How "Imbalanced Domestic Trade" disrupts a closed economy

Ralph Hiesey, August 29, 2025

Defines "balanced domestic trade" for a closed economy and why it is especially important for modern, highly productive economies. Uses logic well understood for international trade.

Section 0: For Keynesian macroeconomists: A preview

Section 1: "Trade imbalance" in a closed economy.

Section 2: International Trade Analysis: How Trade imbalance has long been known to negatively affect international trade. Later Section 3 will show how a closed economy can similarly be affected.

Section 3: How "trade imbalance" can happen in a closed economy. "Exporters" get richer. "Importers" get poorer, bifurcating an economy.

Section 4: Some economic consequences explained by above analysis that present macroeconomics does not easily explain.

Section 5: Nine Additional Economic institutions which have historically evolved to help economies compensate for "imbalanced trade" even in a closed economy.

Section 6: Some Economic policy implications

Section 0: For Keynesian macroeconomists–a preview: Description of the one assumption different from Keynes' analysis.

Paul Samuelson's Economics is the name of the famous textbook published in 1948 which described economist J.M. Keynes' macroeconomic analysis that described what caused economic recessions/depressions. The new essay here has economic assumptions almost identical to those used by Keynes, but adds one additional assumption that allows agents to be more diverse–and more predictive of modern economies–than allowed by Keynes.

Trade balance has been well understood among internationally trading nations for over two hundred years. Trade balance happens when for each country the value of exports is equal to value of their imports. But there was often serious trade imbalance between countries, especially in the 17th and 18th century. The biggest conflict was that the higher export countries gathered higher money/gold that was extracted from the lower export

countries. However, this has been somewhat resolved by understanding (except by Trump) "capital account" among trading countries. Section 5 of this essay explains why something like "capital account" must be accounted for, even in single countries without external trade.

Now unrealized is how trade imbalance can occur—and make trouble—even for a closed economy that does not trade with any other country. The cause is essentially exactly the same that can happen between two countries. In this case, think of "internal importers" as agents that over time purchase more value than they produce—whereas "internal exporters" in the same country produce more value than they purchase. The key insight, same as for imbalanced international trade, money moves from "importers" to exporters—with zero net money gain for the entire economy.

Keynes' assumptions assumed all were homogeneous agents who each spend exactly what that same agent earns, guaranteeing no troublesome trade imbalance. This is implied by the so called "Keynesian cross." Some serious economists have taken this to mean that debt is not a problem because, according to Keynes' agent, "we owe it to ourselves." Not really! More realistically, some poorer agents owe money to richer other agents in the same economy. This essay explains additional important economic consequences Keynes didn't easily predict—one being how income inequality among agents can quite easily develop. The description here also does not assume a consumption function like Keynes: $C = C_0 + C_1 * Y$. Consumption in this essay is assumed to be simply the sum total consumption of all agents together.

I have shown how such imbalances have been reduced through other historically developed economic institutions and customs. Many of these have been cataloged in **Section 5** of this essay. For those who understand "capital account" in international trade, these are similar to what helps to rebalance trade in a domestic economy.

Section 1: "Trade imbalance" in a closed economy.

Sections 1 through 4 in this essay assume that exchange of goods/services in an economy is done only by money exchange: a "pure capitalist economy." It will become evident why this would be an impossible restriction for a functioning modern economy. Section 5 drops that assumption to add additional institutions, and shows why they are necessary.

Here's an economic story describing a badly trade imbalanced economy to illustrate the problem: Imagine a future economy with one giant mega supplier: the Mighty Amazoom Corporation with massive manufacturing and service locations throughout the country. They are so big that they can supply almost every possible product and service for everyone in the entire economy. They have incredible capital with super modern production robots that run 24 hours per day. They only require 20% of the population to produce all needed

goods/services. Another 5% of citizens make a small amount of other services. No one else is needed to produce what is needed by everyone.

That sounds great. Economists should be delighted by such great economic efficiency. Only 25% of the population needs to work. So what's the big problem? The problem is that seventy five percent of the population has no job and no income! The British call these people redundant. But how can those plentiful goods/services get purchased? Only 25% of people have jobs and income. How could Mighty Amazoom possibly sell more than 25% of its potential output when so many are without jobs? Such an economy would have under performing GDP, with many citizens unsuccessfully seeking jobs to pay for stuff. It is even difficult to see how such an economy could possibly function. **Section 5** of this essay will show that other helpful economic institutions have spontaneously developed to partially compensate for this kind of problem. One purpose of this essay is to explain why these institutions needed to be brought into existence to make an economy work better.

An equivalent way to describe the same problem is to understand that there are two separate reasons jobs are needed in an economy:

1. Jobs are needed to produce products and services that everyone needs.
2. Jobs are needed for people to get income to buy products and services that they need.

The economic problem that makes distribution difficult: There is nothing that guarantees that #1 is equal to #2.

