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FREE TRADE AND HOW IT ENRICHES US

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Summary

- Free trade improves the well-being of all parties to it. The most significant way that trade achieves this outcome is by enabling and incentivising specialisation in production, and also encouraging mechanisation and innovation. As specialisation deepens, and as mechanisation and innovation advance, the per-person output of goods and services increases.

- Total economic output rises as specialisation increases; specialisation increases as trade expands; and trade expands as the size of markets grows.

- Specialisation that takes place according to *comparative advantage* increases total economic output even if it does not increase the productivity of any individual workers. Each of us gains when our trading partners improve their efficiency at production.

- Neither free trade nor protectionism affects a country's level of total employment over the long run. Trade policy affects only the *kinds* of jobs that prevail. Specifically, free trade destroys jobs in industries for which the country has a comparative disadvantage and creates jobs in industries for which the country has a comparative advantage. Protectionism's effect on jobs is the opposite.

- Trade results in no net reduction of jobs in the home economy because home-economy imports result in foreigners either buying more home-economy exports or investing more in the home economy - both activities that create jobs to offset those jobs destroyed by imports.

- Trade deficits are not necessarily evidence of economic or policy problems. They are not caused by ‘unfair’ trade practices by foreign governments, they do not reflect a shortfall of savings in countries that run them, and they do not necessarily increase domestic citizens’ indebtedness to foreigners. Trade with foreigners differs in no economically essential way from trade with fellow citizens.

Introduction

International trade is as old as human civilisation. But, until recently, it didn't amount to much. It didn't really take off until the industrial revolution and the repeal of Britain's 'corn laws' in 1846, which led to a wave of trade liberalisation across Europe. In the centuries prior to 1800, the value of goods traded across national borders was about 5 per cent of global output, measured by gross domestic product (GDP). By 2015 it had increased to 60 per cent of global GDP. This explosion of international trade played an important part in the astonishing economic growth over the period. In 2018 US dollars, global per capita GDP has risen from $1,000 in 1800 to $16,000 today. In the UK, it has risen from $3,500 to $43,000 over the same period.

But 'globalisation' was not an uninterrupted progression. International trade dipped sharply during the inter-war period and, especially, after the Smoot-Hawley tariffs introduced with the goal of protecting American jobs during the Great Depression. Between 1914 and 1939, international trade declined from 30 per cent of global GDP to 10 per cent.

Tariffs were widely recognised to have exacerbated the problems they were intended to solve and, following World War II, a slow process of international trade liberalisation began. The General Agreement on Tariffs and Trade (GATT) was first signed by 23 countries in 1949. After many 'rounds', it was replaced by the World Trade Organization (WTO) in 1995, which now has 164 member countries. Import tariffs and export subsidies in member countries were eliminated or reduced during the second half of the twentieth century and international trade took off again.

Until recently.

The reversal is most evident in Donald Trump, the American president, who has acted on his protectionist rhetoric during the 2016 presidential campaign by imposing new tariffs on steel imported from China and the European Union. But even before Donald Trump ran for president, the reversal had begun. Between the 2008 financial crisis and 2016, G20 countries introduced 1,583 new tariffs while eliminating only 387. And the persistent growth of international trade since WWII has stalled. The political consensus in favour of free trade is weakening.

Hence this Discussion Paper. It explains why trade makes everyone who participates in it better off than they would otherwise be, and why it makes no difference if the trading parties live in different countries.

The case for free trade has been familiar to economists since the work of Adam Smith in the late eighteenth century and David Ricardo four decades later. But politicians keep forgetting it, if they ever knew it. And so, apparently, do the voters who elect them.

If only people would stop forgetting, we defenders of free trade could stop repeating ourselves.

Adam Smith on specialisation and the size of the market

Trade is conducted only by flesh-and-blood people

We begin with a vitally important fact that is too often overlooked: trade is conducted only by individuals. Countries do not trade. Regions do not trade. Hemispheres do not trade. Collectives, however conceived or described, do not trade. Only individuals trade. Often they do so without being in concert with others on their side of the trade, as when you spend your own money to purchase a scoop of ice cream for yourself, or when you agree to work at a job for a certain wage. Other times individuals trade in concert with others on their side of the trade. The most common modern example is when individuals combine their resources into multi-person business firms each of which has members who are authorised to buy and sell in the firm's name, as when officials of the Ford Motor Company spend some of the resources of Ford shareholders on sheet metal for use in producing automobiles.[1]

But in even the world's largest private corporations, the executives of each of these organisations buy and sell as agents of the shareholders, each one of whom individually chooses to be part of this principal-agent relationship. These principal-agent relationships create individual entities - such as the Ford Motor Company - each of which is consciously directed and has a purpose. Much like an individual man, woman, or household, it makes sense when analysing trade and trade policy to treat business firms and other multi-person organisations as individuals. In contrast,

1 States can also trade, as, for example, when one buys a plane for its airforce or when a state-owned railway sells a customer a ticket. But again, this is a particular legal entity (the state) engaging in trade and, again, the decision to transact is made by flesh and blood human beings.

because no such conscious direction or purpose exists for countries or regions or nationalities, to treat them as if they act or are directed in the same way that a conscious, purpose-driven individual acts and is directed is unwarranted and misleading. While the purchases and sales of, say, the Germans (or Germany) can be measured and reported in much the same way that the purchases and sales of the Ford Motor Company can be measured and reported, only the latter are part of a conscious plan. The former are simply the aggregate results of many individuals each pursuing his own goals according to his own plan. We will see later the importance of avoiding the error of thinking of nations or countries as conscious trading entities.

Trade is a peaceful way of transferring ownership rights to those who value them most

Central to the reason that we trade is the fact that other people own things that we want. These things consist of physical items, such as apples and automobiles, and services, such as repairing leaky pipes and cutting hair. But the fact that other people have things that we want does not alone explain trade. Other means of acquiring desired things include theft, fraud and begging. Yet another means is to produce those desired things ourselves. And in reality each of these means of acquiring things is used. But the single most commonly used means of acquiring desired things is trade. Trade occurs whenever two individuals voluntarily exchange ownership rights: Jill voluntarily transfers her ownership of an apple to Jack in exchange for Jack's voluntary transfer of his ownership of a grapefruit to Jill.

By its nature, trade is voluntary and peaceful. And while some trades occur under false pretenses - such as when Jack fools Jill into believing that the plastic yellow ball in his hand is a grapefruit - I shall throughout this primer regard as 'trades' only those voluntary exchanges made in the absence of fraud. I do so not only because the overwhelming majority of voluntary exchanges involve no fraud, but also because the objections to trade which are addressed in this primer do not spring from accusations of fraud.

Trade being voluntary implies that each party to a trade believes herself to be made better off by that trade - better off, that is, compared to how she believes she would be if she did not make that trade. Anyone offered a deal that she believes would make her *worse* off simply rejects the offer. As with the possibility of fraud, there is always the possibility of error. Jill

might truly believe that she'll enjoy eating Jacks's grapefruit more than she'd enjoy eating her apple only to discover, after she trades her apple for the grapefruit, that she really would have preferred eating the apple. As with exchanges made because of fraud, I will throughout this short monograph assume away this sort of consumer error. I assume such error away not because I think that it doesn't occur – of course it occurs – but because such error mars only a small fraction of trades, and because this sort of error plays no role in any of the chief arguments against free trade.

So the elemental motive for trade is simple and obvious: trade is a means for each individual to improve his or her well-being. This outcome is achieved by giving up something valued less intensely in exchange for something valued more intensely. And because each party to every trade is similarly motivated, each trade improves the well-being of each party to it. At its simplest level - such as the exchange of an apple for a grapefruit - trade improves human well-being even though nothing new is produced. Merely changing, through trade, the pattern of ownership of existing goods increases human welfare.

While this truth should never be overlooked, it's obvious that significant increases in human well-being require far more than merely rearranging property titles to existing goods. The stock of existing goods must be increased, as must the capacity to render services. And trade is inseparable from the social cooperation that is necessary to produce new goods and services.

Trade promotes productive specialisation - and is promoted by specialisation

In the first chapter of his monumental 1776 work, *An Inquiry Into the Nature and Causes of the Wealth of Nations* - a book that is regarded as launching the modern discipline of economics - the Scottish moral philosopher Adam Smith (1723-1790) remarked on the unfathomable amount of social cooperation that is required to produce an ordinary woollen coat. Smith's remarks are worth quoting at length:

> The woollen coat, for example, which covers the day-labourer, as coarse and rough as it may appear, is the produce of the joint labour of a great multitude of workmen. The shepherd, the sorter of the wool, the wool-comber or carder, the dyer, the scribbler, the spinner, the weaver, the fuller, the dresser, with many others, must all join

> their different arts in order to complete even this homely production. How many merchants and carriers, besides, must have been employed in transporting the materials from some of those workmen to others who often live in a very distant part of the country! How much commerce and navigation in particular, how many ship-builders, sailors, sail-makers, rope-makers, must have been employed in order to bring together the different drugs made use of by the dyer, which often come from the remotest corners of the world! What a variety of labour too is necessary in order to produce the tools of the meanest of those workmen! To say nothing of such complicated machines as the ship of the sailor, the mill of the fuller, or even the loom of the weaver, let us consider only what a variety of labour is requisite in order to form that very simple machine, the shears with which the shepherd clips the wool. The miner, the builder of the furnace for smelting the ore, the feller of the timber, the burner of the charcoal to be made use of in the smelting-house, the brick-maker, the brick-layer, the workmen who attend the furnace, the mill-wright, the forger, the smith, must all of them join their different arts in order to produce them … if we examine, I say, all these things, and consider what a variety of labour is employed about each of them, we shall be sensible that without the assistance and co-operation of many thousands, the very meanest person in a civilized country could not be provided, even according to what we very falsely imagine, the easy and simple manner in which he is commonly accommodated. (Smith 1981 [1776]: 23-24)

An ordinary coat is made of countless different materials from many different places, and is produced only because each of a multitude of individuals, today spread out across the globe, contributes to the production process his and her creativity, knowledge, effort, and willingness to bear risks. And each of these producers does so - *can* do so - only because he and she trades with others.

