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# Wisconsin alcohol sales tax collections last year jumped at highest rate in almost 50 years

9 September, 2021

1. If you feel like you've been drinking more alcohol during the past year's COVID-19 pandemic, the state of Wisconsin has the tax receipts to prove it.
2. Alcohol taxes collected in Wisconsin jumped nearly 17% in the fiscal year that ended June 30, according to state tax revenue data analyzed by the nonpartisan Wisconsin Policy Forum.
3. That's the largest jump since 1972, when the drinking age was lowered to 18 for a little more than a decade.
4. Data from the state Department of Administration and Legislative Fiscal Bureau show Wisconsin's excise tax revenue on alcoholic beverage sales are projected to reach about \$73.8 million, a 16.6% increase from the \$63.3 million collected in the previous fiscal year.
5. While it's difficult to fully evaluate COVID-19's impact on state alcohol sales, the Policy Forum reports it's likely that restrictions on gatherings and social events, paired with the mental and emotional toll of the ongoing pandemic, may have resulted in increased drinking habits in a state that already ranks high in alcohol consumption.
6. "For individuals, this period also may have generated increased stress about personal health and the health of loved ones, lost or reduced employment, fewer work or leisure activities, and challenges with school and child care," according to the report. "During such a period, it is perhaps unsurprising that alcohol sales increased in Wisconsin."
7. The Forum reports that the only other comparable jumps in state alcohol tax revenues over the last 60 years came in 1972, after the state increased the liquor and wine tax and lowered the legal drinking age, and in 1964, when it also increased the wine tax.

8. The largest annual increase between 2009 and 2020 was only 2.4%.
9. Alcohol taxes in Wisconsin are based on the volume of beverage sold, with beer taxed at about 6.5 cents per gallon and hard liquor taxed at \$3.25 per gallon. Wine is taxed at 25 cents per gallon if the alcohol content is 14% or less by volume and 45 cents per gallon for wines with a higher alcohol content. Hard cider is taxed at 6 cents per gallon if the alcohol content is less than 7%, and if higher it is taxed the same as wine.
10. The Forum did not include in the report the state's general 5% sales tax collected by alcohol retailers.

### **Public health concern**

11. Wisconsin has the nation's 48th-lowest beer tax rate, according to the Tax Foundation, a national tax policy think tank. The state ranks 43rd-lowest for wine tax rates and 41st-lowest for liquor.
12. "One consequence of this is that — despite the historic magnitude of this year's revenue increase — its impact to state finances overall will be marginal," according to the report. "However, the **public health implications of increased alcohol consumption may be a greater concern.**"
13. In 2019, Wisconsin ranked third in the nation in terms of the percentage of adults — 64.4% — who drink alcohol, higher than the neighboring states of Iowa, Minnesota, Illinois and Michigan, according to the state Department of Health Services. Wisconsin adults who drink consume an average of 2.6 drinks per drinking occasion, higher than adults in other states.
14. The UW-Madison Population Health Institute reported in 2019 that binge drinking in Wisconsin costs almost \$4 billion a year, or about \$700 per state resident.

### **Hazardous roads**

15. A Forum report released last December found that **alcohol-related crash fatalities had risen significantly** despite there being fewer drivers on the road because of the pandemic. Full-year data wasn't available, according to the report, but preliminary data showed that total

vehicle miles were down in the state by about 25% in the second quarter of 2020 compared to 2019.

16. The report found that the number of alcohol-involved crash fatalities increased from 52 to 78 during the study period in 2020 compared with 2019.
17. In August 2019, the Forum reported that total deaths in Wisconsin related to drug and alcohol use had more than tripled since 1999. Such deaths include deaths in which alcohol is the primary cause, such as liver disease or alcohol poisoning, as well as fatal accidents in which the deceased person was intoxicated.
18. “In light of these and other considerations, it will be important to monitor alcohol sales closely to determine if the marked increase in sales and presumably consumption observed in fiscal year 2021 is a one-time byproduct of the pandemic or the beginning of a longer-term and possibly harmful trend,” the report said.

## Micro Economics Commentary

This article reports about the alcohol **excise tax** in Wisconsin. Excise tax refers to “taxes imposed on particular goods and services” (Tragakes, 2020, P127). In this example it is the tax applied on alcohol after COVID-19 pandemic. A key concept in economics is efficiency, which measures the value of **social welfare**: affordability for buyers and profitability for sellers. Excise tax raises the price of goods to decrease consumers’ consumption and hence prevent the **negative externality**, or “external costs created by consumers” (Tragakes, 2020, P164) on demerit goods.

Consuming alcohol leads to “public health implications” (Schmidt, 2021, para. 12): “alcohol-related crash fatalities had risen significantly” (Schmidt, 2021, para. 15). The government’s main goal is to reduce the consumption of alcohol. Figure 1 below shows the effect of the negative external cost of alcohol to the market. The demand curve is congruent to MPB (**marginal private benefit**), above the MSB (**marginal social benefit**) curve. The supply curve equals both MPC (**marginal private cost**) and MSC (**marginal social cost**).  $P_{opt}$  and  $Q_{opt}$  are the price and quantity of the social optimum position, while  $P_m$  and  $Q_m$  refers to the market production position. The **consumer surplus**, “the area under the demand curve and below the price paid by the consumer, up to the quantity purchased” (Tragakes, 2020, P67), is  $C+D+E$ ; while the **producer surplus**, “the area above the firms’ supply curve and below the price received by the firm, up to the quantity produced” (Tragakes, 2020, P67), is  $A+B$ . An external cost of  $B+D+E$  should be deducted from the total surplus to account for the negative externality, yielding a total surplus of  $A+C+F-E$ . The social optimum position has a consumer surplus of  $F$  and a producer surplus of  $A+C$ , yielding a total surplus of  $A+C+F$ . **Social welfare loss**, or **deadweight loss**, is the reduction in gains from trade *or* for an externality; for example, the buyers of cigarettes and the sellers of alcohol both are somewhat responsible for the social costs of increased cancer risks for third parties. The deadweight loss here is  $(A+C+F)-(A+C+F-E)=E$ , so the market is not efficient.

