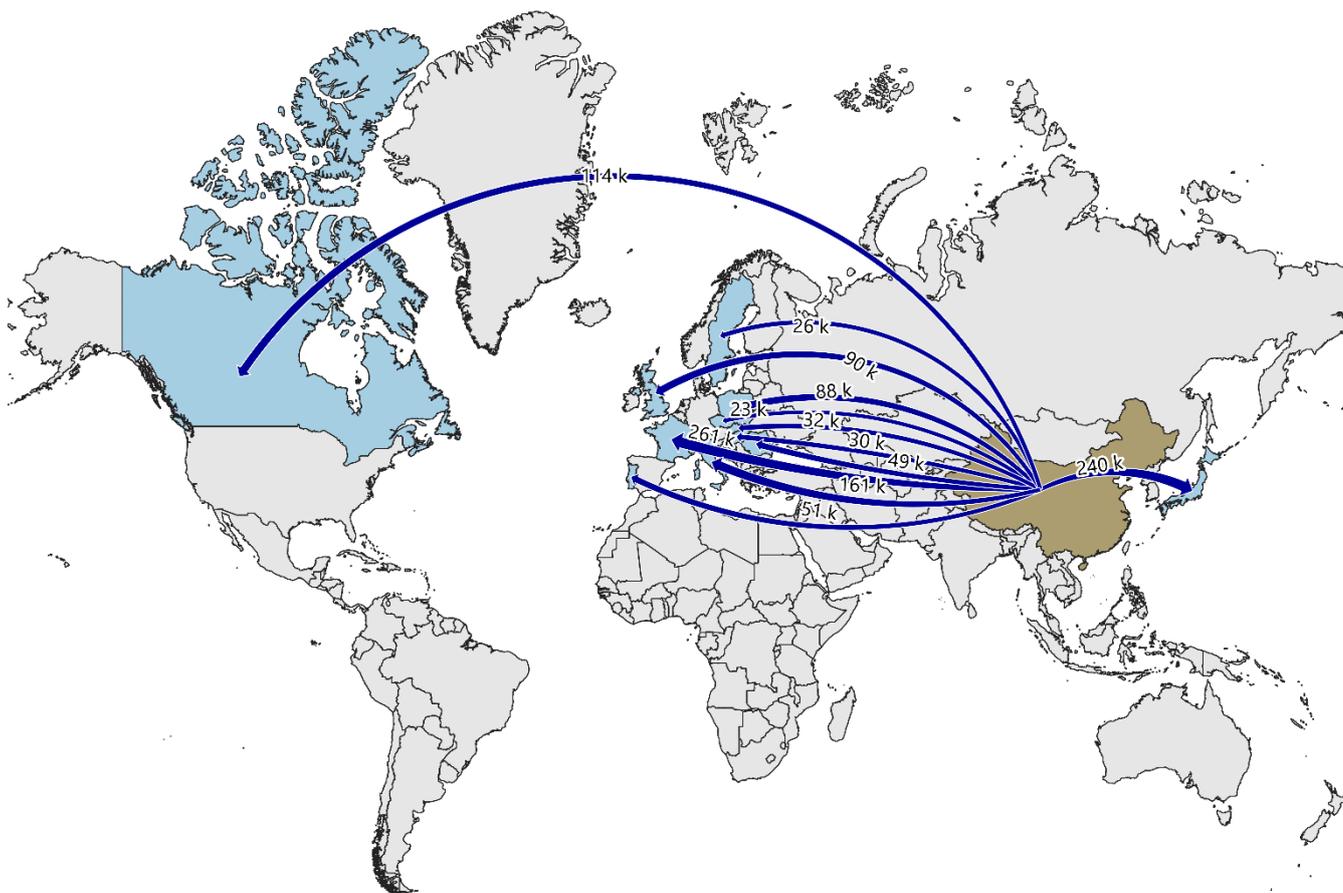
Table 2: Medium-tech jobs move to...