Most obviously, because you did not make your coat, you bought it - that is, you traded for it. On the other end of that bargain were the multitude of individuals whose combined productive efforts resulted in the physical production of your coat as well as its delivery to the retail store at which you purchased it. Each of these persons - persons such as the sheep farmer, the textile-mill worker, the delivery-truck driver, and the actuary employed by the insurance company whose services are essential for the economically feasible operation of the retailer - traded his productive

efforts in exchange for money that he then used to buy goods and services for himself and his family. Had none of these people been able to trade with others for the goods and services that they wish to consume, none would have willingly contributed his time and effort to produce components of a coat destined to be worn by you.

And likewise with you. You earned the money that you spent to purchase your coat by working for a productive enterprise. You might truly love your job, but you're unlikely to continue working at your job if your employer stops paying you. You continue to work because doing so is a *means* for you to trade your time and effort in exchange for money that you then trade away to others in exchange for the goods and services that these others have produced for you to consume. Ultimately, you work not for money but for what money can buy.

And let's pause to note that you are a complete stranger to nearly everyone who worked to produce your coat. You are a complete stranger also to nearly everyone who benefits from your productive efforts. Strangers helping strangers, day in and day out. And what unites all of these strangers in this worldwide web of production and mutual assistance is trade.

It's important to appreciate just how marvellously productive is today's globe-spanning system of economic cooperation. Using the Internet I just surveyed the retail prices of new woollen coats available for sale in the United Kingdom.[2] £200 is a representative price. The median hourly wage of full-time workers in the UK is today £13.94. Thus, an ordinary worker must toil only 14.3 hours in order to earn enough income to buy a new woollen coat. That is, for a mere 14.3 hours of his time, the typical worker can command one of the fruits of the labours of literally millions - perhaps of hundreds of millions - of strangers. And of course what's true for a coat is true also for every other good and service that we routinely consume. Each one, with rare exception, costs us only a few minutes or a few hours of our time. Yet in each case what we acquire in exchange for such a small amount of our own time and effort is a good or service the production of which required the efforts of millions. Indeed, it costs us so little precisely *because* its production drew on the efforts of millions of individuals, each of whom contributed his own specialised talents.

2 My survey of prices was conducted on 5 July 2018.

Adam Smith on why specialisation by workers is productive

Adam Smith's explanation of this phenomenal fact began with the observation that the total output of any group of people will rise if each member of that group specialises in doing a particular task, as opposed to each member producing everything for himself. Smith went on to observe that opportunities for specialisation increase as the size of the market grows - that is, as the number of persons who are part of the trading network increases.

Let's look first at the reasons Smith gave for why specialisation among a *given* number of people causes total output to be higher than it would be if the same number of people each produced for himself all the goods and services that he and his family consume.

First, when workers specialise they do not waste time moving from task to task. If Simon cleans skyscraper windows during the morning and then tends sheep in the afternoon, and if Jane has the morning shift on the sheep farm and the afternoon shift cleaning windows, the time each worker spends traveling from the city to the country and back is time during which neither worker produces goods or services. Better to have one of these workers specialise at tending sheep while the other specialises at cleaning skyscraper windows. Each worker, no longer obliged to waste time travelling to another job, produces more output per day.

While the validity of this point is impossible to dispute, its significance is minuscule. The great bulk of the mass prosperity that we enjoy today clearly did not result merely from workers wasting less time.

The second reason Smith gave for why specialisation increases total output is that, with specialisation, each worker's job skills improve. A worker who spends all of his time performing a single task - say, repairing vacuum cleaners - becomes more skilled at performing that task than he would if he instead divided his time among several different tasks. As specialised workers become more skilled, their hourly outputs increase as does the quality of their work. An economy in which workers are specialised, therefore, produces per capita more and better output per period of time.

While undoubtedly more significant than his point about saving time, this second reason that Smith identified is also insufficient to explain modern prosperity. What about Smith's third reason?

This third reason is mechanisation. Smith argued that as jobs become more specialised they become more likely to be mechanised. It's easier to invent a machine to perform one specific, narrow task than it is to invent a machine to perform a variety of different tasks. So, when a specific, narrow task becomes the province of workers who specialise in performing it, someone is more likely to see the opportunity to invent a machine to perform the task.

When a machine takes over from human labourers, that now-mechanised task is usually performed better than when it was performed by humans. Machines typically are faster, stronger, and more precise than humans. Machines don't need breaks for lunch, for visits to the toilet, or to rush home to nurse a sick child. Nor do machines go on strike. Much more importantly, though, the human labour released by such mechanisation becomes available to do jobs that would otherwise remain undone - to produce outputs that would otherwise remain unproduced. As mechanisation proceeds, society not only continues to get the outputs once produced by humans but now produced by machines; society gets in addition the outputs produced by the workers released from those now-mechanised tasks.

In 1800 about one-third of British workers worked in agriculture. Today, only 1.1 per cent do so. Mechanisation - including the use of chemical pesticides and fertilisers, as well as refrigeration and improvements in the packaging of agricultural outputs - has released nearly all workers from the need to grow food. With so few workers required today to grow food, most of us are free to pursue other occupations. If the technology for growing, harvesting, storing and distributing food were today no better than it was in 1800, one-third of all British workers would today work in agriculture - meaning that many of today's jobs might not exist. Jobs such as web-designer, MRI technician, pediatric gastroenterologist, and personal trainer - among countless others - might never have been created. This fact would have been unfortunate not only for those who today work in these jobs but also for those of us whose lives are improved by consuming the outputs of those who work in these jobs.

While Adam Smith saw fit to list mechanisation as one of the three reasons why specialisation increases 'the wealth of nations', he did not give mechanisation the emphasis that it deserves. More accurately, Smith offered no evidence that he fully appreciated the centrality of innovation to economic growth of the sort that has made the modern world. Workers

freed from farms and factory floors not only become available to perform existing jobs in other existing and expanding industries. In addition, they often become innovators who create markets for entirely new jobs by conceiving of entirely new products, by devising revolutionary and much-better methods of production, and by radically improving the flow of financing to ensure that large numbers of worthwhile ideas actually get tested in the market.

Importantly, the carrying-out of these innovative ideas depends upon the availability of resources, including labour, necessary to bring these ideas to fruition. Even workers who do not themselves become innovators or entrepreneurs after they are released from today's existing jobs play crucial roles in the process of economic growth. They become the engineers, the managers, the salespeople, the craftsmen, the attorneys, the accountants, and the other 'support' staff necessary to transform innovative ideas into actual goods, services, and new production technologies. Innovation is the principal proximate cause of the enormous 'wealth of nations' enjoyed today.

Adam Smith on why larger markets have more productive specialisation

In addition to the three reasons given by Adam Smith for why specialisation among a given number of people increases total output, Smith identified a fourth source of economic growth: increases in the size of the market - that is, increases in the number of people who are part of the trading network. Smith summarised this effect when he observed that 'the division of labour is limited by the extent of the market'. This effect, in turn, works both from the 'supply side' (that is, the supply of workers) and from the demand side (that is, the demand for the outputs produced by specialised workers and machines). Let's look at each side in turn.

Division of labour deepens with more workers

The greater the number of workers available, the greater are the opportunities for productive specialisation. If you're stranded alone on a desert island and eat fish and bananas to survive, you yourself obviously must catch all the fish *and* gather all the bananas that you eat. If, however, another person becomes stranded with you on that island, one of you can specialise in banana gathering while the other specialises in fishing *as long as you are each willing to trade with the other*. For reasons spelled out above, Adam Smith would correctly predict that this doubling of the

population of the island would more than double the total economic output of the island. *Per-capita* output would rise.[3]

Likewise, adding a third person to the island would similarly increase total output by more than in proportion to the increase in the number of workers, even if all three of you continue to produce and consume only fish and bananas. A third person on the island might specialise in fishing on one part of the island while the other fisherman now concentrates on another part. As long as all three of you are willing to trade with each other, the output of fish and bananas per capita rises more than proportionally to the increased specialisation made possible by the rise in population.

In general, for any given number of goods and services to be produced, a larger number of workers enables and encourages further specialisation that results in growth in total output per capita. These 'increasing returns' (as economists call them) to a growing number of workers producing a fixed array of different goods exist because of two features of most production processes. First, the production process for almost any good or service consists of a large number of small tasks, each of which can become the speciality of a subset of workers. For example, if the job of catching fish includes both catching the fish and then packing them carefully into baskets to be carried home, then with two people working at fishing, one person can specialise in actually catching the fish while the other specialises in packing the caught fish into baskets.

Second, with more workers the production process itself can productively grow in 'length'. Larger numbers of workers enable the performance of new tasks that contribute to the faster or better production of the end product. For example, perhaps with only one person specialised in supplying bananas that specialist ascended and descended banana trees by shimmying up and down. But with two workers, one might specialise in hoisting and holding the other worker onto his shoulders so that the latter can pick bananas faster than previously. (One worker, in effect, becomes

3 Astute readers will recognise that the increase in per-capita output caused by more people participating in the economy is, at root, no different from the increase in per-capita output that occurs when a fixed number of people switch from not-specialising to specialising. When each person in a fixed number of people switches from being completely self-reliant to specialising and trading with all the others, what effectively occurs is that one larger economy replaces several smaller, single-person economies. Because of specialisation in the larger economy, its total output is greater than is the sum of the outputs of the smaller economies that it replaced.

a human lift.) The result of this 'lengthening' of the process of gathering bananas is that more bananas are produced per period of time.

Division of labour deepens with more buyers

Suppose (as is plausible) that a town with a population of only 500 supports one medical doctor - a generalist physician. Now let the population multiply by 1,000 so that it now numbers 500,000. This town will now have medical specialists that it did not have when it was smaller - specialists such as pediatricians, oncologists, podiatrists, cardiologists, and cardio-vascular surgeons. What explains the emergence of these more specialised physicians?

In part the answer is that a larger population is more likely than is a smaller population to contain individuals with aptitudes and willingness to work at these highly specialised tasks. But the bulk of the answer is that a larger population is more likely than is a smaller population to have enough *customers* to justify such deep specialisation.

Consider, for example, a pediatric gastroenterologist.[4] The percentage of people under the age of 16 who suffer digestive disorders requiring medical attention is (fortunately) very small. One result is that a small population will contain too few children with serious digestive disorders to support a pediatric gastroenterologist. Depending on the size of the population, it might have enough people to support a gastroenterologist who treats patients of *all* ages, and it might have enough children to support a pediatrician who treats children for all illnesses. But to support the deeply specialised pediatric gastroenterologist, the town's population must be large enough to ensure that it contains a sufficiently large number of children who will, at any time, suffer digestive illnesses requiring the attention of such a specialist.