This is no fantasy for contemporary economies. We already have some creeping contemporary examples such as Amazon and Walmart who have driven many out of small businesses, although under capitalism they are doing just they are supposed to do. Automobile and electronic production employ many fewer workers to produce much more value in goods/services than 50 years ago. In the US some manufacturing has been moved to China and Mexico. As the number of needed workers becomes smaller, wage competition for fewer jobs drives wages lower, which has been even more obvious since the 1980's. Low wages then reduce aggregate demand even more for an economy as customers have less money.

This wasn't a problem in the US in 1790 when 90% of the population of the US was employed only in agriculture. There was a heck of a lot of work to do! Now only 1% live on farms, but 100% of people need to eat, which is one reason why this problem is much more evident now.

Some economists claim that economics is about how people make choices under conditions of scarcity. Perhaps that was true in 1790, but today, a visit to any US shopping center, if you peek inside a Walmart or Costco with goods packed from floor to ceiling it is hard to believe the scarcity story. Now, for at least 50% of the population, the real problem for them is to have enough money to buy it, or enough credit, or jobs that pay enough to pay for it. This essay is more focused on that contemporary reality. For many the problem now is scarcity of money.

This creates great differences in income and ability to save money. It gives some hint for why today 50% of the US population owns a tiny 2% of the total wealth. And how a tiny 2% of the population owns 50% of the wealth.

One reason I am critical of contemporary macroeconomics is that productivity has moved to a point where much cheaper production of goods/services and less production labor is possible. Macroeconomics in advanced economies now needs to focus more on goods and income distribution rather than maximizing GDP. Nothing even close to wealth equality is necessary for significant economic improvement. If income could shift just enough to move these percentages so the bottom 50% wealth cohort possessed 4% instead of 2% of total wealth, that would mean a doubling of wealth for the bottom half the population, with very little decrease from 50% to 48% for the top 2%.

I will analyze a closed economy the same way international trade has for hundreds of years been analyzed. There is a surprisingly close comparison to a closed economy. I have taken from international trade economics three economic measures that are quite useful: *trade balance*, *current account* and *capital account*.

Section 2: International Trade Analysis: **Trade imbalance** has often long been known to negatively affect international trade. Later **Section 3** will show how a closed economy can similarly be affected.

Mercantilism: In the sixteenth to eighteenth centuries some countries had a policy of deliberately exporting more products/services than they imported, with the purpose of building up higher reserves or money from the importing countries, which would make it easier to enable them to import goods. This was called mercantilism, which especially in the seventeenth century was considered by many economists to be the best way to build wealth for a country. That is usually hardest on the importing country, but the exporting country also could experience a lack of demand for their exports which could also reduce their GDP. So both countries lose when this continues. As this problem was better understood, mercantilism went out of fashion, and considered unworkable international trading policy

because it often eventually discouraged international trade for both exporting and importing countries, and in some cases increased conflict among nations.

With international trading countries there are three important commonly used economic terms: ***trade balance, current account*** and ***capital account*****.** *Current account* quantifies the amount of *trade balance* of a country: It is the total value of goods/services a country exports minus the value of total imports of goods/services within some period of time. So for a net exporting country trade balance is positive, and for net importing country it is negative. Mercantilists advocated positive current account balances in order to accumulate money—which with just two countries trading gradually transferred money from net *importers* to net *exporters*. Each country has a matching *capital account* which measures the cash reserves that flowed the other way, from net importers to net exporters to pay for those goods/services. As mercantilism faded, more attention was given to *capital account*, to see what a country was losing in capital—especially when it imported more than it exported.

One remedy to shift better trade balance with international trade is possible if the currency exchange value between two types of money is allowed to adjust between the two countries. Users of money of the net importing country can reduce the value of their money when they exchange it with money of the net exporting country, which will tend to equalize the value of trade between them. It is well worth noting that this advantage was eliminated when the Euro was adopted as the common currency for European nations. This has been regarded by many economists as being a weakness, or mistake that has caused difficulties making the Euro work as common currency to balance trade among many European countries. This puts different countries into one monetary straitjacket that disallows them from adjusting currency exchange rate to balance trade among countries.

And of course this is not a method that could ever be used among citizens within one economy to resolve imbalances within that country, since everyone uses the same money.

Section 3: How "Trade imbalance" can happen within a closed economy. "Exporters" get richer. "Importers" get poorer, bifurcating an economy.

It may seem strange that trade imbalance can happen within a single, closed economy that doesn't have any foreign trade. I'll show how that can happen. I'll begin by assuming all goods/services are traded using money: a "pure capitalism." It will become evident why modern economies could not function with this restriction.

Countries who engage in imbalanced international trade cause money to be transferred from net importing to net exporting countries. The logic is exactly the same within a closed economy with *imbalanced trade* among agents within the same country. In a single

economy, every agent can be described as either an *exporter agent* or an *importer agent* plus a few agents in the middle that neither import or export.

I define an *domestic exporter agent* in a closed economy as one who produces goods/services to sell (income), in value that *exceeds* the value that same agent consumes in goods/services (expenses) during some period, like a month. Like an exporting country, they will produce more output than they consume, and will therefore gain net money equal to the value of those extra goods/services. The *domestic importer agents* are those who must consume the surplus goods/services produced by *domestic exporters*. The *domestic importers* will therefore lose the net money that the *exporters* gained.