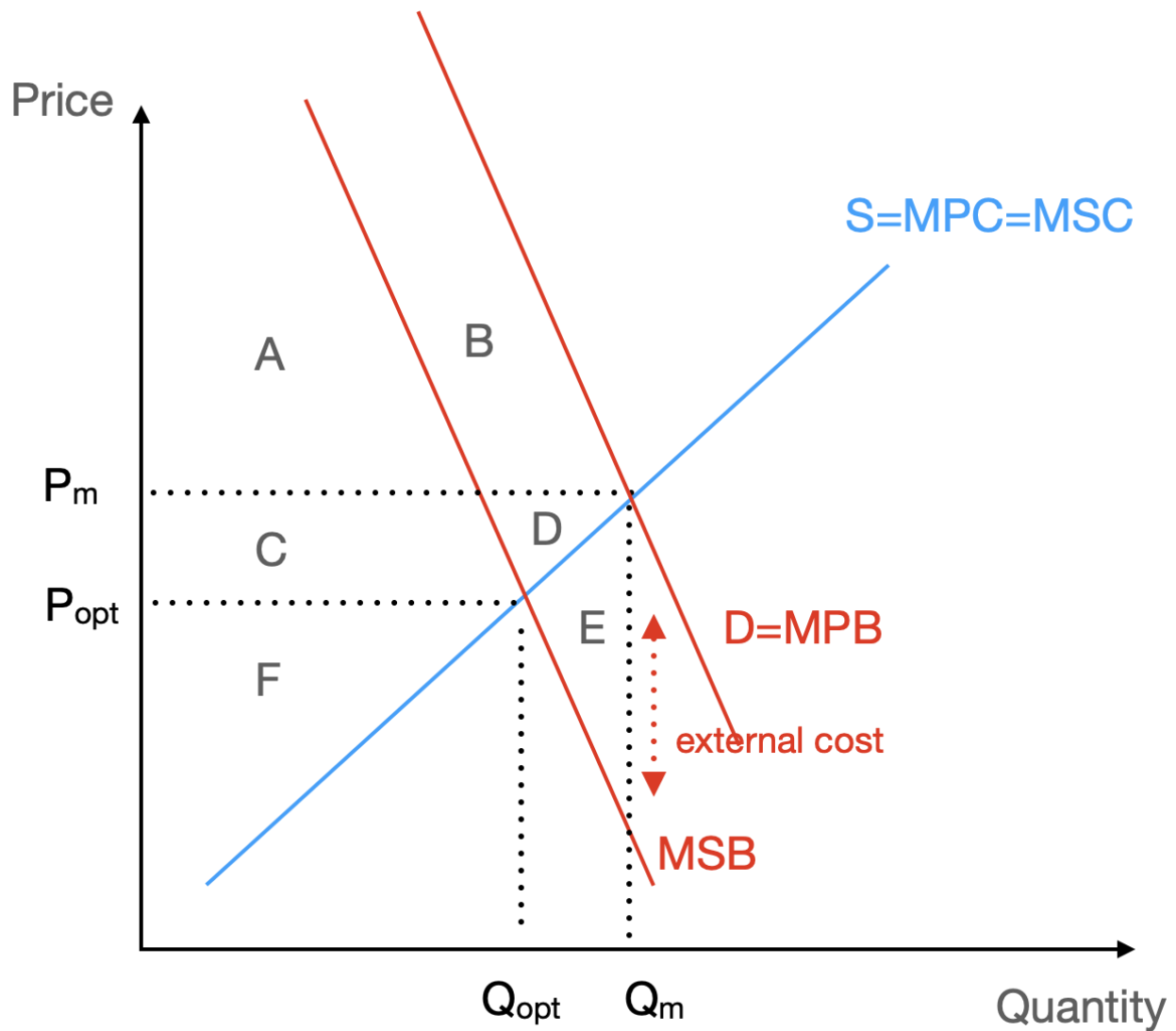


Figure 1. Negative consumption externality of alcohol

To solve this problem, the Wisconsin state government applies excise tax on alcohol, shifting the supply of alcohol upward. In Figure 2 below, the tax shifts the supply curve from  $S$  to  $S_{tax}$ , causing an increase in price of alcohol in the market and a decrease in demand. After the tax, the new consumer surplus is  $G$ , and the new producer surplus is  $A+B$ . In addition, the rectangle area,  $C+D+E+F$ , is the tax revenue, and  $B+D+E$  is the external cost. Combining all those factors, the value of social welfare is  $A+C+F+G$ , which is numerically the same as the social welfare for the optimum position. Hence, this policy does achieve economic efficiency. The excise tax “internalizes the externality” by forcing both consumers and producers to pay the external costs, causing prices to diverge – the producer price falls to  $P_{producer}$  which reduces quantity supplied, and the consumer price rises to  $P_{consumer}$  which reduces the quantity demanded. Together the

quantity falls in the market to  $Q_{opt}$  if the tax was correctly sized, achieving the government's goal while ensuring efficiency.