Not only does a large market enable individuals to earn their livings by working at highly specialised tasks, it encourages these individuals to invest the time and resources necessary to acquire skills that are unique to those specialised tasks. A pediatric gastroenterologist undertook the additional schooling and training that is necessary for this specialised

4 I have an unusual fondness for this medical speciality. The reason is that such a specialist saved my then-three-year-old son's life in 2000. It is relevant here to point out that my family and I then lived in the New York City metropolitan area.

occupation; he would not have done so if he believed that the market for such a specialised service would be too small to enable him to earn a living by practicing that specialisation.

Larger markets encourage more product innovation and development

Just as a physician is more likely to make the investment of time and effort necessary to specialise in pediatric gastroenterology the larger is the population of the market that he will serve, so are entrepreneurs and investors more likely to experiment with, and to invest in, the production of goods and services with high upfront costs the larger is the population of the market. Outputs requiring substantial upfront costs will not be developed and produced if entrepreneurs and investors do not expect to be able to sell enough units to recover these upfront costs. Therefore, the larger is the market, the larger is the customer base and, hence, the more likely is the volume of future sales to be high enough to enable the recovery of the upfront costs.

A simple hypothetical example clarifies the point. Suppose that Merck pharmaceutical company, based in New Jersey, USA, is faced with the decision of whether or not to develop a drug to treat a painful but seldom deadly disease that each century afflicts only one in every 1,500 people. If this drug is typical, Merck will have to spend upfront about $2.5 billion on researching, developing and testing the drug. Even if Merck were certain that these upfront efforts will succeed, it will undertake these efforts only if it expects to sell enough units of the drug at a price high enough to enable it to recover not only the cost of actually physically manufacturing the pills but also the costs of these substantial upfront efforts.

Assume that Merck's customer base is limited to the United States and that average annual US population over the next 100 years is expected to be 400 million. Assume also that the drug is taken only once per lifetime for each patient. Under these circumstances, Merck will expect to have no more than 266,667 one-time buyers of its drug. For Merck to justify the development of this drug, it must expect to sell each treatment of the drug at a price of *at least* $9,375.[5] If Merck is not confident that it would sell at least 266,667 at a per-unit price of $9,375, it will not develop the drug. But now assume instead that Merck's customer base is the whole world.

5 $9,375 = $2,500,000,000 ÷ 266,667. (And 266,667 is one in every 1,500 of the assumed US population of 400 million.)

Even if global population over the next century holds steady at roughly 7.5 billion, Merck will then be able to sell upwards of 5 million units of its drug. Selling each unit at a price of at least $500 will enable Merck to recover its upfront development costs. If Merck is confident that it would sell at least 5 million units of the drug at the much-lower price of $500, it will develop the drug.[6]

The general point is that the larger is the number of potential buyers, the more likely is a product-development effort that entails large upfront costs to be profitable and, hence, undertaken. Therefore, trading networks that span the globe will foster the production and sale of many goods and services that would not be produced and sold in smaller trading networks, such as those that are confined to a single country.

Conclusion

All voluntary trade improves the well-being of all parties to it. The most significant way that trade achieves this outcome is that it enables and encourages specialisation in production, and also encourages mechanisation and innovation. In turn, as specialisation deepens and as mechanisation and innovation advance, the total per-person output of goods and services increases.

Specialisation would be impossible without trade. (Someone specialised in carpentry would starve to death if he were unable to trade any of his carpentry services for food.) And trade encourages and promotes further specialisation, mechanisation and innovation - which are the proximate causes of our modern prosperity.

6 In this example I ignore many factors, such as the need to discount future expected revenues by the rate of interest that Merck in reality would have to consider in addition to the size of the market. None of the factors that I ignore changes the point or import of the example.

Comparative advantage and beyond

As we saw in Chapter 1, Adam Smith argued that specialisation increases economic output per person by, in some cases, making each worker more productive at the task that he performs, and in other cases by giving rise to labour-saving production processes that release workers to produce goods or services that otherwise would not be produced.

There is yet another channel through which specialisation increases output per person - a channel that involves neither any changes in any worker's productivity nor any introduction of labour-saving production processes. This channel is specialisation according to each worker's comparative advantage.

Trade shifts production to those for whom the opportunity cost is lowest

The principle of comparative advantage is perhaps the most counterintuitive of any of the central concepts of economics. Although a sketchy version of this principle appears in Robert Torrens's 1815 *An Essay on the External Corn Trade*, the discovery of the principle of comparative advantage is credited, probably justly, to the early nineteenth century English financier and economist David Ricardo (1772-1823). Ricardo introduced the concept in Chapter 7 ('On Foreign Trade') of his highly influential 1817 book, *On the Principles of Political Economy and Taxation*.

Ricardo used a simple numerical example involving two countries (England and Portugal) and two goods (cloth and wine). Ricardo showed that even if the Portuguese require fewer hours of labour to produce both cloth and

wine than is required by the English, Portugal can still gain by specialising in the production of wine and exporting it to England in exchange for English-made cloth. Portugal will gain by such specialisation and trade if the amount of cloth that it gives up by producing a unit of wine is less than the amount of cloth that England gives up by producing a unit of wine.

By specialising in producing wine, which costs them comparatively less to produce than it costs the English to produce, the Portuguese can trade some of their wine to the English in exchange for more cloth than they would produce had they produced the cloth themselves instead of the wine that they exported to England.

Following a purely verbal explanation of comparative advantage is notoriously difficult. So let's look at some hypothetical numbers. In the example that follows I use two individuals - Ann and Bill - rather than two countries. The reason is that comparative advantage exists ultimately at the level of the individual; any country-level comparative advantage is merely a reflection of the comparative advantages of the individuals (or firms) resident in that country.

In addition to assuming only two individuals, I use several other assumptions, which I identify below. Each of these assumptions is used only to make the explanation as clear as possible. Each and every assumption can be dropped without putting the conclusion of the analysis at risk. Here, listed for convenience, are the key assumptions used in the following analysis:

- There are only two individuals: Ann and Bill.
- There are only two goods that these individuals care to consume and, hence, care to produce: fish and bananas
- Each individual respects the other's property rights, and is committed to honouring his or her contractual obligations.
- The fish produced by one person are identical to the fish produced by the other person; likewise, the bananas produced by one person are identical to the bananas produced by the other.
- Each person's production-possibilities curve is 'linear'. With this assumption I mean that the amount of one good - say, fish - that each person - say, Ann - sacrifices to produce an additional unit of the other good (bananas) is the same regardless of the amount of fish Ann is currently producing.

- When Ann and Bill specialise and trade, each wants to continue to consume the same number of bananas that each consumed before specialisation and trade commenced.

If Ann spends all of her working time gathering bananas, she gathers one hundred per month but catches no fish. If, instead, she spends all of her working time fishing, she catches two hundred fish per month and gathers no bananas. Because we assume that the production functions are linear, if Ann divides her work time evenly between these two tasks, each month she gathers fifty bananas and catches one hundred fish. If Bill spends all of his working time gathering bananas, he gathers fifty bunches. If instead he spends all of his time fishing, he catches fifty fish. Table 1 shows the maximum quantities of bananas and fish that Ann and Bill each can produce monthly.

Table 1: Production possibilities

	Bill	Ann
Bananas	50	100
Fish	50	200

If Ann and Bill do not trade, then the amounts that each can consume are strictly limited to the amounts that each can produce. Suppose that before specialisation and trade commence, Ann and Bill each divide their work time evenly between fishing and banana gathering. Table 2 shows the amounts of fish and bananas that Ann and Bill each produce *and consume* each month.

Table 2: Amounts produced and consumed before specialisation and trade

	Bill	Ann
Bananas	25	50
Fish	25	100

Now Ann meets Bill and, after observing Bill's work habits, offers Bill the following deal: 'I'll give you thirty-seven of my fish', says Ann, 'in exchange for twenty-five of your bananas'. Bill accepts. Will one, none, or both of these individuals be made better off by this trade?

Again, purely for expositional simplicity we assume that both Ann and Bill want to consume the same number of bananas with trade that each consumed before trade. Table 3 shows the amounts of bananas and fish that Ann and Bill each *produce* in anticipation of trading with the other. Note that Bill specialises completely in banana-gathering. He wants to continue to consume 25 bananas each period, but he must also give to Ann 25 bananas. He can achieve this outcome only by spending all of his time producing bananas, in which case he produces 50 bananas and no fish.

Table 3: Amounts produced with specialisation and trade

	Bill	Ann
Bananas	50	25
Fish	0	150

Ann, knowing that she will receive 25 bananas from Bill, shifts some of her work time from banana gathering into fishing. With trade, Ann produces only half (25) of the 50 bananas that she produced before trade. Able now to spend more time fishing, Ann's catches an additional 50 fish - causing her monthly fish output to rise from 100 to 150.

On trading day, true to their word, Ann gives to Bill thirty-seven fish and Bill gives to Ann twenty-five bananas. Table 4 shows the amounts of bananas and fish that Ann and Bill each *consume* with trade. Note that Ann and Bill are both better off than they were before trade. Each person has the same number of bananas to consume as before, but Ann now has thirteen more fish while Bill has twelve more fish to consume. This small society - call it Annbillania - is wealthier by a total of twenty-five fish!

Table 4: Amounts consumed with specialisation and trade

	Bill	Ann
Bananas	25	50
Fish	37	113

This increase in total output is not the result of either or both of these individuals plundering or 'exploiting' a third party, for there is here no third party to plunder or to 'exploit'. Nor is this rise in output and consumption the result of any of the factors identified by Adam Smith. This increase in output and prosperity for both people is the result exclusively of Ann specialising more in fishing and Bill specialising more in gathering bananas. This happy outcome occurs because in this society each person concentrates more fully on producing that good that he or she produces *comparatively* efficiently - that is, efficiently compared with the other person.

The first impression that one gets when looking at Table 1 is that Ann is better than Bill at *both* fishing and banana-gathering. After all, Ann can each month produce greater quantities of these goods than can Bill. But it is the genius of the principle of comparative advantage that it enables us to understand that this first impression is mistaken. What matters economically is how much it costs Ann to produce each of these goods compared to how much it costs Bill to produce each of these goods. And because (by assumption) the only two goods that either person cares to consume are fish and bananas, the cost of producing fish is measured in foregone bananas, while the cost of producing bananas is measured in foregone fish.