In the same way that current account describes a country's total net exports with international trade during a particular interval of time, I will define *Internal current account* for an agent as the total value he/she produced (income) minus the total value he/she consumed (expenses) during a period. It is positive for *exporter agents* and negative for *importer agents.*

I define the *total internal current account* during a period for a closed economy as the sum of all *internal current accounts* for all *exporter* agents in that period. This is the value of surplus goods/services that exporters produced which they did not consume, therefore which must have been purchased and consumed by the *importers*. The exporters gain money equal to the *total internal current account*. The *importers* reduce their savings equal to what the *exporters* gained. Whenever total internal current account is non zero, that defines an *imbalanced economy*. Over time it is possible that importers can switch to be exporters, and vice versa. But agents who are importers often tend to stay importers, and likewise exporters tend to remain exporters. It should be clear from this that if that is true, whenever an economy is *imbalanced*, wealth inequality becomes at least a little more pronounced because savings flows from importers to exporters. How much more money flows will depend on the amount of *internal current account*, but perhaps reduced somewhat from that value, depending on the additional factors to be mentioned that will be listed in **Section 5**.

It's <u>exactly</u> the same economic/mathematical situation as if all the *importers* were physically located in one country and the *exporters* in another—doing international trade. It's not just an analogy! The exporters get richer and the importers get poorer. In this case all importers and exporters are in the same economy The few for whom their *export* value equals their *import* value have no saving or dissaving.

When an economy has a high *internal current account*, that is what I mean by an economy with *high trade imbalance*. It means the excess goods/services that the exporters produce, and the importers must consume, is large. And of course money had to flow from importers to exporters to pay for it, making importers poorer and exporters richer.

Of course in different interval periods agents could switch sides. But often in modern economies, especially where productivity is very high, incomes are highly unequal, leaving many agents stuck as *importers* with low wealth. Those who are *exporters* get money that they may invest in capital, tending to make them more productive, making wealth even more and more unequal—especially as has been evident since 1980 in the U.S. economy, which I hypothesize has been caused by internal trade balance. So a trade imbalance causes exporters to get richer and importers poorer.

International trade economics has long recognized the problem of trade imbalance, and has realized the necessity of *capital account* which compensates the bad effect of high *current account.* The *capital account* measures money that flows back from ex*porters* to *importers* during the same period as current account. Investment by exporting countries into an importing country is one important way that has in practice been done. **Surprisingly, nothing like a c*apital accoun*t has been recognized within macroeconomics as being necessary to rebalance an unbalanced single economy.**

Even though it hasn't been recognized as necessary for a single economy, the analysis in the previous paragraphs has shown why institutions within modern economies must have, of necessity, developed customs and institutions to recycle money back to importers to distribute goods/services. Otherwise some importers could run out of money, reducing aggregate demand and thereby reduce GDP. Of necessity, banks have developed means for exporters to loan money to importers to keep trade flowing. Government does public borrowing by selling Treasuries usually to exporters–and uses the money to supply some importers with government goods/services.

Section 5 of this essay lists additional important examples, which have the function similar that "capital account" serves for international trade. The number that compensates for the total domestic current account could be called the *total cash recirculation account*. To totally compensate, an economy with a domestic current account = $C, would have ***total cash recirculation* account** = -$C. This is like in international accounting where current balance is expected to be equal to capital account. Here are some of the institutions that I have identified in **Section 5** that can help balance an unbalanced economy: **>**taxes taken from *exporters* to provide government services for citizens some of whom are *importers*. **>**Social Security transfers money from *exporters* to *importers*. **>**Credit cards that loan money from *exporters* to *importers*. **>**Legislated minimum wages

for *importers*. **>**Government deficit spending using Treasury bonds sold to *exporters*. **>**Earned income tax credits. **>**Unemployment benefits.

To me, it is remarkable that for over 100 years this requirement has been so well recognized with respect to international trade, but still not clearly recognized as necessary within a single economy. People who believe they are in favor of pure capitalism often denigrate the items listed in Section 5, *total cash recirculation* account items, and don't understand that capitalism requires them to function well to distribute goods/services and maximize GDP—by compensating an economy into better trade balance. Also there has been much political influence from the very wealthy to change public policy, to make the factors listed in Section 5 less effective, and thus make the rich richer, and wealth inequality worse, although this likely reduces effective goods/services distribution, and GDP.

Unfortunately, so far as I know, neither of these two balancing factors are measured by statisticians in the US, so important data for balancing these through policy is lacking. I hypothesize that the factors listed in **Section 5** are often inadequate to compensate "domestic current account"–thus being an important cause of income inequality to reduce GDP. But actual data measuring **internal trade imbalance** is needed to confirm–or disprove–such correlation.