Country	No. Jobs	Country	No. Jobs
India	6.1m	Mexico	0.2m
Turkey	1.5m	Argentina	0.2m
Brazil	1.4m	Tunisia	0.2m
Egypt	0.7m	Colombia	0.2m
South Africa	0.5m	Morocco	0.2m
Algeria	0.4m	Italy	0.2m
Saudi Arabia	0.4m	Chile	0.1m
Indonesia	0.3m	Philippines	0.1m
Bangladesh	0.3m		

Source: RaboResearch

High anxiety reversed for some

Figure 16: High-tech friend-shoring job flows from China



Source: RaboResearch

High-tech manufacturing jobs

In contrast to the projected distribution of friend-shoring of low- and medium-tech jobs, we expect high-income countries are relatively attractive for high-tech jobs.

This can be explained by the fact that labour costs play a smaller role in this sector, which is more capital intensive, and higher-income countries already have sizeable high-tech manufacturing sectors.

There are a couple of omissions from our projections, however. South-Korea has a very competitive high-tech sector, but also has an extremely positive trade balance with China, which might deter it from being too assertive. The same can be said for Malaysia. Singapore has an advanced manufacturing sector, but where the potential labour force is a limiting factor.

The US is also not on the list, but we believe in reality, and based on the survey evidence already shown, some US states such as Texas and Arizona will certainly benefit.

Table 3: High-tech jobs move to...

Country	No. Jobs	Country	No. Jobs
France	261k	Portugal	51k
Japan	240k	Romania	50k
Italy	161k	Slovakia	32k
Canada	114k	Hungary	30k
UK	90k	Sweden	26k
Poland	88k	Czechia	23k

Source: RaboResearch

Note that unlike for low- and medium- tech friend-shoring, many of these implied jobs are likely to be at least partly automated. Nonetheless, the gain in resilience, exports, and national income holds true for the West: and the direct opposite for China.

A friendly warning

Nobody can say for sure if friend-shoring will happen or not. The world is changing very rapidly, and countries one would once assume were friends may not be so forever.

Moreover, with inflation rising, is a further increase in the cost of production really a good idea now? Many businesses will say no.

At the same time, China will almost certainly push back against friend-shoring. As Xi Jinping had already warned in January 2021, *"We should increase the dependence of international supply chains on China and establish powerful retaliatory and menacing capabilities against foreign powers that would try to cut supplies."* How menacing will things get?

In short, this is not going to be a quick, easy, or painless exercise.

Nonetheless, the [historical and fundamental analysis](#) that had already led us to predict the "perhaps probable" shattering of "the world system" now being flagged by the Financial Times tells us that geopolitics will eventually trump neoliberal economics, making friend-shoring more likely to happen. Indeed, the above Chinese threat is more likely to accelerate than delay the process, after a lag.

True, the scale that we see potential friend-shoring happening on in this report may take years, geopolitics depending; and it may never occur completely as we project.

Indeed, for many Western firms the appeal of reshoring completely, rather than taking another risk on another emerging market, may appeal more – especially with government support. There are certainly areas of even G7 economies that have low enough regional GDP per capita that they would welcome jobs close to the levels China could likely 'offer'. Of course, that shift in final destination doesn't matter much for China.

Overall, the survey evidence, the leading data, and the global backdrop all suggests that the rising risk is of at least a partial friend-shoring transition along the lines of what we describe:

Some friends will be reunited. Others will be parted.

And global trade flows, geoeconomic and geopolitical power, and financial markets will all move accordingly.

Technical Appendix

In this appendix we will elaborate on the methodology of this report and the data sources used. The methodology can be split into four parts: first, the computation for the number of Chinese jobs at stake. Second, filtering out unfit countries. Third, the ranking of the countries that could potentially take on some of these jobs. And fourth, the distribution of available jobs between those countries.

Chinese jobs at stake

To compute the number of Chinese jobs that are at stake, JS_i , we use the following formula:

$$JS_i = JI_i * EX_i * TVA_w$$

Where JI_i denotes the number of industrial jobs for province i , EX_i denotes the export intensity of the industrial sector for province i , and TVA_w denotes the percentage of total value added originating in China that is exported to the West.