So when we *compare* one person's cost of producing one of the goods to the other person's cost of producing that good, we see that, while Ann can produce a banana at a cost of two fish, Bill can produce a banana at a cost of only one fish. Of these two people, Bill is the comparatively lower-cost producer of bananas. In contrast, while for each additional fish Bill produces he produces one fewer banana - that is, Bill's cost of producing a fish is one banana - for each additional fish that Ann produces she produces ½ a banana less - meaning that Ann's cost of producing a fish is ½ of a banana. Of these two people, Bill is the lower-cost supplier of bananas while Ann is the lower-cost supplier of fish. Bill, we say, has a comparative advantage over Ann

at supplying bananas while Ann has a comparative advantage over Bill at supplying fish.

Viewed from each individual's perspective, Ann knows that each fish she catches costs her half a banana; so she's willing to sell each of her fish at any price higher than one-half of a banana. (In our example, she sold thirty-seven fish to Bill at a price of roughly two-thirds of a banana per fish.) Bill knows that each banana costs him one fish to produce, so he will sell bananas at any price higher than one fish per banana. (In our example, he sold twenty-five bananas at a price of about one and one-half fish per banana.)

There's nothing special about this particular price - that is, this particular exchange ratio of fish for bananas. Any price of fish between one-half a banana and one full banana will generate gains from trade for both Ann and Bill.[7] What *is* important is the existence of at least one price - one exchange ratio - that is mutually advantageous for both persons. And such a price (or range of prices) will exist if comparative advantage exists - which is to say, if each person has a different cost than does the other person of producing each good.

When the lower-cost fish supplier (Ann) produces more fish than she herself plans to consume - that is, catches fish that she trades to Bill - Bill taps in to Ann's greater efficiency at fishing. He cannot produce fish himself at a cost lower than one banana per fish, but by trading with Ann he acquires fish at a cost (in our example) of two-thirds of a banana. Likewise, by trading with Bill, Ann taps in to Bill's greater efficiency at gathering bananas. In essence, by agreeing to specialise each according to his and her comparative advantage and then trade, Ann and Bill each agrees to allow the other person to share in the fruits of his or her comparative advantage.

The above example, though simple, reveals comparative advantage's essential feature - namely, mutually advantageous opportunities to specialise and trade exist among any two entities if the cost to one of the entities of producing a good or service that is valued by both entities differs from the other entity's cost of producing that good or service. Making the

7 Because each fish costs Ann half of a banana to produce, she is not willing to sell fish at a price of less than half of a banana. Because Bill can produce for himself a fish at a cost of one banana, he is not willing to buy a fish at any price higher than one banana.

example more realistic by adding millions of people and millions of goods and services - including machinery and other capital goods - only increases the applicability and power of the principle, because larger numbers of people and products mean greater scope for mutually advantageous specialisation and exchange.

Combining Ricardo with Smith

Deeper understanding of comparative advantage is gained by combining Adam Smith's insights with that of David Ricardo. Remember that the above-described increase in Ann and Bill's prosperity involved no change in either person's abilities to produce either good. Nor did it involve the introduction of any machinery. Let's now relax one of these assumptions. Specifically, let's assume - not unrealistically - that by specialising more heavily in fishing, Ann's skills at catching fish have improved so much that were she now to spend all of her time fishing she would catch in each period, not 200 as before, but 300 fish. Table 5 shows the new production possibilities of Ann and Bill.

Table 5: Ann becomes more skilled at fishing

	Bill	Ann
Bananas	50	100
Fish	50	300

Ann clearly has improved at producing fish. Yet it's important to understand just how the economist measures this improvement - namely, in terms of Ann's opportunity cost of producing each item. Before her fishing skills improved, each fish cost Ann ½ of a banana to produce; now, though, being more skilled at catching fish, each fish she catches costs her only 1/3 of a banana to produce. But notice what Ann's falling cost of producing fish implies about her cost of producing bananas. Before Ann's skills improved, Ann's cost of producing each banana was two fish. Now, however, with improved skills at fishing, each banana that Ann produces costs her *three* fish. That is, precisely *because* Ann can now produce more fish per unit of time than she could earlier, the amount of fish that she foregoes producing when she spends time gathering bananas is greater than it was earlier.

In short, by becoming a better producer of fish, Ann thereby becomes, *economically*, a worse producer of bananas. Even more surprisingly, Ann's improved ability to produce fish also improves Bill's ability to produce bananas compared to Ann's ability to produce bananas. Before Ann became a more-efficient producer of fish Bill could produce bananas at one-half of Ann's cost of producing bananas. Now, however - with Ann being a more-efficient producer of fish - Bill can produce bananas at one-third of Ann's cost of producing bananas. To repeat this remarkable fact: Ann becoming a better producer of fish makes Bill, compared to Ann, a better producer of bananas despite there being no change in Bill's absolute abilities to produce either fish or bananas.

It follows that Bill, at least potentially, gains from Ann's improved skills at fishing. To see how, remember that before Ann's fishing skills improved Bill's cost of producing bananas was half that of Ann's. But because Ann's improved fishing skills have raised her cost of producing bananas (from two fish per banana to three fish per banana), Bill's cost of producing bananas - which, as before, is still one fish per banana - falls from one-half of Ann's cost to one-third of Ann's cost.

The potential for Bill to gain from Ann's improved fishing skills lies in the fact that Ann is now willing, unlike before, to sell fish to Bill at a price less than ½ of a banana each (but not lower than 1/3 of a banana each). With sufficient bargaining power, Bill can now entice Ann to give to him, in exchange for any given amount of his bananas, more fish than she gave to him before.

In this two-person example, the sharing of the gains from trade - what portion of the benefit of trade goes to one person and what portion goes to the other - is determined exclusively by bargaining power. The better is Ann at bargaining relative to Bill, the greater is the share of the gains from trade that she captures and the lesser is the share that Bill captures. Yet it is crucial never to forget that as long as producers specialise according to comparative advantage and then trade, there are mutual gains from trade. However small is the share of the gains from trade that are captured by Bill, he is still better off materially than he would be by refusing to trade. Looked at differently, no matter how good a bargainer Ann is, she will be unable to persuade Bill to specialise and trade on terms at which he loses or simply gains nothing.

In the reality of the modern world - a world in which each good and service is typically produced and sold by many different suppliers - the sharing of the gains from specialisation and trade is determined by competition. Obviously, after her fishing skills improve, Ann would like to reap all of the benefits of this improvement by continuing to sell to Bill at the same price as before: each fish fetching 2/3 bananas. But if Ann faces competition from other fish suppliers who can produce fish at a cost lower than 2/3 bananas (per fish produced), then she is likely to be led by competition to lower her price. While before her skills improved she would not have lowered her price below 1/2 bananas per fish, with her now-improved skills, she's willing, if obliged by competition, to lower her price down to 1/3 bananas per fish. And if there are enough other people specialised in fishing who have skills comparable to Ann's, then competition among them for Bill's bananas will oblige Ann to share at least some of the benefits of her improved skills with Bill (and with other buyers of fish).

National borders are irrelevant to the benefits of trade

Together, the Smithian and Ricardian explanations for why people specialise and trade constitute a formidable justification for a policy of free trade. A government pursues a policy of free trade to the extent that it does not discriminate against, or in favour of, goods or services on the basis of the political jurisdiction in which those goods or services are produced or sold.

Indeed, the economic case for free trade can be fairly summarised as a demonstration that political borders are economically meaningless. Whatever benefits arise when two residents of the same country trade with each other arise when residents of two different countries trade with each other; whatever detriments - real or imagined - arise when two residents of different countries trade with each other arise when two residents of the same country trade with each other. Nothing about a political border changes the nature or the consequences of trade.

Among the most frequent errors committed by those who oppose free trade is to identify the job losses or business closures that result from trade with foreigners as being downsides unique to trade with foreigners. Yet they are not. *Whenever* consumers change the ways they spend their money there are businesses that boom and jobs that are created, as well as businesses that suffer and jobs that are destroyed. *Whenever* a new source of raw materials is discovered - *whenever* an entrepreneur introduces a new product or a new method of production or distribution - *whenever*

there is *any* economic change, some people's economic fortunes wax while other people's economic fortunes wane.

One small sample will suffice. In the late 1990s, in the US, the Atkins diet became very popular. People on this diet eat fewer carbohydrates and more protein. Soon after this diet became all the rage, a popular American donut shop (Krispy Kreme) closed some of its stores and blamed - no doubt accurately - the Atkins diet. Many workers lost their jobs making and selling donuts, not because of any increase in imports, but exclusively because Americans' eating habits changed. And yet whatever distress, anxiety and hardship are suffered by those who lose jobs because fellow citizens purchase more imports are suffered equally by those who lose jobs because of changes in consumer preferences that have nothing to do with international trade.

Put differently, if economic competition is good when it occurs among rival firms located within the same country, there is every reason to believe economic competition to be equally good when it occurs among rival firms located in different countries. This observation highlights another advantage of free international trade: it encourages maximum possible competition. Even if domestic consumers currently buy nothing from a particular foreign country or firm, their freedom to do so works as an additional incentive for domestic suppliers to remain attentive to consumer demands by keeping prices low and product-quality high.

Here's yet another advantage of a steadfast policy of free trade: it discourages the wasting of resources in pursuit of special privileges. If business people believe that they stand a good chance of receiving special privileges from government - privileges such as punitive taxes on consumers who purchase the offerings of their foreign rivals - business people will spend time and resources seeking such privileges. And the more willing is government to grant such privileges, the greater will be the amounts of time and resources spent in their pursuit.

These expenditures, while profitable for the firms who succeed in securing the special privileges, are a net loss for society. One reason is that these expenditures are meant to inflate the privilege-seekers' profits by creating artificial scarcities that reduce others' prosperity. Another reason is that the use of resources in these ways necessarily means that these resources are diverted away from other, more productive uses. The business woman from Manchester who spends the day in London lobbying for protection

from competition is not spending that day at her firm to ensure that it operates as efficiently as possible. The lawyer hired by an industry group to petition for tariffs is not using his time and legal expertise to assist firms at writing better contracts or helping clients in their real-estate deals. These losses of productive output are real. Such losses - which economists call ‘rent-seeking wastes’ - would be reduced with reductions in government’s willingness to grant tariffs and other special privileges.