The surprising result of the above analysis is that if goods/services are all exchanged only by money—in a 100 % capitalism economy, saving is just a transfer of money from *importers* to *exporters* which means it is a zero sum game! –exactly as is true with imbalanced international trade between two countries. One macroeconomic fact that should not be surprising is the high wealth inequality we observe in modern economies—where there are some agents that have incomes much larger than their expenses, thus domestic trade balance is likely to be high.

The functions and customs that will be described in **Section 5** allow total savings in an economy to be non zero and also compensate trade to be more balanced. People often believe that some of those institutions and customs described in **Section 5** are only needed because of some unfortunate deficiency in work or saving habits of some agents that need to be corrected and compensated for—rather than seeing them as required because of a fundamental money constraint that imposes a condition on agents in an economy where only money exchange is allowed to exchange goods/services.

How to confirm, or disconfirm the hypothesis explained in section 3. Hopefully, economist David Card has convinced economists to believe that empirical data, not previous economic mathematical theory, are the correct way to judge whether an hypothesis is correct,

uncertain, or incorrect. To do so in this case it is first necessary for statisticians to measure the **domestic current account** and the "**domestic capital account**" quantities that have been defined above—that are equivalent to the numbers now measured for foreign trade. The way this essay should be judged is to see whether the data below are properly predicted by these numbers.

Section 4: Some economic consequences explained by the above analysis that present macroeconomics does not easily explain.

How imbalance of internal domestic trade can cause increasing income/wealth inequality:

Section 3 explained how an **economy with significant domestic trade imbalance** can cause an economy to be gradually separated into two distinguishable groups: domestic importers and domestic exporters. Domestic exporters get richer as domestic importers get poorer because saved money flows from importers to exporters. This is likely to be an important cause of **wealth inequality within even a closed economy.** The longer that condition continues, the worse wealth inequality will become.

How imbalance of trade can cause stagflation:

Why do economists think stagflation is strange? Because two things are happening at once, that shouldn't be. The price level is going up—which suggests too much money chasing goods/services in the economy. Uh-oh, the Fed needs to constrict money by **raising interst rates** to bring down demand for products/services and therefore prices. But wait—total value of economic output is also going down, causing higher unemployment meaning we should increase money and demand so people have more money to increase demand that will encourage greater supply. Fed needs to **lower interst rates** to increase demand.

A simple explanation for this puzzle is that the economy has become badly imbalanced. People over time in **an imbalanced economy** divide into two classes: (1) domestic importers and (2) domestic exporters, as explained in **Section 3**. Richer exporters have thereby become the dominant influence in the economy. The exporters, by definition, earn more money than they spend. So they buy what they need and are not constrained by rising prices, resulting in inflation. Importers by definition earn less than they need to spend, therefore not able to save money, or buy some things they would like to, thus constricting demand. So sellers may aim their prices to sell mainly to exporters who have the money. Sellers would increase sales if a large group of importer agents had more money to spend, but importers are not buying much. But sellers can partly make up

profits by raising prices, which doesn't bother the richer exporters as much. This could explain why the top 10% are now doing well, even with inflation, while the bottom 60% are being pinched by higher prices and less money, a larger group who reduce GDP and increase unemployment..

To determine if my explanation is correct or not, it is important to obtain data about imbalance of trade, which so far as I know we do not have. Possible policy actions that could be considered if my explantion is corret: reduce domestic trade imbalance by increased taxes on exporters (who likely have higher incomes) and decrease tax on importers.

Lazy bums?

If the economy does not provide sufficient compensation for a trade imbalance, that *requires* some in the economy to dissave. Some exporters in the economy who are able to save may think that those who don't save must be lazy bums. Maybe that's also true, but if there is insufficient compensation for a high **$C** imbalance, it will be impossible for everyone to save. Perhaps blame the savers for saving too much. However bad macroeconomic policy, by not using more effectively some of the methods to compensate described in **Section 5**, would likely be a more useful target for their criticism.

Why the US Government almost always deficit spends, (except for a tiny surplus during 2001) thus increasing public debt—

which is one important method that allows private saving to be possible. Public deficit spending is not just a terrible vice for which many believe governments are guilty—public debt is one way that **makes it possible for private exporter citizens to save by** balancing domestic trade imbalance. Government borrowing by selling Treasury bonds to domestic exporters makes the government a net domestic importer when it sells Treasury Bonds to exporters who want to save. Similarly, non financial businesses can act as net importers by selling corporate bonds to internal exporter agents to pay for investment, or even expenses. E*xporters* may have extra cash savings that they may want to loan to *importers* in the loanable funds market, although that puts *dissavers* in even greater debt with interest they need to pay. It will also be explained in **Section 5** that selling both private and public bonds are beneficial because they help compensate for *domestic trade imbalanc*e.

Problem for our economy: Robots.