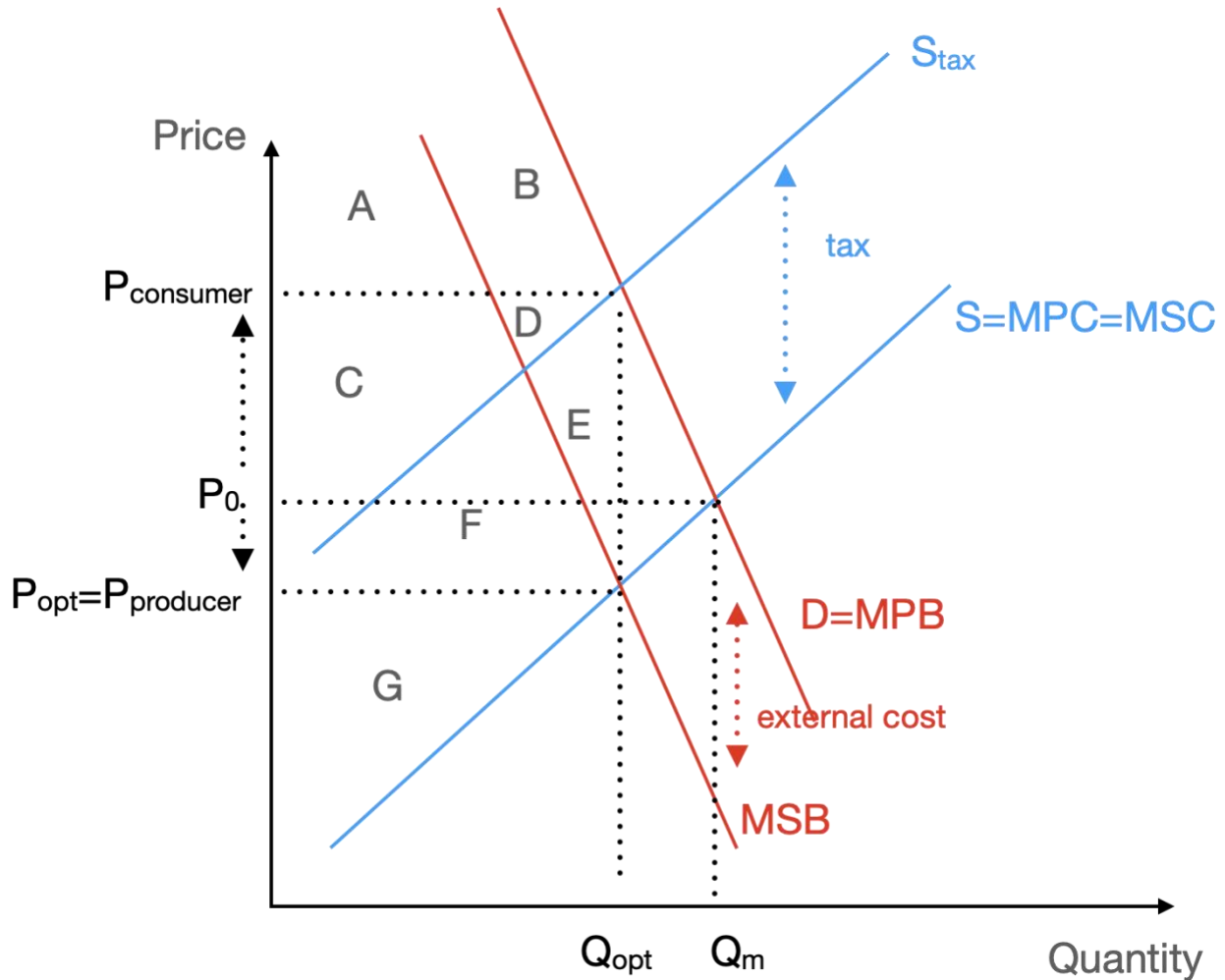


Figure 2. The effect of alcohol excise tax on the market

One main issue with the policy is the inelasticity of demand for alcohol. Because alcohol is addictive, it has an **inelastic PED (price elasticity of demand)**, or “quantity demanded is not very responsive to the change in price” (Tragakes, 2020, P85); hence, the amount of alcohol consumed is still large. Moreover, excise tax as an **indirect tax** “imposed on spending to buy goods and services” (Tragakes, 2020, P127) poses a higher tax burden for the poor as they have lower income. Such a regressive tax is detrimental to equity because it favors the rich but harms the poor.

In this scenario, a better policy for the government to resolve the problems is combining the excise tax with education. If the education scheme is successful, the demand for alcohol drops to

$D_2=MSB$ . The supply curve is still at  $S_2$ , so the price of alcohol rises from  $P_1$  to  $P_2$ , and the quantity of alcohol also falls from  $Q_1$  to  $Q_2=Q_{opt}$ . This means that the alternative approach would increase the price to prevent consumers from purchasing the alcohol, and the quantity purchased by the consumers also decrease a lot to the optimal quantity, achieving economic efficiency and allocative efficiency.