Trade and jobs

No objection to free trade is more common than the claim that more imports lead to permanently higher unemployment. Several other arguments against free trade exist, but none comes close to the 'imports raise unemployment' argument in stoking popular fears of commerce with foreigners.

The argument that more imports mean more unemployment is simple - and, as we'll see, simplistic. This argument begins with the correct recognition that, because purchases of imports are not purchases of goods or services produced in the home economy, fellow citizens who might otherwise be employed producing these particular goods and services are not so employed. This argument ends one small step later with this incorrect conclusion: 'Therefore, imports promote lasting domestic unemployment'.

While it's true that imports often destroy *particular* jobs, or prevent other *particular* jobs from being created, it's untrue that imports increase lasting unemployment. Because human beings are not single-purpose robots, each designed and programmed to perform one and only one task, the destruction of any particular job does not cast the worker who once held that job into a state of permanent joblessness.

To see just why no permanent joblessness is created by imports requires that we stand back to get a larger and more complete picture of the economic activities of which the imports and loss of particular jobs are a part. Let's consider the hypothetical example of apples imported into the United Kingdom from the USA.

Suppose that Jones is a British grocer who purchases £1,000,000 worth of apples from America. The reason for this purchase is that Jones finds these apples to be a better bargain than are apples sold by domestic

suppliers. Assuming that the quality of the American apples is the same as that of domestically grown apples, the per-apple price of the American apples must be lower than that of comparable British apples. Jones therefore expects to earn higher profits by retailing these American apples in his supermarket than he would earn by retailing instead £1,000,000 worth of domestically grown apples.

What the opponent of free trade sees in this exchange is British apple growers' lost sales and, hence, the lost jobs of fellow citizens who work, or who would work, in British apple orchards. But what the opponent of free trade does *not* see is larger and more important.

An important effect of this exchange is the fate of the £1,000,000 spent to buy the imported apples. What does the American apple exporter do with the £1,000,000? British pounds cannot be spent in the USA. The most obvious use of these British pounds is for the American to purchase £1,000,000 worth of exports from the UK - which this American might do. In reality, though, it is likely that the American apple exporter himself has no interest in purchasing anything at all from the UK. Yet his acceptance of £1,000,000 in exchange for his apples reveals that he knows someone with US dollars who wants to spend at least £1,000,000 in the UK. We can call that someone a US bank.

The American apple exporter exchanges his 1,000,000 British pounds for £1,000,000 worth of American dollars. The only reason the US bank willingly turns over £1,000,000 worth of dollars to the apple grower in exchange for the 1,000,000 British pounds is that the bank knows that some its customers want to acquire - and are willing to pay for - at least £1,000,000.

But the only reason for an American to want British pounds is to use those pounds to acquire something from the UK. Suppose that one of the bank's customers is an American beer importer. This beer importer wants to offer for sale in the US £1,000,000 worth of British beer. So the American beer importer uses dollars to buy the £1,000,000 from the US bank and then uses the £1,000,000 to purchase beer from the UK.

The £1,000,000 originally spent in the UK to buy American apples returns, in this example, to the UK to buy British beer. Put differently, the £1,000,000 not spent on British apples was spent instead on British beer. Therefore, although the purchase in the UK of imported apples puts downward

pressure on employment in British apple orchards, it puts upward pressure on employment in British breweries. In short, Brits bought American apples with British-brewed beer and Americans bought British beer with American-grown apples.

This example, although hypothetical and simple, reveals an essential truth about trade: it has no long-run effect on the level of total employment. Instead, trade *rearranges* employment. Trade *shifts* jobs from some domestic firms and industries (namely, those that produce outputs that compete with imports) to other domestic firms and industries. This shifting of jobs - this rearrangement by trade of production and employment opportunities in the home country - is positive-sum. The jobs that are created are generally higher paying than are those that are destroyed. The reason is that trade allows industries that enjoy comparative advantages to expand and obliges those with comparative disadvantages to shrink - which is to say that industries that use resources (including labour) most productively expand while those that use resources less productively shrink.

Economists often claim that the domestic firms and industries to which jobs are shifted by trade are firms that export. This claim is only partly correct. It's true that the more a country imports the more it exports. More imports, therefore, lead to more jobs in firms and industries that produce outputs for export. But firms and industries that export are not the only ones in which employment is boosted by trade. Because imports put downward pressure on the prices that consumers pay for consumption goods, consumers have more money to spend on other goods and services. For example, the money consumers save by purchasing lower-priced imported shoes might be spent on restaurant meals. Imports of shoes, therefore, expand employment in the domestic food-service industry despite the fact that this industry is not one that exports.

Another means by which trade creates jobs in firms and industries that do not necessarily export is by lowering the prices of inputs used by domestic producers. For example, perhaps imports of steel and other building-construction material might lower the costs of opening and operating movie theatres. Competition among movie theatres then results in these lower costs being passed on to movie-goers in the form of lower ticket prices. The resulting increase in movie-going will create additional jobs in the non-exporting industry of local entertainment.

Although the above example involves only two countries, nothing of significance changes if more countries are drawn into the picture. The conclusion remains unaltered: money spent on imports returns to the domestic economy as demand for domestically produced outputs.

For example, let's make the extreme assumption that no one in the USA wants, under any circumstances, to buy anything at all from the United Kingdom. At first it might appear that this universal lack of interest among Americans in British goods or services will dissuade the American apple grower from exporting any apples to the UK. After all, if no American - including the apple grower - wants anything from the UK, what use are British pounds to the American apple exporter? Additional reflection, however, reveals that if someone in a third country - say, Canada - wants to buy goods or services from the UK then the American apple grower will be willing to exchange his apples for British pounds if he, or some other American, wants to buy goods or services from Canada. In this example, the American apple grower will export apples to the UK and accept pounds as payment. This American will then use the pounds to buy (say) lumber from Canadians. Canadians accept the pounds as payment for their lumber exports to the USA because they wish to buy (say) beer from the UK.

The general point is that as long as some *foreigners*, regardless of nationality or country of residence, want to purchase some outputs supplied by producers in the domestic economy, there will be foreign demand for the domestic economy's exports. Foreign demand for the domestic economy's exports need not come from the particular countries that sell imports to the domestic economy.

More generally, from the perspective of each country, the rest of the world is best thought of as simply the rest of the world. Just as you as an individual do not expect to sell to each of the many merchants with whom you deal the same amount as you buy from each merchant, people reckoned as a single country should not expect to export to each of the many countries with whom they deal the same amount as they import from each country. What matters to you, as an individual, is how much you buy from others on the whole, and how much you sell (usually your labour) to others as a whole, with the particular identities of buyers and sellers being of no consequence. Likewise, what matters to the people reckoned as a country is how much they buy from other countries as a whole, and how much they sell to other countries as a whole, with the particular identities of the countries that do the buying and those that do the selling being of no consequence.

Assuming flexible labour markets is reasonable

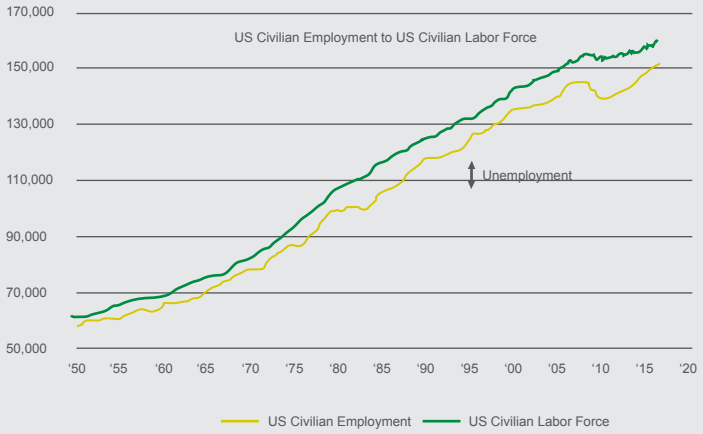
The conclusion that trade does not reduce the overall number of jobs rests on several assumptions, the realism of which varies from country to country. The most important of these assumptions is that labour markets are reasonably efficient and flexible - that is, that workers generally are free to switch jobs, that employers are generally free to expand their operations and to compete for workers, and that wages over time adjust to reflect the demand for each particular kind of worker as it interacts with the supply of that kind of worker.[8]

To the extent that labour markets are obstructed with barriers to the creation of new jobs - barriers such as occupational-licensing restrictions or labour-union rules that confine certain jobs to union members - workers who lose jobs to imports will have more difficulty than otherwise finding new jobs. Likewise, if and to the extent that wages are prevented from falling to reflect the greater supply, relative to demand, of some workers, then workers who lose jobs to imports will face more difficulty finding jobs elsewhere.

Economists are justified, *when discussing trade*, in assuming labour markets to be sufficiently efficient and flexible that workers displaced from their current jobs will eventually find different, new jobs. One justification is that this assumption describes reality closely enough for most first-world countries today, at least over the long run. New firms - with new employment opportunities - *are* created. Workers can and do often switch jobs. Wages and other terms of employment can and do change enough to reflect changes in the supply and demand for various kinds of workers.

8 Two other such assumptions warrant mention here. The first is the assumption that the country is not in the midst of an economic recession. The second is that government unemployment compensation is not so generous as to encourage workers to permanently leave the labour force simply because of the loss of particular jobs today.

Figure 1: Jobs and the size of the population (thousands)



Source: BLS, FRED

In Figure 1, we see that the more than 150 per cent increase in the size of the US labour force since 1950 has been matched by a similarly sized increase in the number of jobs in the US. (The vertical distance between the two lines is the unemployment rate.) These data are powerful evidence of the validity of economists' understanding that the number of jobs in a market-oriented economy over the long run is determined overwhelmingly by the size of the labour force and, hence, not by trade policy.