When production equipment such as robots take the place of workers for much production work, trade imbalance increases. Fewer people run the robots, reducing

worker employment. Some people mistakenly believe that more college education is needed for redundant workers so a similar number of workers will be able to run the robots and will thus increase their income. But the whole point of using the robots is to produce the same output with fewer people, tending to increase profit per worker, **which tends to increase the value of internal trade imbalance by paying less to workers and more to their bosses.** Macroeconomists frequently tout *higher productivity* without understanding its possible negative effect on income distribution. Walmart and Amazon are recent real life contemporary examples that have put smaller competitors out of business. More awareness of the options for getting better trade balance by methods listed in **Section 5** could be helpful

Problem for our economy: Shifting to cheaper production labor in China and Mexico.

Much high labor intensive production has been moved out of the US to reduce labor cost, which further decreases the number of domestic workers having well paid jobs. So with lower labor cost, pay for management increases—while redundant and unemployed workers become more numerous, increasing economic imbalance within the US economy.

Why economic *growth* is always considered to be necessary. Zero percent growth is usually considered a sign of a faltering economy. Why?

Economic expansion is NOT required because we need more stuff! As productivity increases within an economy, by definition fewer hours per worker are required for the same GDP output. Therefore some workers become, as the British say, redundant, which increases economic trade imbalance. To maintain demand, redundant workers must find new jobs to provide income that will enable them to consume what they produced before, plus also provide demand for the additional output produced after those redundant workers find new employment. When productivity increases, **growth in GDP must occur not because still more goods/services are needed**, but rather to **maintain income for redundant workers that allows all goods/services to be distributed and consumed.**

Does mercantilism exist within a closed economy?

Although mercantilism has been for two centuries understood as bad policy for international trade, the corresponding attitude in a closed domestic economy is usually exactly the opposite: the belief is expressed by economists and moralists that saving, by producing more than consuming, is highly praised, which leads only to virtuous outcomes,

without understanding the negative consequence of *imbalanced domestic trade* as I have defined it for a closed economy. For some, belief in the undeniable virtue of saving as a spur to investment will likely be enough reason to completely reject the logic being expressed in this essay. An example: British economist John Hobson, who expressed in the early twentieth century a view similar to what is expressed in this essay, found strong opposition from economists to his thesis that excessive saving could result in reduced economic performance. Near the end of his life in 1938 he wrote his final book with the wry title Confessions of an Economic Heretic. My personal confession is that knowing his fate I have avoided saying there is a problem with "too much saving"–but it is true that another way to describe those who consume much less than they produce is to use the "s" word: savers.

Improving Keynes' macroeconomic theory that explains and corrects recessions/depressions:

Before the 1930's economists were frequently puzzled by economic events marked by slowdowns in GDP, and accompanied by increase of unemployment that would happen seemingly for no obvious reason. What was particularly puzzling was that they occurred not with *shortages* of goods for sale because they were often accompanied by what were called "general gluts" of a wide variety of goods. These were mysterious events for economists ("supply siders" such as Jean-Batista Say) because it was generally believed that economies could fail only if there were insufficient *production* of goods/services, not an excess. Often these events were described as an economy that would unexpectedly develop a lack of aggregate demand. Or such events were sometimes even described as caused by "overproduction." During such recessions there was *desire* for such goods from part of the population—particularly those with high unemployment who had insufficient money to purchase goods/services.

In 1948 economist Paul Samuelson published the first edition of his famous textbook Economics that described how J.M. Keynes suggested that such recessions or depressions could be fixed. Keynes observed that such recessions/depressions appeared to be caused by *reduced aggregate demand* in an economy—because such recessions could happen even if there were plenty of goods/services. Keynes described this as being caused by lack of *consumer confidence*. This explanation is perfectly good for predicting the existence of *general gluts* often observed in sluggish economies. However he didn't attempt to explain what caused lack of *consumer confidence.* This essay is suggesting that this could be better explained by an economy that became *trade imbalanced*, shifting wealth from *net importers* to *net exporters.* That would explain how low confidence

would occur mainly with the subset who were the *importers* (dissavers) in the economy-–some of whom may have been unemployed for a while because of the imbalance of trade.

The best way to prove or disprove this hypothesis would be if we had real time information about trade imbalance within a country. So far as I know the Fed does not collect data on *domestic trade imbalance* that would enable us to observe if changing domestic trade imbalance correlates with economic downturns. Another reason that might be evidence for this view is that *consumer* confidence, according to the Investopedia website, has been more commonly observed as a lagging indicator of unemployment, suggesting that it is likely to have been caused by some earlier event–which could be an increase of domestic trade imbalance.

Why did Keynes did not come up with this explanation? Possibly because he visualized the set of agents as being all equal—not imagining an economy in which the group of agents could divide between *domestic importers* and *domestic exporters*. Samuelson's classic text assumed a *single agent* model that guarantees a perfectly balanced economy. This assumption was implicit by the 45 degree angle *Keynesian cross* that implies that the money obtained by producing goods/services would be closely equal to what it cost to purchase them. But there is a hint that Keynes might have considered the imbalance view because he also described the possibility of a *liquidity trap*—meaning some fraction of wealthy agents in the 1930's were not spending, but holding excess cash liquidity as wealth. My hypothesis assumes that *imbalance of trade* could have caused eventual high savings by *exporters* to increase over time, which would imply that they trapped more liquidity—though the way Samuelson formulated the *consumption function* in the model he described in his textbook didn't allow this possibility to be visible.