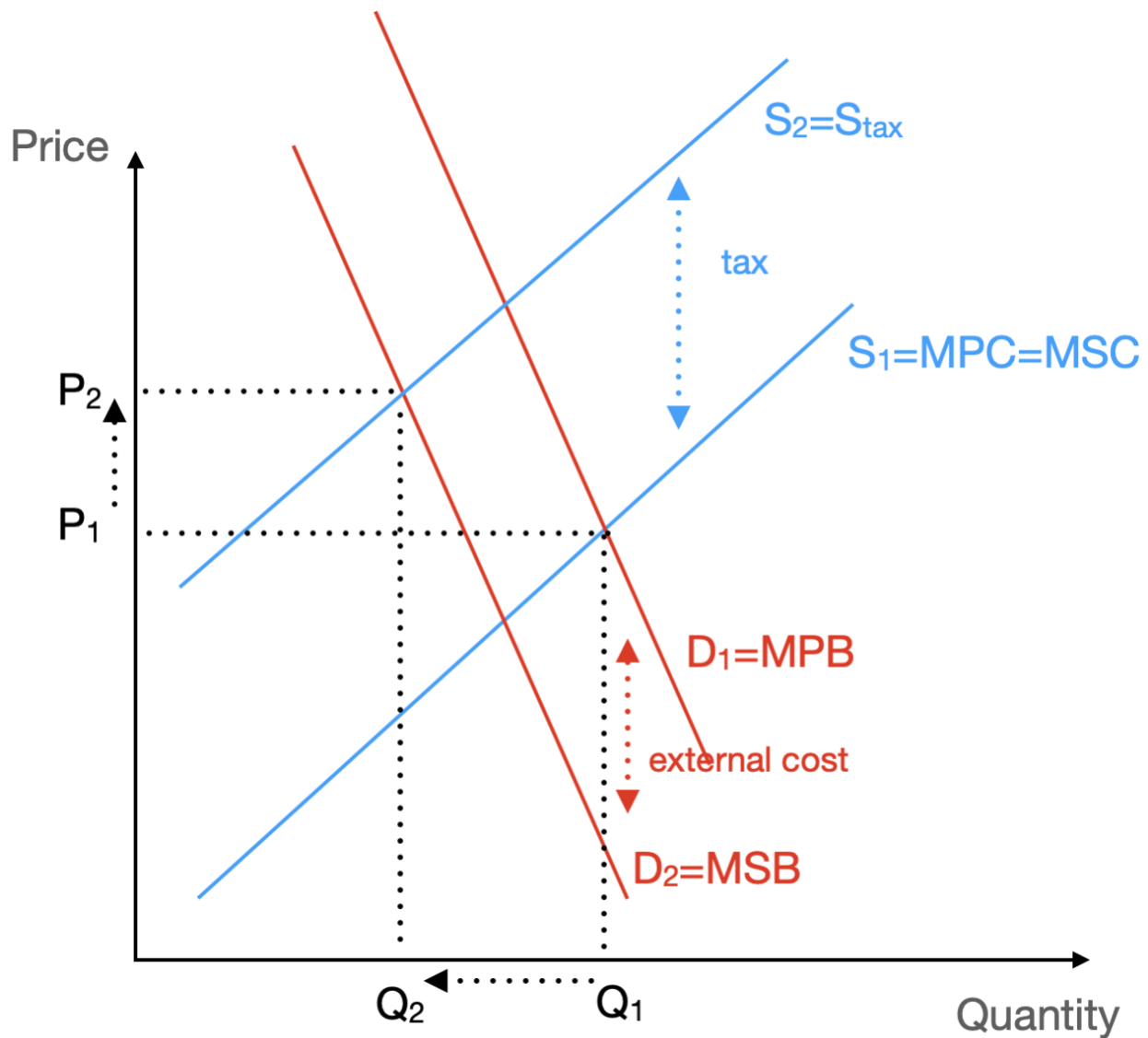


Figure 3. The effect of education on the market

In conclusion, the article talks about the “Wisconsin alcohol sales tax” (Schmidt, 2021) to counter the negative consequences of alcohol consumption such as “alcohol-related crash fatalities” (Schmidt, 2021, para. 15). The policy would discourage consumption of alcohol and

achieve economic efficiency by diverging consumer and producer prices; however, the regressive tax puts more pressure on the poor. To solve this problem, an alternative policy of combining educational programs and the excise tax would help because it aims to reduce the desirability of alcohol, therefore discouraging the demand. The alternative also achieves economic efficiency as the quantity consumed is at the social optimum position.

Word count: 791

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## Prices jump prods RBA on rates

17 October, 2021

1. Markets ramped up pressure on the **Reserve Bank of Australia's ultra-low interest rate policy** after signs global supply chain disruption is pushing inflation into the central bank's target zone quicker than its forecasts.
2. The RBA's preferred core inflation measure jumped a bigger than expected 0.7 per cent in the September quarter, lifting the annual rate to 2.1 per cent and inside the bank's 2-3 per cent target band for the first time in six years.
3. The result follows strong inflation figures in New Zealand and interest rate rises there that were also connected to booming house prices, which locally have increased more than 20 per cent over the past year.
4. It also comes amid a global debate among central banks and economists over whether price increases related to **COVID-19 supply chain disruption** are temporary or becoming embedded in higher continuing inflation.
5. The headline consumer price index increased 0.8 per cent in the September quarter, driven by a 3.3 per cent rise in the price of new housing and 7.1 per cent growth in the cost of petrol.
6. Petrol prices increased a further 10 per cent over the past fortnight, amid global gas and coal energy supply crunch.
7. Before the figures were released, Treasury Secretary and RBA board member Steven Kennedy said that **if supply-side price shocks persisted, global central banks would probably bring forward interest rate rises.**
8. The bond market is tipping the RBA will increase the current 0.1 per cent cash rate well before governor Philp Lowe's 2024 guidance, when it expects inflation to be "sustainably" within the target band.

## Traders unconvinced

9. Markets forced the yield on the April 2024 treasury bond, which is a proxy for the central bank's rate guidance, above 0.2 per cent, more than double the central bank's 0.1 per cent target in Wednesday trade.
10. **The RBA last week was forced to purchase \$1 billion of the bonds to bring the yield back down to earth following New Zealand strong inflation results**, but traders appear unconvinced the RBA's position is tenable.
11. The 30-day interbank futures are fully pricing three rate rises next year, with a risk of a fourth. The first increase is seen in May with a chance it could happen as early as February, though this is very unlikely.
12. The Australian dollar rose to US75.36¢, within a three-month high of US75.46¢.
13. Economists are less hawkish than markets, but robust results for inflation in the September quarter have some rethinking their tip for when the central bank will begin to normalise monetary policy.
14. "With the economy now recovering again, we believe the conditions for the start of rate hikes will now be in place by late 2022," AMP chief economist Shane Oliver said, more than a year ahead of the RBA's 2024 guidance.
15. "We are now pencilling in a small increase in the cash rate from 0.1 per cent to 0.25 per cent in November next year and a 0.25 per cent hike in December 2022, taking the cash rate to 0.5 per cent by the end of next year."
16. ANZ head of Australian economics David Plank said it was not unusual for the market to disagree with the RBA, but "the extent to which the market is disagreeing with the RBA is larger than typical".

17. Dr Lowe wants to see **inflation “sustainably”** within the 2 per cent to 3 per cent target band before lifting rates, which the bank believes will require annual wages growth above 3 per cent.
18. Dr Kennedy said inflation and expectations remained moderate in Australia. “The Reserve Bank has noted that inflation is not expected to be consistently within their inflation target band until around 2024,” he said.
19. NAB senior economist Taylor Nugent said the flow-through effects of the COVID-19 crisis meant it was difficult to get a clear read inflation, which was unlikely to change until mid-2022.
20. “Pressures should be thought of as transitory due to global supply chain pressures amid buoyant demand, and should start to fade as consumers pivot from goods to services,” Mr Nugent said.
21. “Beyond that, it is unlikely inflation can be sustained at the mid-point of the RBA’s 2-3 per cent target unless wages growth lifts to 3 per cent-plus.” It is currently 1.7 per cent, with the next wages results due out on November 17.

### **Positive inflation shock**

22. HSBC chief economist Paul Bloxham said when put into a broader global context – noting US core inflation at 3.6 per cent and British core inflation at 2.9 per cent – Wednesday’s result was not particularly strong.
23. “The world is in the throes of a significant positive inflation shock ... and for Australia all this has done is nudge the underlying measures just above the bottom edge of the RBA’s target band,” Mr Bloxham said.
24. High levels of construction activity, shortages of building materials and supply disruptions underpinned the biggest price jump for new built homes since 2000 when the GST was introduced.