A second justification for the assumption of reasonably efficient and flexible labour markets is that, when the discussion is of trade and trade policy, we want to isolate, as much as we can, the effects of trade from those of non-trade factors. If, for example, a country's labour markets are so clogged with government-imposed obstacles to the creation of new jobs that workers displaced by imports can never find new jobs, do we blame trade or do we blame the obstacles? While the decision of where to place the blame might seem academic and irrelevant, it is not. If people understand that changes in trade patterns themselves cause no permanent decrease in employment when labour markets are flexible, observed long-run decreases in employment that follow in the wake of increased import penetration will be correctly understood to be ultimately caused by government's labour-market interventions rather than by trade. Public pressure will then be

more likely to concentrate on cleansing labour markets of government-imposed obstructions than if the observed joblessness is mistakenly blamed on trade.

Perhaps a better way to grasp this point is to recognise that inefficient and inflexible labour markets wreak damage regardless of why workers lose particular jobs. If labour markets function poorly, then workers who lose their jobs because consumers, say, choose to buy less bread and more fish will be affected no less, and no less harmfully, than will workers who lose their jobs because of greater import penetration. By assuming, in discussions of trade, that labour markets work reasonably well, we are less prone to attribute to trade consequences that are more appropriately attributed to other sources.

In short, to understand the causes and consequences of trade, and of trade policy, it is appropriate to consider them in isolation from other economic changes and policies as long as these other changes and policies are plausibly distinct from trade and trade policies.

Jobs are not scarce

If labour markets work reasonably well, then an increased supply of some particular kind of workers will, at least initially, push wage rates down and thus encourage the employment of more such workers. Likewise, the increased availability of some particular kinds of workers spurs employers to find profitable employment for such workers. People able and willing to work are, after all, productive resources - and a chief function of entrepreneurship is to find ways to profitably employ productive resources. Again, the conclusion is that the overall level of employment in the long run is unaffected by trade and is instead determined by the size of the labour force in combination with the efficiency of the labour market.

This conclusion is directly at odds with the ‘lump of labour’ fallacy. The lump-of-labour fallacy is the notion that there is a fixed amount of work to be done in an economy and a fixed number of jobs necessary to perform in order to get this work done. Contrary to careless claims by some free-trade advocates, the lump-of-labour fallacy does not necessarily imply the conclusion that more imports lead to fewer jobs in the domestic economy. As we saw above, if more imports of apples from America result in more exports of beer to America, the number of jobs in the domestic economy, and in America, remains fixed. All that has happened because of trade is

that, in the UK, some jobs in apple orchards have been replaced with jobs in breweries, while in America some jobs in breweries have been replaced with jobs in apple orchards.[9]

Nevertheless, those who commit the lump-of-labour fallacy are prone to be sceptical of imports. They think of jobs as fixed and given things in an economy rather than being created and conditioned by the economy of which they are a part. They imagine jobs to be created independently of the economy and existing independently of the number of workers in the economy, of labour-market conditions, of macroeconomic conditions, and of all the many institutions and innumerable details that constitute the economy. In this fallacious worldview, the destruction of any one job is not part of a process that creates another job. Therefore, even if the lump-of-labour fallacy does not itself logically imply the conclusion that more imports necessarily mean more unemployment, the worldview of which this fallacy is a part leads those who hold it to see the destruction of any particular job as a calamity without any upside.

Contrary to much popular misunderstanding, jobs are not scarce. Or put differently, jobs are only as scarce as are human desires. As long as there are unsatisfied human desires, there are jobs to do - namely, jobs to better satisfy these as-yet-not-fully-satisfied desires. Jobs will truly disappear only if and when humanity reaches a condition in which every possible desire of every human is completely satisfied. But, of course, in such a condition - in such a heavenly state - no one will need or want a job, for by definition we will all be unimaginably wealthy.

The practical challenge, therefore, is not to create jobs. Again, because human wants and desires are virtually limitless, jobs are - and will forever be - superabundant. The practical challenge instead is to arrange for each person to be able to work to satisfy as many human desires as possible, including his own. Meeting this challenge implies the need to avoid wasting scarce resources and human effort. It implies the need, whenever possible, to shift resources and human effort toward the satisfaction of more-pressing desires and, hence, away from the satisfaction of less-pressing desires. And because the cost of satisfying the desires that we satisfy is the foregone satisfaction of other desires, meeting this challenge certainly implies the

9 While the lump-of-labour fallacy does not logically imply that imports lead to fewer jobs, it *does* logically imply that labour-saving technology leads to fewer jobs. If, say, driverless lorries destroy jobs for lorry drivers, then, if the lump-of-labour fallacy were true, unemployment would permanently rise.

need to avoid using more scarce resources and human labour than are minimally necessary to satisfy any given human desire. If we use more resources and labour than are necessary to satisfy some particular desire, we thereby forego the satisfaction of some desires that could have been, but are not, satisfied. In short, we make ourselves poorer than we would have otherwise been.

From this perspective, tariffs and other government interventions that artificially protect some particular, existing jobs from being destroyed by competitive market forces prevent us as consumers from satisfying as many of our desires as possible.

Trade deficits

In the previous section, we saw that the purchase of imports does not reduce overall employment in the economy. A key reason for this outcome is that money spent on imports, once received by foreign exporters, returns to the domestic economy as demand for domestically produced goods and services. But what if the money does *not* return?

Fears that money spent on imports will never return to the domestic economy as demand for domestically produced outputs fuel much of the support for protectionism. Yet these fears are misplaced. No one works - or parts with valuable merchandise or assets - ultimately to get *money*. Money is a medium of exchange. People accept money as payment only because they want and expect to use it to acquire real goods and services for their or their families' consumption.

Of course the use of money to acquire real goods and services for consumption need not - and in reality seldom does - occur immediately after it is received. Each of us holds money until we encounter bargains sufficiently attractive to entice us to part with our money. More significantly, many of us save, which generally means that we today use our money to acquire, not goods or services for immediate consumption, but, instead, to acquire assets that we anticipate will increase in value during the time that we hold them. When we save, we defer consumption in the hope and expectation of enhancing the amount that we are able to consume in the future.

Foreigners who receive money from us when they sell their exports to us are no different. In addition to spending some of their monetary earnings during the current period to buy our exports – they also hold some of their earnings as cash, and use other of their earnings to buy assets denominated in our currency. When foreigners, during the current period (say, the

month), buy fewer of our exports than we buy of their exports, our country is said to run a ‘trade deficit’.

Throughout this monograph I will use the term ‘trade deficit’ (or ‘trade surplus’) synonymously with ‘current-account deficit’ (or ‘current-account surplus’). Although pedants will point out that there is technically a difference between a trade deficit and a current-account deficit, for our purposes the difference is insignificant and can be ignored. As a matter of practice, when the term ‘trade deficit’ is used in popular and political discussions, what is always meant is the excess of a country’s imports (measured in monetary value) over that country’s exports. This excess of imports over exports is the major factor contributing to a deficit on that country’s ‘current-account’ - which is the name of the ledger on which are recorded the value of all imports and exports. Yet no matter what it is called – ‘current-account deficit’ or, more commonly, ‘trade deficit’ - no concept in all of economics is responsible for as much misunderstanding, as much confusion, and as much policy mischief as is this concept.

As we will presently see, a country that runs a trade deficit in fact suffers no actual deficiency in its trading practices or outcomes. Nor does a trade deficit signify ‘unbalanced’ international commercial relationships. And nor is a trade deficit necessarily evidence of poor economic health, imprudent economic policies or practices, or ‘unfair’ trade practices by foreigners. Yet most people, upon hearing that their country is running trade deficits, jump to the mistaken conclusion that something is amiss with their domestic economy or with their trade relations with other countries, or with both. And politicians - ever eager for excuses to exercise more power over citizens - use the public’s embrace of this mistaken conclusion as a pretext to obstruct trade.

Current account deficits equal capital account surpluses, and vice versa

It is not difficult to understand trade deficits - or, more generally, to understand the balance of payments, which is the system of accounts on which trade deficits (or trade surpluses) are recorded. But gaining such an understanding does require familiarity with a few special terms and simple accounting rules.

Each country has two different accounts on which are recorded all of its citizens' economic transactions with foreigners. One of these accounts, as noted above, is the *current account*; the other is the *capital account*.[10] The value of every international economic transaction is recorded on one or the other of these two accounts. Further, because these accounts are constructed to always balance each other, it is typically the case that a transaction on one account implies an exactly offsetting transaction on the other account. By construction, therefore, when the value of a country's current account is added to the value of a country's capital account, the sum is *always* zero. If, say, the UK this year has a current-account deficit with the rest of the world of £73 billion, the UK this year has an offsetting ('balancing') capital-account surplus with the rest of the world of £73 billion. Likewise, if Germany this year has a current-account surplus with the rest of the world of €209 billion, that country has an exactly offsetting capital-account deficit - of €209 billion - with the rest of the world. In this sense, then, trade is always balanced.

In the nearby box you will find the components of each account in greater detail. But knowledge of these details isn't necessary to grasp the basic function of each of the two accounts. On the current account are recorded sales and purchases of goods and services meant for consumption or use during the *current* period. On the capital account are recorded all investment activities - that is, purchases and sales of assets (including real estate) undertaken with an eye to future periods.

This international accounting has two basic rules:

10 What we will here throughout call 'the capital account' is sometimes split into two, namely, the 'capital account' and the 'financial account'. Together, both of these accounts record all investment activities. To keep our discussion as simple as possible, we will use 'capital account' to refer to that account on which are recorded all investment activities, be these financial or 'real'.

First, if the people of country A, during some period, import more than they export, country A runs a trade, or current-account, deficit; if the people of country A import less than they export, country A runs a trade, or current-account, surplus. If the people of country A import exactly the same amount as they export, country A's current account for that period is balanced, being neither in deficit nor in surplus.

Second, if the people of country A, during some period, invest less in foreign countries than foreigners invest in country A, country A runs a capital-account surplus; if the people of country A invest more in foreign countries than foreigners invest in country A, country A runs a capital-account deficit.

Each of these rules is tightly linked to the other by the fact that all international economic transactions that are not recorded on the current account (meaning, most transactions other than purchases of imports and sales of exports) are, by definition, investment transactions and, hence, recorded on the capital account. Foreign investment in the home country can usefully be divided into four different components. This investment can be in:

- Equity - that is, acquiring ownership, in whole or in part, of business firms located in the home country.
- Debt - that is, lending money, for whatever duration, to citizens of the home country who are thereby legally bound to repay the funds that are lent to them by foreign creditors.
- Real estate - that is, purchasing land or buildings located in the home country.
- Cash - that is, holding by foreigners of home-country currency as part of their portfolios.