Despite the frequent recurrence of such actual economic events some economists said lack of demand couldn't possibly happen; because they didn't fit their theory about how a capitalistic economy was supposed to work. People called *supply siders* would mistakenly insist that what is needed is more supply, or even tax cuts for the rich.

Section 5: Nine Additional Economic institutions which have historically evolved to help economies compensate for "imbalanced trade" even in a closed economy.

In this section 5 we relax the condition that all money exchanges between agents happen only by exchanging goods/services. Each example here shows a method of transferring goods/services without requiring an equal transfer of money value between agents. I know!! some of these may sound suspiciously like (eeeeeek!) **socialism**!! But they are necessary for successful transfer of goods/services when some agents produce much more than they

consume. Ideally to effectively transfer and consume goods/services, all methods in total would compensate the value **+$C** of imbalance. These describe institutions that in international trade are how *Capital Account* balances *Current account*. If the compensating amount is less than that amount, aggregate demand could be weak. If there were overcompensation, possibly pushing **$C** to a negative number, that would increase aggregate demand beyond supply and risk over demand with possible inflation.

Method 1: Government taxes and spending for public services: An important purpose of taxes is to pay for needed public services that are more efficiently provided by a government single payer than would be practical to be provided by individual private funds. For accomplishing only this purpose it does not matter from which group: exporters or importers that such taxes are collected—or to whom they are distributed; at best, political decisions about who to tax are made with some consideration of fairness. Or at worst, by considerations based on how much particular citizens promise to contribute to political campaigns.

However, for balancing trade emphasized in this essay, government taxes can usefully also provide rebalance of trade in an economy to maximize distribution of goods/services. To serve this purpose taxes must come from *exporters* or savers that when spent on public products/services will be able to rebalance an accumulated **total internal trade imbalance** that will allow flow of goods/services to importers. A problem for using only this method to *completely* rebalance an imbalance of **$C**, is that taxes must be collected from *exporters* in the same total amount **$C.** To accomplish this task using no other method would be extremely unlikely because that would require a tax *equal* to the total of savings accumulated by all exporters which would then leave no money left for the *exporters* to keep as savings. Fortunately other methods exist that will be described, using the loanable funds market that enables *exporters* to add to their savings that earn interest. Taxing *importers* will usefully supply money to purchase public goods, but be of negative benefit to achieving trade balance since such tax will decrease importers' ability to purchase goods needed to help achieve the objective of balancing trade. **One of the very worst tax policies possible** worsening trade balance is to reduce taxes on the wealthy, which would likely increase savings made by the *exporters* who even before they are taxed do not even purchase enough goods to make up for the excess they produce.

Method 2: Increase pay of importers An example could be laws that establish higher minimum rates of pay, which would benefit almost always non savers. The total amount of additional pay in the economy gained by importers would reduce **$C** by that amount of additional pay, assuming the money was subtracted from highly paid *exporters* that were paid more than they consumed..

Method 3: Government transfer payments: Transfer payments that take tax money and transfer it directly to citizens is another effective means to accomplish rebalance. Three important methods in the US are Social Security, Medicare and Medicaid. The US payroll tax is unfortunately a regressive flat tax that is quite high at 15.3% on income that is taken from people with incomes from as low as $400/year to those with income less than $140,000/year, therefore a lot comes from importers, not exporters. That tax is immediately distributed to one of two places. (1)Most of the tax goes to Social Security and Medicare recipients—which likely gets transferred to recipients who spend it rather than save it, which would have a positive balancing effect. (2)The rest of the tax (if any is left) goes to purchase Treasury Bonds (via the S.S. Trust fund) that always immediately pay for government expenses. Therefore this sources money from many *importers* and some *exporters* and then is spent for government expenses which compensate for some trade imbalance. The amount that this method can compensate for **$C** of imbalance is the total amount that is collected from exporters minus importers. As said before, any tax collected from *importers* reduces their ability to even compensate for what the importers have produced, so will negatively count as compensating for the trade imbalance. If the 15% tax were to be extended to all income above $140,000, including investment income, that would surely be more beneficial for reducing the **$C** number by placing this high (15%) tax on mostly *exporters* with high incomes, which could benefit the entire economy—both exporters and importers.

Method 4: Earned Income Tax Credit: The **earned income tax credit** shifts US income taxes in the US from 31 million *importers*/dissavers to many other *exporters*/savers by reducing taxes on those with low income who are very likely to spend all of their income. The total value of such credit for 2022 was $64B. So that the corrective value **$C** resulting from that is likely $65B minus the marginal part of that additional tax that had to be collected from *importers*. Many may view this as a burden produced by those who are under producing workers. However this essay show why it increases GDP since likely most of the $65B of money credit will be spent by *importers* rather than saved.