25. Analysis from the Bureau of Statistics showed government stimulus, including the HomeBuilder program, was shielding true house price inflation, which would continue to push up inflation in coming months.
26. Rents rose 0.2 per cent, with falls in Sydney and Melbourne offsetting large increases in Brisbane, Adelaide, Perth, Hobart, Darwin and Canberra.
27. Global supply constraints also resulted in price rises for many tradeable goods including furniture (up 3.8 per cent), motor vehicles (up 1.4 per cent) and audio-visual equipment (up 1.8 per cent).
28. The most significant price falls were fruit (down 8.3 per cent) because of favourable growing conditions for berries, avocados and citrus fruits, and reduced demand from the food service industry.
29. Woolworths chief executive Brad Banducci said that while fruit and vegetable prices had fallen, he expected meat prices to continue to rise with supply constrained as many farmers rebuild their herds after the drought.
30. Mr Banducci also said second and third round effects such as the cost of shipping containers and storage of pallets were rising strongly.
31. “Landing a shipping container with imported goods is now at \$4500 in some instances, compared with \$1000 a year ago,” he said.
32. Consumer inflation expectations lifted to a 6½-year high this week, as petrol prices increased 10 per cent over the past fortnight, according to the ANZ-Roy Morgan consumer confidence survey.
33. “The notable development this week is a 0.3ppt rise in ‘weekly inflation expectations’ to 5.0 per cent,” Mr Plank said. “This is the subindex’s highest value since December 2014.”
34. Mr Plank noted consumer expectations tended to follow rather than lead inflation, and drew a strong connection with the petrol price rise.

## Macro Economics Commentary

This article reports about the “Reserve Bank of Australia’s ultra-low interest rate policy” (Mizen, Lefort and Kehoe, 2021, para. 1) and its consequences. A key concept in economics is government intervention, which “attempts to achieve macroeconomic objectives through a choice of policies.” In this article the purpose of government intervention is to achieve “low **interest rate**” (Mizen, Lefort and Kehoe, 2021, para. 1) and “sustainable **inflation**” (Mizen, Lefort and Kehoe, 2021, para. 17). Interest rate means “the cost for borrowing or the benefit for saving,” and inflation means “a sustained increase in the general price level.”

According to the article, “COVID-19 supply chain disruption” (Mizen, Lefort and Kehoe, 2021, para. 4) increases the cost of production and causes a rapid decline in supply, so the **aggregate supply** or “the total quantity of goods and services produced in an economy (real GDP) over a particular time period at different price levels” (Tragakes, 2020, P277) would decrease.

According to Figure 1 below, the short-run aggregate supply curve shift to the left from  $SRAS_1$  to  $SRAS_2$ , causing the price level to rise from  $PL_1$  to  $PL_2$ , and real GDP value to drop from  $Y_p$  (potential GDP) to  $Y_2$ . This leads to an **inflation** where the prices of current goods and services generally shift up and people’s purchasing power decreases. In the money market, Demand for Money increases from  $D_{M1}$  to  $D_{M2}$ , and the interest rate increases from  $IR_1$  to  $IR_2$ . This outcome is the opposite of the government’s “low interest rate” objective.

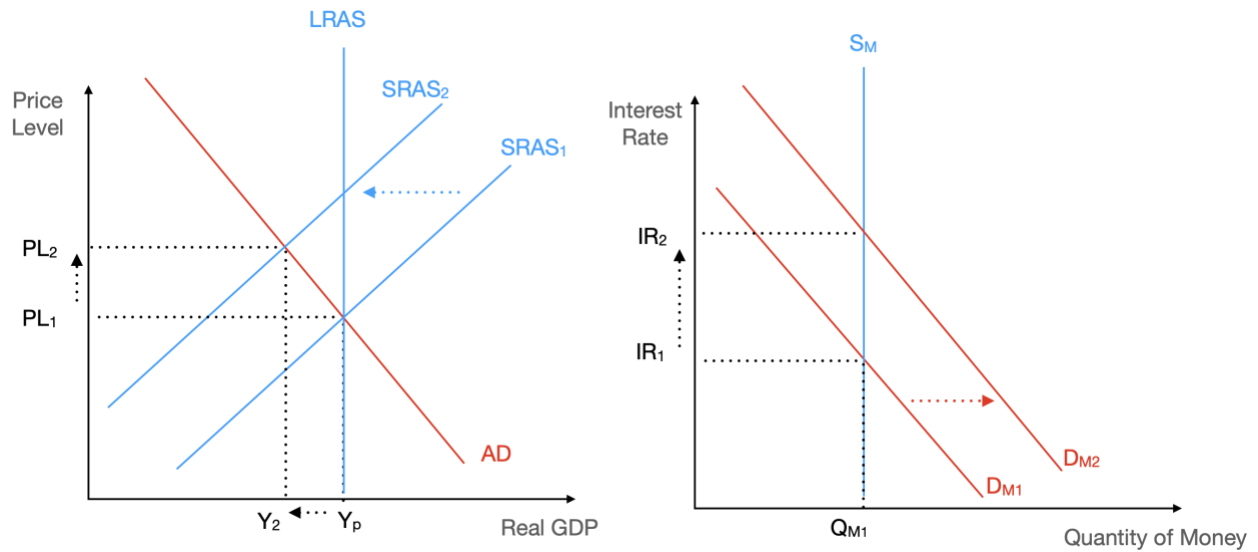


Figure 4. AD-AS diagram and money market diagram for the supply-side price shock

To solve this problem, the government must resort to market intervention. The RBA adopted the monetary policy to “purchase \$1 billion of the bonds” (Mizen, Lefort and Kehoe, 2021, para. 10), which pushes up the money supply. In Figure 2 below, money supply in the money market increases from  $S_{M1}$  to  $S_{M2}$ , leading to the decrease of interest rate from  $IR_2$  to  $IR_3$ , satisfying the government’s “low interest rate” objective. Moreover, the low interest rate would encourage people to borrow money and spend more on goods and services as the cost for borrowing is low, leading to a dramatic rise in aggregate demand and a bonus of increase in **real GDP** or “the market value of all final goods and services produced in a country over a time period that has eliminated the influence of changes in price” (Tragakes, 2020, P154). Hence, this policy would solve both the interest rate problem and benefit the economy as a whole.