Whenever foreigners engage in any of these four activities in the home country, the home country receives an inflow of capital from abroad. From the perspective of the countries whose citizens make these foreign investments, these investments are *out*flows of capital.

Any inflow of capital into the home country increases the home country's current-account deficit (or decreases its current-account surplus). Simultaneously, this inflow of capital from abroad increases, by the same amount, the home-country's capital-account surplus (or decreases its

capital-account deficit). As for any country whose citizens make foreign investments, this outflow of capital increases that country's current-account surplus (or decreases its current-account deficit). Simultaneously, this outflow of capital to other countries increases, by the same amount, that country's capital-account deficit (or decreases its capital-account surplus).

International trade and investment accounting

CURRENT ACCOUNT

– Merchandise imports [-] and exports [+]

– Service imports [-] and exports [+]
  – tourism
  – transportation
  – business and professional services

– Income paid to foreigners on their investments in the home country [-] and income received by residents of the home country on their investments in foreign countries [+]

– Unilateral monetary transfers
  – government grants given [-] and received [+]
  – private remittances given [-] and received [+]

CAPITAL ACCOUNT

– Direct investments, incoming [+] and outgoing [-] (including investments in real estate)

– Portfolio investment, incoming [+] and outgoing [-] (securities and banking flows, including those of central banks)
  – equity
  – debt
  – cash

– Gold acquisitions [+] and surrenders [-]

– International Monetary Fund credits and Special Drawing Rights acquisitions [+] and surrenders [-]

– Official acquisitions [+] and surrenders [-] of foreign-exchange reserves

The signs in each bracket indicate whether the monetary value of the transaction on the account on which it is record is recorded as a credit [+] or as a debit [-]. By construction, the positive value of one account always equals the negative value of the other such that, when the value of the two accounts are summed the value is zero.

Suppose that in January the people of the UK import a total of £50 billion from abroad. Suppose also that in that same month the people of the UK export the exact same amount - £50 billion - of goods and services. In *this* case, with the value of its exports being equal to the value of its imports, the UK's current account for January is balanced at £0. Further, because all of the pounds received by foreigners on their export sales to the UK return to the UK as demand for UK exports, foreigners have no pounds remaining to *invest* in the UK. Likewise, because UK residents spend on imports all that they earn on exports, they, too, have no funds remaining to invest abroad. Therefore, because in January there is no activity on the UK's capital account, that account is also balanced at £0. And, of course, adding the value of the current account to that of the capital account yields, as always, a total balance of £0.

Now suppose that in February the people of the UK import a total of £46 billion but export only £44 billion - that is, they import £2 billion more than they export. In February, then, the UK runs a current-account, or 'trade', deficit of £2 billion. But what are foreigners doing with the £2 billion that they've chosen not to spend that month on British exports? The answer is that foreigners are, necessarily, investing those two-billion pounds in pound-denominated assets. Perhaps the £2 billion is used to buy stock on the London Stock Exchange. Or perhaps it is the price paid for real estate in London and Glasgow. Another possibility is that the £2 billion is loaned to the government of the UK (in the form of purchases of bonds issued by Her Majesty's Treasury). Regardless of the particular form of the investment, every one of the £2 billion that does not return to the UK in February on the current account - that is, as demand for British exports

- returns on the capital account.[11] In February, the UK's current-account deficit of £2 billion is exactly offset by the UK's capital-account *surplus* of £2 billion.

Recognition that any current-account deficit is offset exactly by a capital-account surplus supplies one good reason to stop fretting if your country runs a trade deficit. When all international economic activities are accounted for, there is in fact no deficit. All pounds that leave the UK as demand for imports return *either* as demand for UK exports or as investment in the UK. Because international economic activity consists of both consumption and investing activities, it is always balanced when both of these kinds of healthy economic activities are accounted for.

Trade-deficit myths

Despite the fact that *by construction* each country's current and capital account balance each other such that when they are added together the sum is always £0, myriad myths surround the balance of payments. Let's examine these principal myths.

Myth 1: Trade deficits reduce employment

The unwarranted worry that a country that runs a trade deficit thereby suffers greater unemployment is caused by an exclusive focus on the fact that the country exports less than it imports. 'Because we export less than we import', the faulty reasoning goes, 'we produce less than we would were we to run no trade deficit. The jobs destroyed by our imports are not fully offset by jobs created by our exports. Thus, the trade deficit decreases employment in our country'.

Those who focus only on imports and exports - that is, only on those economic activities that are recorded on the current account - assume that producing more goods and services for export is the only source of job creation that can offset the jobs that are destroyed by imports. This

11 Even pounds held for indefinitely long time periods by foreigners return to the UK - or, at least, the purchasing power in these pounds returns. However, it is beyond the scope of this primer to explain this 'real cash balance' effect (as it is sometimes called).

assumption is baseless. Jobs in the domestic economy are created not only when foreigners buy more of our exports, but also when foreigners invest more in our country. Foreign investment in the domestic economy supplies capital to launch new businesses, to expand and to modernise existing firms, to fund more research and development, to pay for more worker training. The list of possible uses of investment funds is long indeed. And each of these uses creates jobs.

When, for example, Ikea opens a store in Edinburgh, this investment by that Swedish company increases the UK's trade deficit,[12] but it also creates jobs in the UK. Workers are hired to build the store and, of course, to operate it. The fact that none of these jobs is in the export sector is irrelevant: they are particular jobs made possible only because some Swedes chose to use some of their pound sterling not to buy British exports but, instead, to invest in the UK.

More generally, whenever foreigners invest in the home economy their export earnings return and are put to use in the home economy. Suppose that a Chinese exporter buys a home in London. Because all purchases of real estate are recorded on the capital account, the pounds used to buy this London home return to the UK not on the current account - that is, not as demand for British exports - but on the capital account. But return to the UK they certainly do.

12 This claim is not always *strictly* true. Because balance-of-payments accounts are recorded for specific, limited periods - for example, monthly - an increase in one kind of foreign investment in the home economy need not increase that country's trade deficit during the same period in which the investment occurs. The increased investment of one sort can be funded exclusively from funds obtained by foreigners' sale of other assets that are denominated in that country's currency. For example, Ikea could pay this month to build its new store in Edinburgh, not with funds diverted this month from buying UK exports but, rather, with proceeds from its sales this month of (say) British bonds that it acquired in previous periods. But this possibility exists only because foreigners in past periods bought British bonds and, thus, increased the UK trade deficit in those past periods. The essential point is that whenever foreigners use funds to invest in your country they are not buying from your country all of the exports that they could possibly buy. Yet this fact does not mean that the funds that return to your country as investments support less job creation than they would support were they to return to your country instead as demand for your country's exports.

And these pounds will then be spent or further invested in the UK. Perhaps the British seller of the home uses some of the sales proceeds to buy an automobile manufactured in the UK, and uses the remainder of the sales proceeds to purchase shares in BP or to start a new information-technology firm in London. Whatever the particular uses of these pounds in the UK, these uses create jobs in the UK - jobs the creation of which offset British jobs lost to imports.

To better grasp the folly of interpreting a trade deficit as a net drain from the home economy of aggregate, job-creating demand, recognise that pounds can be spent or invested by domestic residents in the same ways that pounds can be spent or invested by residents of foreign countries. Foreigners might use all of their pounds to buy British-brewed beer and British-made automobiles, thus resulting in no UK trade deficit. But foreigners might instead use all of their pounds, say, to buy shares on the London Stock Exchange, thus resulting in a UK trade deficit. But suppose, not unreasonably, that in this latter case the British sellers of the stock immediately use their sales proceeds to buy British-brewed beer and British-made automobiles. Clearly, the positive effect on employment in British breweries and automobile factories is the same in both cases. Yet in the first case the UK runs no trade deficit while in the second case it does run one. This example alone should suffice to reveal the error of the claim that trade deficits necessarily reduce domestic employment.

Myth 2: Trade deficits necessarily are evidence of economic or policy problems

Trade deficits are commonly believed to be evidence that the home-country's economy is faltering, either because of irresponsibility on the part of private citizens or because of policy malfeasance on the part of government (or both). This belief is probably the result of a combination of the negative connotation of the word 'deficit' with widespread ignorance of the fact that each and every trade deficit is always offset by a capital-account surplus. Simply *calling* a trade deficit by its other, equally correct (yet less scary) name – 'capital-account surplus' - would go a long way towards calming these fears about trade deficits.

Common sense and economic theory tell us that countries that receive disproportionately large inflows of investment funds are probably doing something *right*, at least relative to many other countries, rather than doing something wrong. A current-account deficit - a.k.a. a capital-account

surplus - implies that any country that runs one is believed by global investors to be a relatively attractive place to invest their funds. No one knowingly invests in companies or countries that he believes to be in economic decline. The very existence of a trade deficit for your country, therefore, implies that global investors regard your country's mix of investment opportunities to be, on net, sound and profitable relative to that of many other countries. And while it's possible that global investors as a group are mistaken about the attractiveness of your country's mix of investment opportunities, it is hardly cause for national embarrassment and lamentation in your country that global investors believe it to have an economic future that is sufficiently promising to justify entrusting their funds in your country.

Admittedly, a trade deficit, while itself never a *cause* of economic problems, can be a *symptom* of economic problems. If citizens of the home country become irresponsibly extravagant spendthrifts, and if they borrow money from foreigners to fund today's spending extravaganza, the home-country's trade-deficit will rise. And because such irresponsibility today creates both increased indebtedness, as well as a decreased ability of home-country citizens to repay this debt, a trade deficit run under *these* circumstances is indeed a symptom of an underlying economic problem in the home country - namely, the irresponsible profligacy of the home-country's citizens.[13]

Yet even though, in this example, one symptom of the home-country's economic problem is a trade deficit, the problem is not *caused* by trade. The problem is caused instead by what economists call excessively high time preference on the part of citizens of the home economy - by what most people call short-sighted extravagance. If citizens of the home country choose, for whatever reason, to irresponsibly discount the future in order to consume lavishly today, restricting their trade with foreigners is unlikely to cure this malady.

13 Of course, for the home country to run a trade deficit under these circumstances, foreign creditors must believe that citizens of the home country are nevertheless still sufficiently likely to be productive enough, or wealthy enough, to repay the debts.