Filtering countries

We apply the following filters to make sure we only select countries that qualify as a potential friend-shoring country:

- Geopolitics (is the country a friend of Russia/China?);
- Domestic political stability (is it safe?);
- The level of infrastructure, which encompasses some landlocked countries (does it suffice?);
- Its labour potential (is the country too small, or unable to offer spare workers?); and
- Its labour-share-of-GDP-adjusted costs relative to China's in three different product sectors, low, medium, and high technology.

Ranking of countries

To assign an attractiveness score to each country, we compute a weighted sum of z-scores for a number of variables. Some variables are fairly straight forward, whilst others are less so. For each ranking that we make (so that is one for low-tech jobs, medium-tech jobs and high-tech jobs), we include the following variables:

- Labour cost (average income in US dollar, current prices);
- Potential labour force in the manufacturing sector;
- Political stability (worldwide governance indicator);
- Infrastructure (logistics performance index);
- Distance to largest market (either the US or Europe);
- Value added for respectively low-, medium- and high-tech manufacturing as a percentage of total value added;
- Population growth; and
- Tariffs

Potential labour force

The potential labour force in the manufacturing sector requires some more detail. We have defined the potential labour force, PLF_i , as follows:

$$PLF_i = \left(U_i + \mathbb{I}_{i,r} \times \frac{\sigma_r}{P_i} \times LF_i \right) \times MJ_i$$

Where U_i is the number of unemployed in country i , $\mathbb{I}_{i,r}$ is a variable that indicates whether the participation rate in a country is below its regional average, σ_r is the standard deviation of the participation rate in a region, LF_i is the labour force in country i , P_i the participation rate in country i , and MJ_i is the percentage of people that work in the manufacturing sector in country i .

In words, this means that we include the potential that the participation rate of country can rise by one standard deviation (based on the region that the country is located in), given that it is below its regional average. This in turn, increases the potential labour force.

We then proceed to see what part of this potential labour force has a similar profile to the Chinese labourers that are currently performing this job. We slice the total population in deciles and, based on the income distribution of a country and the labour-share-of-GDP, we finally determine the final potential labour force.

Tariffs

For every country we compute a tariff-score based on the trade relation with the US and the EU27. This score is weighted by the share that the US and the EU27 have in the export basket of the exporting country.

Total score

For each variable, we compute a z-score based on the data of the countries that pass the filters. The total score is computed by weighting these variables. The weights differ per category. Labour costs for example, are less important for high-tech goods than for low-tech goods.

Distribution of available jobs

To see whether it is actually worth it for countries to take on Chinese jobs, we compare the domestic value added of export to China, with the domestic value added of imports from China. If the balance of these two factors is larger than the net benefit of the additional jobs, a country will refuse to take manufacturing jobs from China.

If the opposite holds, a country will take on some of the jobs that China loses. We distribute the available jobs starting with the country that is most attractive (based on the weighted z-score as explained above).

Data sources

To make a global comparison of countries it is important that we use a single data source to avoid any methodological differences in the data. Therefore, we have relied on data from the World Bank for most of our indicators. For the data regarding China, we have relied on data from the Chinese National Bureau of Statistics.

Please see the table below for an overview of the data used and its sources.

Table 4: Data sources

<i>GDP per capita, \$, current</i>	<i>World Bank</i>
GDP per capita, \$, PPP, current	World Bank
Political stability indicator	World Bank
Infrastructure index	World Bank
Unemployment	World Bank
Labour force	World Bank
Labour participation rate	World Bank
Industry employment growth	World Bank
Low-tech manufacturing, % TVA	World Bank
Med-tech manufacturing, % TVA	World Bank
High-tech manufacturing, % TVA	World Bank
Population growth	United Nations
Income distribution	PovcalNet
Distance to largest market	CEPII
Origin of value added in final demand	OECD
International trade by product category	UNCTAD
Tariffs	WTO
Industrial exports by Chinese province	NBS
Industrial production by Chinese province	NBS
Population by Chinese province	NBS
GDP per capita by Chinese province	NBS
Industry employment by Chinese province	NBS

Source: RaboResearch

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A summary of the methodology can be found on our [website](#)

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