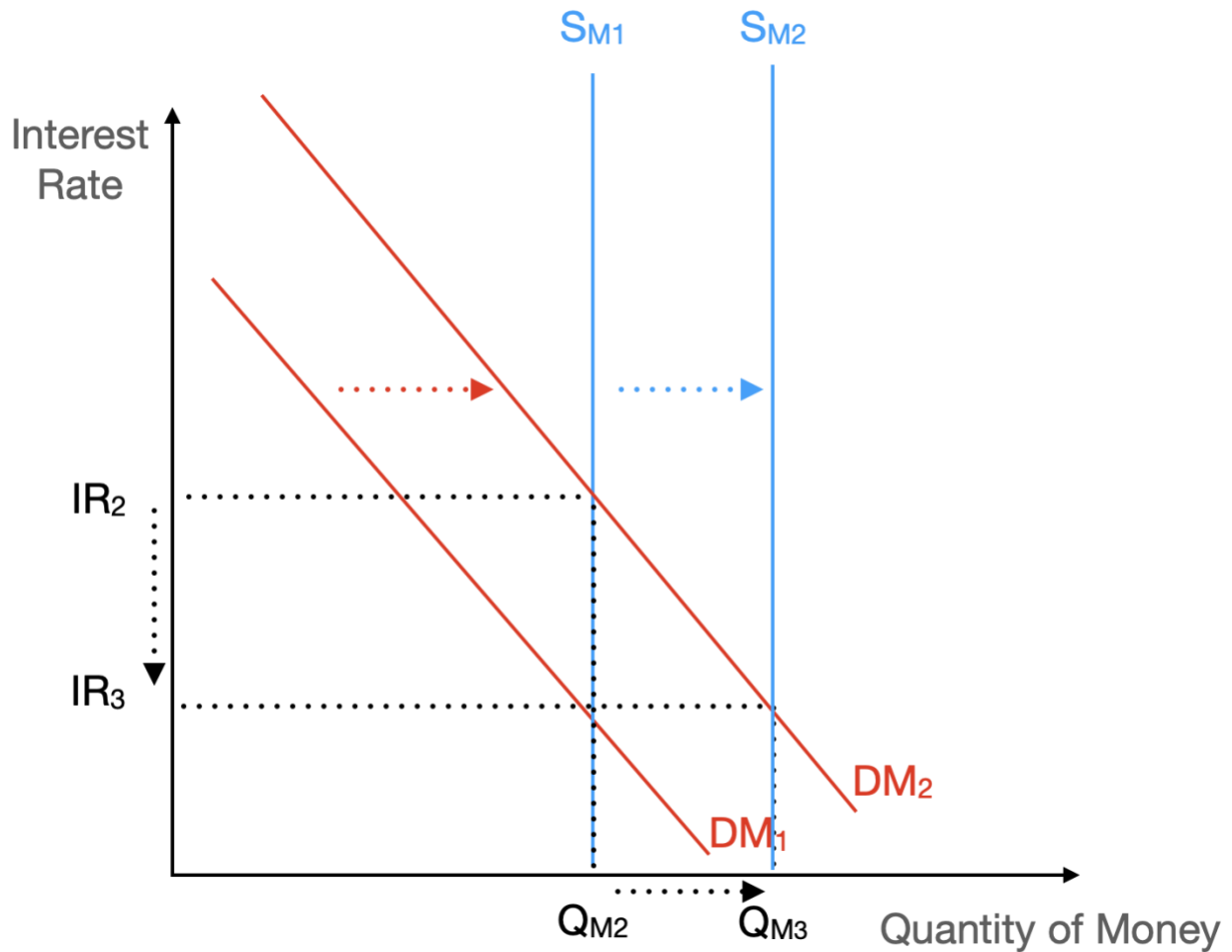


Figure 5. Influence of the monetary policy on the money market

However, the potential drawback is worth noticing. As illustrated in Figure 3 below, the increase in aggregate demand from  $AD_1$  to  $AD_2$  would increase the price level from  $PL_2$  to  $PL_3$ , and the real GDP would rise from  $Y_2$  to  $Y_p$ . Price level keeps rising from  $PL_1$  to  $PL_2$  to  $PL_3$ , which indicates a rising inflation rate; meanwhile, the real GDP is unchanged. This cost-push inflation causes rising unemployment and results in wage-price spiral, further leading to **stagflation**: economic stagnation and high inflation. It may even lead to **hyperinflation**, which refers to “price level increases of more than 50% per month” (Tragakes, 2020, P318).