The most plausible real-world example of such irresponsibly extravagant spending is governments running *budget* deficits.[14] Because spending other people's money is easier than spending your own - and because government borrowing in effect is the spending of the money of future taxpayers, many of whom aren't yet born (and, hence, don't vote) - the ability of governments to finance their expenditures with borrowed funds arguably leads to excessive government spending today paid for with borrowed funds.[15] Insofar as foreigners are among the government's creditors, the country of a government that runs budget deficits thereby runs higher trade deficits (or lower trade surpluses) than otherwise. If this government borrowing is truly unwise or excessive, then that country's trade deficit will in part be evidence of this imprudent fiscal policy.

But if instead this government's actions are generally in the public interest, then any budget deficits that it runs must be presumed to be, not evidence of excessive government spending relative to tax revenues, but, rather, the result of prudent and public-interest-serving fiscal decision-making. In this case, while any funds lent to the government by foreigners will, as in the first case, cause that country's trade deficit to rise (or its trade surplus to fall), the resulting increase in this country trade deficit, unlike in the first case, is not evidence of any underlying economic or policy problems.

In either case, though, the funds lent to the government by foreigners are a *benefit* to that country's citizens. The more foreigners lend to the home government, the greater are the savings of citizens of the home country available to be invested in the private economy. Put differently, when foreigners join some of their savings with the savings of citizens of the home country to help finance deficit spending by the home-country government, the total pool of savings put to use in the home country is larger. Long-term interest rates are thus lower, as is the amount of private investment that is crowded out by government borrowing. These facts hold regardless of the prudence or imprudence of the government's fiscal policies.

14 A government budget deficit is not at all the same as a trade deficit. The former does indeed necessarily represent an excess of expenditures over receipts - and, hence, increased government indebtedness. Unlike with trade deficits, government budget deficits *do* always create debt that, barring sovereign bankruptcy or revolution, must be repaid.

15 See especially: Buchanan, J. M. and Wagner, R. E. (1997) *Democracy in Deficit*. New York: Academic Press.

Myth 3: Trade deficits are caused by 'unfair' trade practices by foreign governments

Enough has been said above about trade deficits to indicate why they are not evidence of foreign-governments' unfair trade practices. Pundits, politicians and protectionists who argue otherwise reason that, if only foreign governments didn't restrict their countries' imports so severely, or didn't subsidise their countries' exports so lavishly, then the home economy would export more and import less. The result for the home economy would therefore be a lower trade deficit. But such reasoning is fallacious.

When a foreign government restricts its citizens' imports it thereby restricts its citizens' exports. If as a consequence of import restrictions the citizens of a country spend less in total on imports, the citizens of other countries receive less of that country's currency for use to buy that country's exports. Likewise, if a foreign government successfully uses subsidies to increase its country's exports, then the increased export earnings by that country's citizens enable them to import more.

Whether a country runs a trade deficit or not, and whether any such deficit is large or small, depends mainly upon the attractiveness to global investors of investing in that country relative to the attractiveness of investing elsewhere. A country that investors find to be attractive will draw in relatively large amounts of capital from around the world and, hence, run trade deficits. And the more attractive investors find this country, the larger and more regular will be its trade deficits. In contrast, countries that are especially *un*attractive to global investors will run trade surpluses. Trade restrictions and export subsidies by foreign governments, therefore, have little to no direct effect on the home country's balance of payments.

Ironically, though, there might be an indirect effect - yet an effect quite the opposite of what is predicted by protectionists and other trade sceptics. Because governments that play favourites through the use of import restrictions and export subsidies weaken their countries' economies over time, those countries become less attractive to global investors relative to countries whose governments engage in no, or less, such intervention. Over the long-run, therefore, foreign governments' protective tariffs or export subsidies (or both) will drive global capital away from countries that rely heavily upon such intervention and towards countries saddled with less such intervention. As a result of foreign-government trade interventions, countries in which a greater proportion of resource allocation is guided by

competitive markets rather than by politicians and bureaucrats will experience *rising* trade deficits.

Myth 4: Trade deficits reflect a shortfall of savings in countries that run them

It's true that, as a matter of accounting, whenever a country runs a trade deficit, the amount of investment that takes place in that country exceeds the amount of savings by that country's citizens. Yet this fact does not necessarily mean that citizens of countries that run trade deficits save too little. It is a mistake to assume that if citizens of countries that run trade deficits increase their savings by the amounts of these deficits that these deficits would thereby disappear.

This mistake is very common, and is often committed even by professional economists. For instance, in a 2 May 2018 op-ed in the *Wall Street Journal*, Harvard University economist Jason Furman, who served as Chairman of President Barack Obama's Council of Economic Advisors, wrote that:

> The current-account deficit is the gap between total investment and total savings. If a country saves less money than it puts toward things like factories and equipment, it has to finance the difference with foreign borrowing.[16]

Mr Furman's statement conveys the mistaken impression that all of the ideas and initiative for investments that take place in a country are exclusively those of the citizens of that country - citizens each of whom 'puts toward things like factories and equipment' the investments necessary to bring these things into existence. Yet - this common narrative continues - these same citizens, as a group, can fail to save enough to finance all of these investments. When this failure happens, therefore, these citizens must draw on - or 'absorb' - foreign savings to make up for the shortfall in their own savings.

But this narrative is wrong. It is simply untrue that all of the investment that takes place in a country is investment that 'it' - the people of that country – 'puts toward things like factories and equipment'. Investment in the domestic economy can be, and often is, sparked by the creativity and

16 Worry About the Trade Deficit - a Bit, *Wall Street Journal*, 2 May 2018, https://www.wsj.com/articles/worry-about-the-trade-deficita-bit-1525215114

initiative of foreigners. After all, because no country has a monopoly either on entrepreneurial creativity or on the gumption to undertake risky investments, many of the investments made by foreigners in the domestic economy would not be made were foreigners prevented or dissuaded, for whatever reason, from investing there.

And because people with entrepreneurial ideas frequently are the only ones with sufficient confidence in their ideas to finance them, it is not surprising that much foreign investment in the domestic economy is funded, not with domestic savings, but with the savings of foreigners.

This reality, however, is masked by the common practice of speaking of all investment that occurs within a country as if that investment is sparked, not by the particular individuals who do the investing, but by the country in which the investments are made. It's a short step from the impression that all investment that occurs within a country was somehow destined to occur within that country, to the conclusion that the only reason foreigners fund any of this investment is that domestic citizens didn't save enough. This false conclusion, in turn, leads to the equally false belief that if the citizens of a country that runs a trade deficit had increased their savings by the amount of the trade deficit, their savings - rather than those of foreigners - would finance all of the investments, thus resulting in that country running no trade deficit.

Investment opportunities are not 'given'. They are not independent of the perceptions, talents and preferences - including preferences for savings versus consumption - of the flesh-and-blood investors who make them. Investment opportunities, rather than somehow coming into existence on their own, are often *created* by the individuals who do the investing. Whenever executives of Ikea invest some of that company's resources in the building of a new retail furniture store, they do not passively fill an investment opportunity that would otherwise be filled by other investors. With their and their company's unique talents and preferences, they create specific opportunities to sell furniture. So, while Ikea's building of stores outside Sweden causes other countries' trade deficits to rise, it is a mistake to assume that it fell to Ikea to build these stores only because citizens of those other countries saved too little.

Had citizens of those other countries saved more, it's possible, of course, that some of them would have opened furniture stores at home and, thus, reduced the expected profitability of new Ikea stores in those countries.

But even if this possibility had become a reality, it does not follow that those other countries would thereby have lower trade deficits.

Myth 5: Trade deficits necessarily increase domestic citizens' indebtedness to foreigners

This myth is another that appears in the above-quoted passage from Mr Furman's *Wall Street Journal* essay on trade deficits. It does so when he writes that the 'gap' between total investment and total savings within the country must be financed 'with foreign borrowing'.

That a trade deficit does not necessarily involve borrowing from foreigners is easily seen by referring back to the four different ways that foreign investment takes place. Only one of the four ways involves debt. The other three ways - equity investments, real-estate purchases, and cash holdings - create no indebtedness of domestic citizens to foreigners.

As an example, consider again a decision by Ikea to build a store in the UK. In building this store, Ikea uses pounds to create a store that it then owns and operates. Ikea's decision increases the UK's trade deficit, but no citizen or resident of the UK is put any further into debt as a result. The value of this investment is not an amount of money that anyone in the UK - or anyone anywhere, for that matter - must repay. If the store fails, the loss falls exclusively on Ikea's owners; no one is obliged to compensate Ikea's owners for their losses.

Likewise, if the store succeeds the resulting profits reaped by Ikea reflect value that is *created* by Ikea's successful construction and operation of this store. These profits are not proceeds from the repayment of any debt. Nor are these profits 'value' that is withdrawn from the British economy. The reason is worth emphasising: these profits are *created* by Ikea. They would not exist had not Ikea taken the risks and put forth the effort to build and operate this store in the UK. Indeed, because these profits reflect the extent to which Ikea improved the use of resources within the UK, the existence of these profits implies increased prosperity for the British people as a whole.

The bottom line is that a trade, or current-account, deficit is an accounting artifact that measures only one slice of a larger set of economic transactions. The existence of such a deficit signifies no genuine deficiency in the domestic economy or in that economy's trade with foreigners. Indeed, a

trade deficit generally signifies economic promise. Worries about trade deficits are utterly without justification.

Conclusion

Trade enriches those who take part in it. Few ideas are less disputed by economists. Nevertheless, it is difficult to sustain political consensus in favour of free trade. The costs of trade – such as job losses in industries where foreign firms have a comparative advantage – are concentrated and, hence, visible. The benefits, though far greater, are dispersed and little noticed. That your car and home appliances are cheaper because no tariff is applied to imported steel (for example), or that your job would pay less if imported steel were taxed, are not facts that leap from the cash register or from your payslip. Nor, therefore, do they often leap from the mouths of politicians.

The 50-year post-World War II international consensus in favour of free trade was a triumph of wise policy over demagoguery. Alas, that consensus if collapsing. The old mercantilist idea that countries gain by exporting and lose by importing is again popular among politicians, and new trade tariffs are being introduced. It is again politically profitable to claim that we are harmed when one of our compatriots buys something from a foreigner. That is a dangerous idea, and not just economically.

Politicians, and those who vote for them, need to remember the virtues of free trade.

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