Method 5: Government spending by increasing public debt. Fiscal policy: Government can obtain revenue by selling Treasury bonds mostly to *exporters* in the economy. The money is spent on government operations which creates economic demand nearly dollar for dollar that will compensate for **total internal trade imbalance.** This is a beneficial method because the revenue comes mostly from *exporters* looking to save their cash money as Treasury bonds. Unlike the government tax described in Method 1 above, this is a way of obtaining funds from *exporters* that allows them to feel like they are simultaneously keeping possession of

their wealth as their savings but saving in form of a Treasury Bond earning interest instead of holding cash.

But doesn't this backfire later? It might seem that such bonds, when paid back at the end of the term would reverse the benefit just cited—which if that ever happened would be a serious defect with this method. That seeming drawback has been mostly successfully avoided by making (nominal) Treasury debt always increase—so in effect the debt amount never goes down, because there are always new purchasers of such debt seeking for a place for their savings that is more than sufficient to roll over Treasury debt which reaches the end of its term. This is aided if inflation happens—which reduces the real value of already borrowed debt, and also increases the nominal value of new debt—making it easier to roll over previous debt. The nominal total value of US debt has **never** gone down since at least 1955, except for an extremely small amount in year 2000, so that using this beneficial Ponzi scheme in practice permanently transforms cash savings from exporters back as spendable public cash money. But the present total of debt being over 100% of today's GDP means it cannot ever realistically be paid back which makes it close to a Ponzi scheme. Past debt stored as treasury bonds gradually gets its real value crushed down by inflation, often more rapidly than it increases in nominal terms, although as said it virtually always goes up in nominal terms. However this Ponzi procedure is completely for public benefit, and where no one is ever likely to complain about not getting their money back–because the Fed can print redemption money–although there is no guarantee that those dollars will be worth as much as they were originally. Inflation is usually thought as a unequivocally bad economic event, but this shows one positive public benefit that it can provide to taxpayers.

But what about interest on public debt? It is true that interest paid tends to go back to the savers, which would make this Method 5 less effective. But inflation also reduced the effective interest paid, so it is borrowed at virtually zero real interest rate. This has been described by some as *financial repression*.

Is financial repression a good thing? *Financial repression* been the denigrating label that has been used to describe government policy to keep government bond real interest rates low. According to the website Investopedia:

"The [financial repression] concept was first introduced in 1973 by Stanford economists Edward S. Shaw and Ronald I. McKinnon to disparage government policies that suppressed economic growth in emerging markets……..A government steals growth from the economy with subtle tools like zero interest rates and inflationary policies to knock down its own debts."

However the analysis in this essay shows how this so called "repression" benefits an economy by reducing interest rates on government debt. It takes no difficult economic analysis to see that such policy reduces the flow of money from Treasury bond interest paid by less wealthy taxpayers to the more wealthy individuals who can afford to buy Treasury bonds. Contrary to claims that it "steals growth," if such interest savings are used to reduce taxes mainly to *importers* it allows them to increase their after tax income, without reducing government expenditures, resulting in increased GDP. Here is a graph showing nominal public debt in the US since 1965. It shows that this method has soaked up over $25T of past cash savings since 1965 that has been converted by savers to non transactional Treasury debt, never to be paid back partly by help of beneficial inflation. Method 6 is an identical process for which private debt has the same ability to reduce internal imbalance https://fred.stlouisfed.org/series/GFDEBTN

Why perpetual bonds are useful: An historical example from the UK that avoided the backfire of having to pay debt back were perpetual bonds, called *Consols* that never needed to be paid back. In some instances, after issue the interest was reduced.

Method 6: Private Financial markets historically developed that allowed *domestic exporters* to lend money to *domestic importers* through credit, such as *loanable funds market*. This would move the economy to better trade balance.

Exporters likely have extra saved money. Importers lack it. So it is useful, and not surprising to see how a market for credit naturally gets created by a domestic trade imbalance—with exporters having money they want to loan to importers for interest. This is very similar to Method 5 that described how public debt is a means of converting *cash* to a form of credit, called a Treasury bond. Similarly, financial markets, such as banks and bonds, including credit cards, are private debt versions that developed so that exporters can save their cash money with a bank savings account, or purchasing a corporate bond which will then be loaned to others becoming a saved asset to the exporter. The logic is the same as for public Treasury bonds, except the money is used for private instead of the public spending.

The general term *loanable funds* is a way to save money in a bank or bond by loaning it. One way to describe this is to describe it as increasing the velocity of money—since the same money can be lent repeatedly almost simultaneously going round and round to purchase different goods/services . As money is successively used, instead of using up cash, debt is piled higher and higher—in 2024 having reached an amazing $100 trillion dollars since 1955. If such public or private lending were not possible, and all saved cash were literally saved in a lock box, exporters would eventually rather quickly scoop all cash into boxes, thus shutting down an economy with little cash left for spending.

This makes it possible to make far more spendable money available, and also to simultaneously save far more massive amounts of money than would be possible if holding cash money were the only method of what is called "*saving cash*."