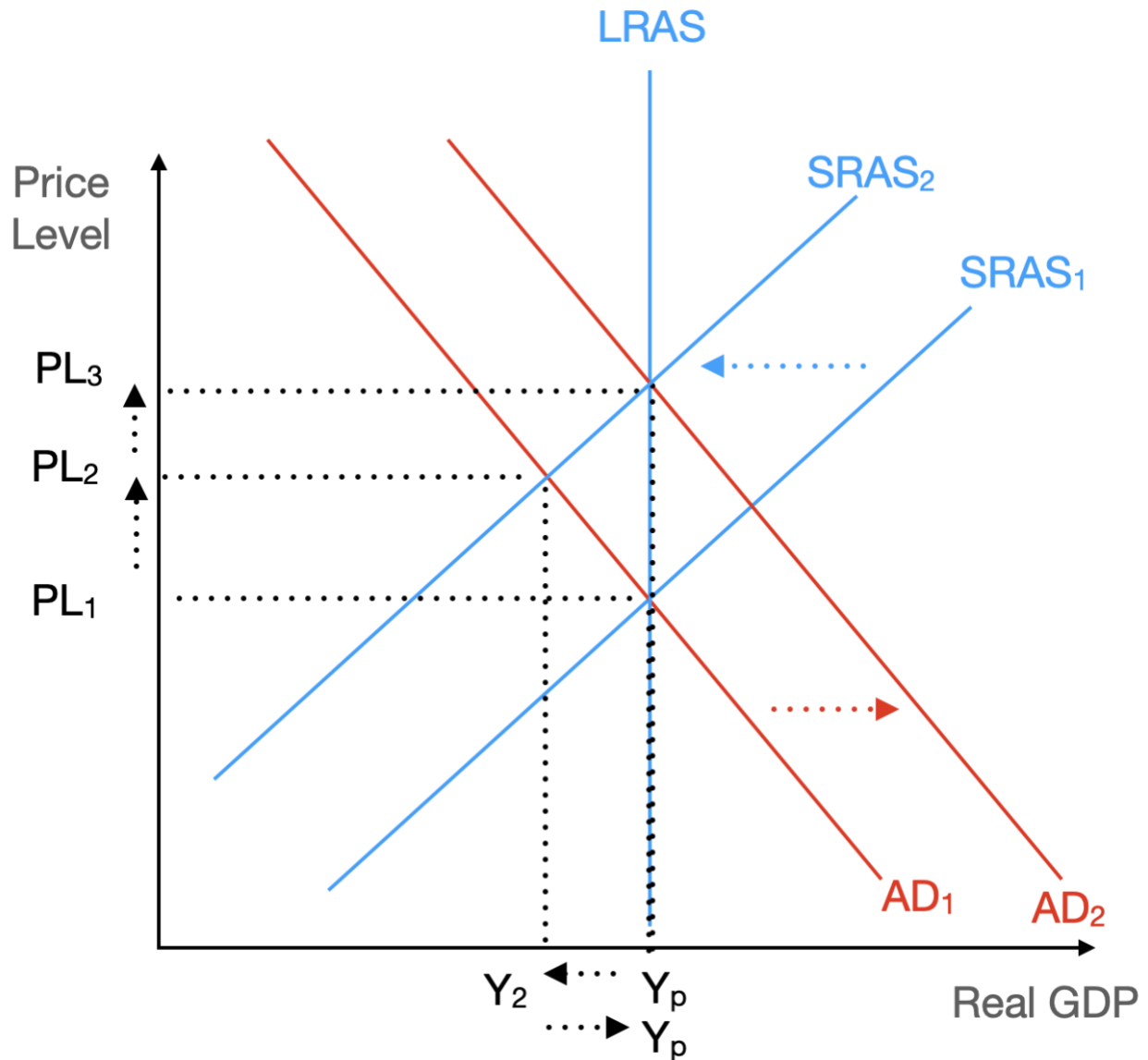


Figure 6. Monetary policy may result in wage-price spiral

In this scenario, a better policy for the government should be combining the original monetary policy with an investment in technology and education. When stagflation occurs, any further change in aggregate demand or short-run aggregate supply would probably not work. The effective solution here is to increase the long-run aggregate supply by improving the quality of labor and capital resources in the economy to enable more efficient production mechanisms. Figure 4 below shows that LRAS would shift rightward from LRAS<sub>1</sub> to LRAS<sub>2</sub>, causing the price level to decrease from PL<sub>2</sub> to PL<sub>3</sub> and real GDP to increase from Y<sub>p1</sub> to Y<sub>p2</sub>. In other words, the inflation is stabler and the economy is progressing forward. This alternative approach would



achieve the government’s goal of low interest rate (done by the monetary policy) and the “sustainable inflation” (Mizen, Lefort and Kehoe, 2021, para. 17) simultaneously.

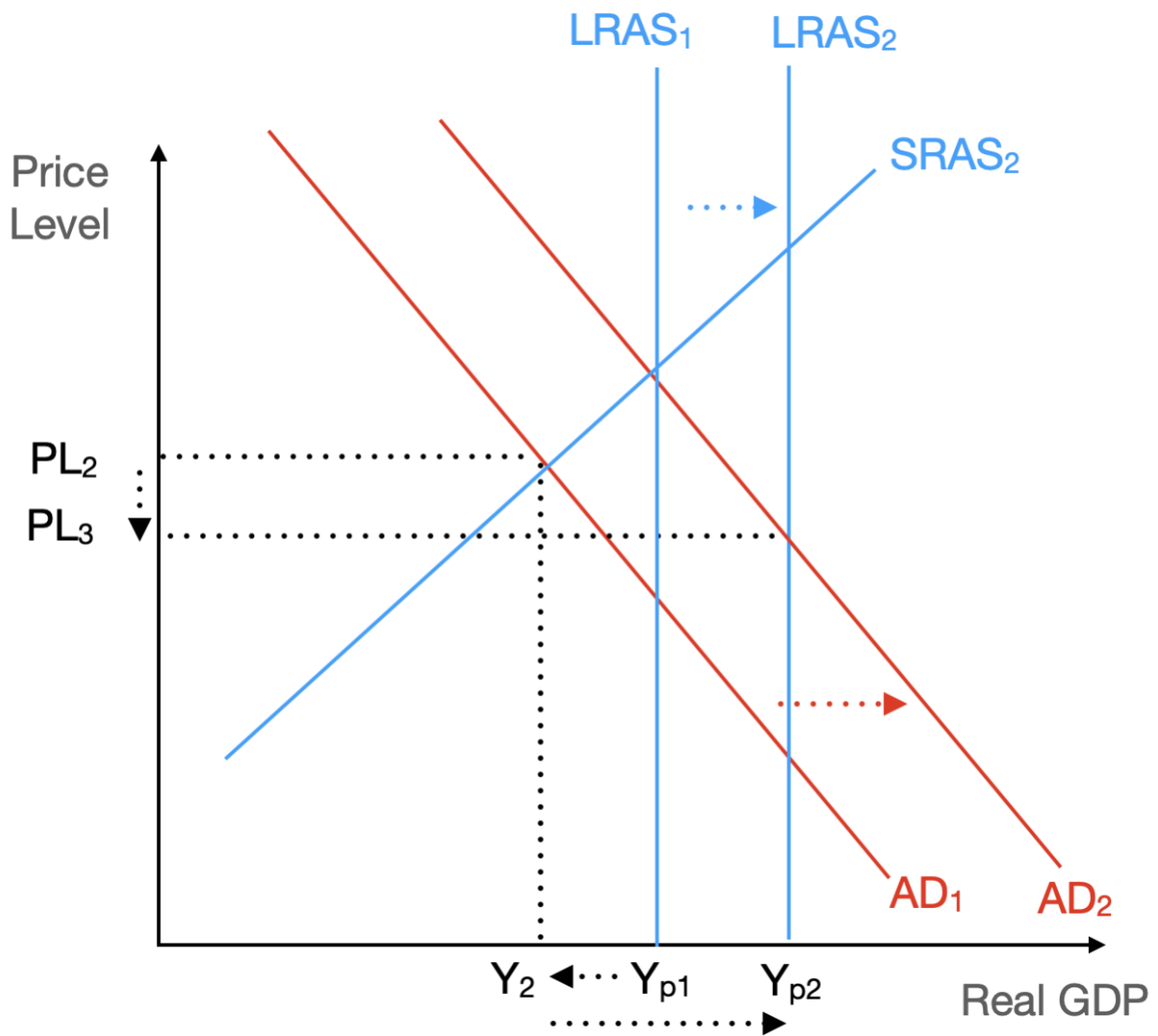


Figure 7. Effect of investment in education and technology on the AD-AS diagram

In conclusion, Australia’s economy faced the problem of “supply-side price shocks” (Mizen, Lefort and Kehoe, 2021, para. 7) and the subsequent high interest rate. The government intervened in the market through a monetary policy to purchasing \$1 billion worth of bonds to increase the money supply and reduce the interest rate. However, the economy may be subjected to a serious stagflation as inflation rises without change in the real GDP in the long run; hence, an alternative policy of combining the previous monetary policy with an investment in technology and education to improve long-term aggregate supply would likely solve the

problem. The interest rate is low, inflation remains reasonable, and the real GDP rises in the long run.