Traditionally, before the 1930's, *saved money* from exporters was assumed to be all, or almost all, used only for investment purchase—meaning for something that would enhance productivity of goods/services. However a recent article by **Amir Sufi, Atif Mian and Ludwig Straub** has shown that very much of recent such loans have been to households to purchase needed consumption goods. They have called that spending "**Indebted demand**." **The Saving Glut of the Rich"** (working paper), and "**Indebted demand**" published in **Quarterly Journal of Economics,** November 2021 are referenced by these links. They show that such loans cause a short term boost in economic demand, but eventually reduced demand and GDP as the debt load gets higher on those who don't have enough credit to continue to borrow. They also believe that interest rates have decreased as wealth of the rich gained ever greater **loanable supply** money available, and debt interest burden has gotten higher for borrowers, thus lowering money **loan demand**.

This graph shows total residual public and private debt that has not yet been paid back in the US from the 1950's to the present: In 1950 it had nominal value of $389B but now is equal to $99Trillion dollars, virtually for all recent time an always rising number "**All sectors; Debt securities and loans**" . **https://fred.stlouisfed.org/series/TCMDO** . It burdens taxpayers with interest expense which represents an income stream from those of low wealth to others of high wealth, however this interest burden has been beaten down by inflation. This immense total can be seen as a record of accumulated past savings that have been converted over seventy years' saving of cash into debt, never having been reduced, now fossilized unto to a huge pile of bonds and other means of paper debt that represents in value nothing more tangible than a "promise" to pay money eventually. It represents over $300,000 borrowed for payment of products/services delivered (on average) to every man, women and child since 1955– that is way too huge to actually ever be paid back.

One recent book about the problem caused by such immense debt has been written by economists Amir Sufi and Atif Mian in 2014 entitled **House of Debt.**

Though there are a few people that believe that such disastrous debt must eventually be paid back—as long as enough inflation is built in to the economy, it will not ever need to be paid back. And it has had tremendous benefit to the economy—$100 Trillion worth of goods/services additional GDP going back to 1955 have somehow been consumed by citizens that they did not have to pay anyone—except for the money that was needed to

pay for interest on Treasury and private debt. The $100 Trillion was likely paid for almost all by wealthy exporters who purchased Treasury bonds to save their money.

The flip side of the act of loaning is described by economist Richard Koo—When events of economic austerity have been declared necessary by economic "experts," high amounts of loanable funds have been paid back to the original bond purchasers. This reverses the loan process, resulting in what economist Richard Koo describes as a "**balance sheet recession**" which causes an economy to go into a downturn—having the opposite effect they had when they were generated.

If interest rates are too high, loanable funds are likely to be in low demand, slowing an economy. On the other side, if interest rates are too low and credit risk to lenders is high, money supply may be low being held in a "liquidity trap" of saved money. This can cause wealthy people to hold their savings without loaning them, having the same effect as the Fed when it withdraws money to slow an economy. I suspect his quite likely was an important cause of lengthening the 1930's depression.

Method 7: Increase GDP by increasing production of new goods/services targeted to exporters. Create new jobs to produce new products/services to sell to *exporters* that can maintain GDP by moving money from *exporters* to *importers*. This is why an economy must grow. It is not because the economy has need for more stuff. Production of more stuff is necessary to provide jobs, and thus generate spending money for the redundant workers so they can continue to purchase what they were spending before, plus the new output they are producing with their new jobs.

Method 8: Persons default on credit debt: Default on debt amount of **$D** will decrease imbalance by the amount **$D**. However, if the creditor is judged "too big to fail," the Fed may decide to print money for the default amount for the creditor. This will improve the monetary wealth of the creditor by **$D**. The amount of "credit" will be converted to "cash" which will increase the money supply by the amount of the default.

Method 9: Agents can give gifts of products/services to others: For example several agents can combine into one family to act as one agent. One family member earning sufficient money can distribute goods/services to support others in the family. Of course for this to happen individuals need to have incomes adequate to support more than just themselves. Charities funded by people who earn enough income can provide necessary products/services to others who can not afford to pay.

Section 6: Some Economic policy implications:

1. High “Domestic trade imbalance” has been defined, which forces poorer income distribution and lower GDP. Rather than increasing GDP being the main objective, now with highly productive economies a more important economic objective is good distribution of goods/services, which can increase GDP to a more broadly diverse group of income recipients.
2. This essay does not claim incomes should be more equal. It does claim that the $ difference between agents’ incomes and their spending should be reduced.
3. Taxes should be placed most heavily on those agents classed as “Exporters” to improve domestic trade balance.
4. Minimum wages should be established in an economy to reduce income imbalance to obtain better domestic trade balance and distribution of all produced goods/services.
5. Incomes very high compared with the median will usually increase economic trade imbalance, and should be discouraged by high progressive income taxes. The US economic history in the 1950’s strongly suggests that this does not weakens an economy.
6. Tax on wealth is said to be difficult to enforce. A difficult to evade method can be constructed by building deliberate inflation into an economy. Reduce impact to those with low wealth/income by a fixed, constant guaranteed annual income for everyone. Pay with progressive tax on “exporters” who are wealthy.