Word count: 752

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# U.S., EU Strike Deal to Remove Tariffs on Steel and Aluminum

31 October, 2021

1. The U.S. and the European Union have reached a trade truce on steel and aluminum that will **allow the allies to remove tariffs on more than \$10 billion of their exports each year.**
2. Negotiators reached an agreement Saturday as they worked to balance market demands and climate change, U.S. officials said, speaking on the sidelines of a Group of 20 summit in Rome. Bloomberg News reported earlier that the two sides were on the brink of an agreement.
3. The two sides were working hard to reach a deal before Dec. 1, when the European retaliatory tariffs were set to double. The 25% tariffs will apply to EU exports beyond 3.3 million tons, according to two people familiar with the talks, who asked not to be identified before a formal announcement.
4. “We’ve reached an agreement with the EU which maintains the 232 tariffs, but allows limited volumes of EU steel and aluminum to enter the U.S. tariff-free,” said U.S. Commerce Secretary Gina Raimondo told reporters on Saturday. “It was a very successful negotiation and we agreed on a way forward for how to face our shared challenge which is global excess capacity mainly by China.”
5. The deal marks a significant moment in repairing the U.S. trade relationship with Europe, a historic ally, after Donald Trump’s disruptive presidency. The EU from the start of the tariffs in 2018 rejected the premise that production from the bloc presents a national security threat to the U.S.
6. U.S. officials said that the deal involves so-called **tariff-rate quotas**, which allows countries to export specified quantities of a product to other nations at lower duty rates, but subjects shipments above a pre-determined threshold to higher tariffs.
7. A U.S. official told reporters on Saturday that the specific levels at which tariffs would apply would be announced later, and that they are in line with historic levels. The U.S. imported 2.5 million tons of steel from the EU last year and 3.9 million tons in 2019, down from 5 million tons each in 2018 and 2017.
8. “The agreement, ultimately, to negotiate a carbon-based arrangement on steel and aluminum trade addresses both Chinese over production and carbon intensity in the steel and aluminum sector,” National Security Adviser Jake Sullivan said.

9. Raimondo said the deal would help address supply-chain issues that have been hurting U.S. businesses.
10. **“We are also experiencing unprecedented supply-chain disruption** and we fully expect this agreement will **provide relief in the supply chain and drive down cost increases** as we lift the 25% tariffs and increase volume,” she said.
11. The deal contains agreed rules to prevent steel from China from being re-exported tariff-free to the U.S. via the EU, the U.S. officials said. The U.S. and EU also agreed to negotiate a carbon-based arrangement on steel and aluminum trade and create greater incentives for reducing carbon intensity in production of the metals, they said.
12. The United Steelworkers union applauded the deal, saying it will help keep U.S. industry competitive.
13. “It will also provide a much-needed opportunity to address the non-market predatory practices of China and other countries that have distorted global markets, while also spurring a dialogue over climate concerns stemming from countries whose industries are far more carbon intensive than those in the United States and the EU,” the group said in a statement.
14. The dispute started in 2018, when Trump imposed duties on steel and aluminum from Europe, Asia and elsewhere, citing risks to national security. The EU subsequently retaliated, targeting products including Harley-Davidson Inc. motorcycles, Levi Strauss & Co. jeans and bourbon whiskey. With Saturday’s deal, the EU agreed to drop those retaliatory tariffs.
15. “Lifting this tariff burden on American whiskeys not only boosts U.S. distillers and farmers, it also supports the recovery of EU restaurants, bars and distilleries hit hard by the pandemic,” Chris Swonger, head of the Distilled Spirits Council of the U.S., an industry group, said in a statement.
16. Jake Colvin, president of the National Foreign Trade Council, a business-lobbying group that had advocated for removal of the steel duties, said that while the agreement is a step in the right direction, the use of tariff rate quotas will still cause uncertainty for workers and businesses.
17. The deal “should serve to ratchet down trade tensions between the U.S. and Europe and clear the decks for more productive and forward-looking transatlantic conversations,” Colvin said. Still, managed trade mechanisms like tariff rate quotas **“undermine competitiveness, create winners and losers, add significant supply chain costs and disproportionately affect small and medium sized companies,”** he said.

— With assistance by Bryce Baschuk, Jennifer Epstein, Justin Sink, and Joe Deaux

## International Trade Economics Commentary

This article reports about the agreement of US and EU to remove the high **tariff** between each other on steel and aluminum. Tariff refers to “the taxes on imported goods” (Tragakes, 2020, P444). A key concept in economics is interdependence which is “economic decision-makers interact with and depend on each other” (Tragakes, 2020, P5). International trade is an example of interdependence in which countries and organizations interdependent on each other.

The problem faced by both economies is an “unprecedented supply-chain disruption” (Nardelli and Martin, 2021, para. 10). This indicates a rise in production cost, so producers produce at a lower quantity, and short-run aggregate supply (SRAS) shifts inward. To better analyze the effect of tariff, Figure 1 below is drawn. In the domestic market of steel and aluminum, the world price is at  $P_{\text{world}}$ , lower than the domestic equilibrium. This indicates a shortage on the product, and an import of  $Q_{1D}-Q_{1S}$  would appear. The tariff raises up the cost of import, therefore  $P_{\text{tariff}}$  is greater than  $P_{\text{world}}$ , and the quantity import reduces to  $Q_{2D}-Q_{2S}$ . The reduction in import reduces SRAS, making it even lower than normal value. A large decline in SRAS causes the GDP to decrease from  $Y_1$  to  $Y_2$ . Price level also increase from  $PL_1$  to  $PL_2$ , so an inflation appears. For the exporter, on the other hand, their export gets lower as tariff is so high. The high tariff therefore results in a decline in both importer and exporter’s GDP.

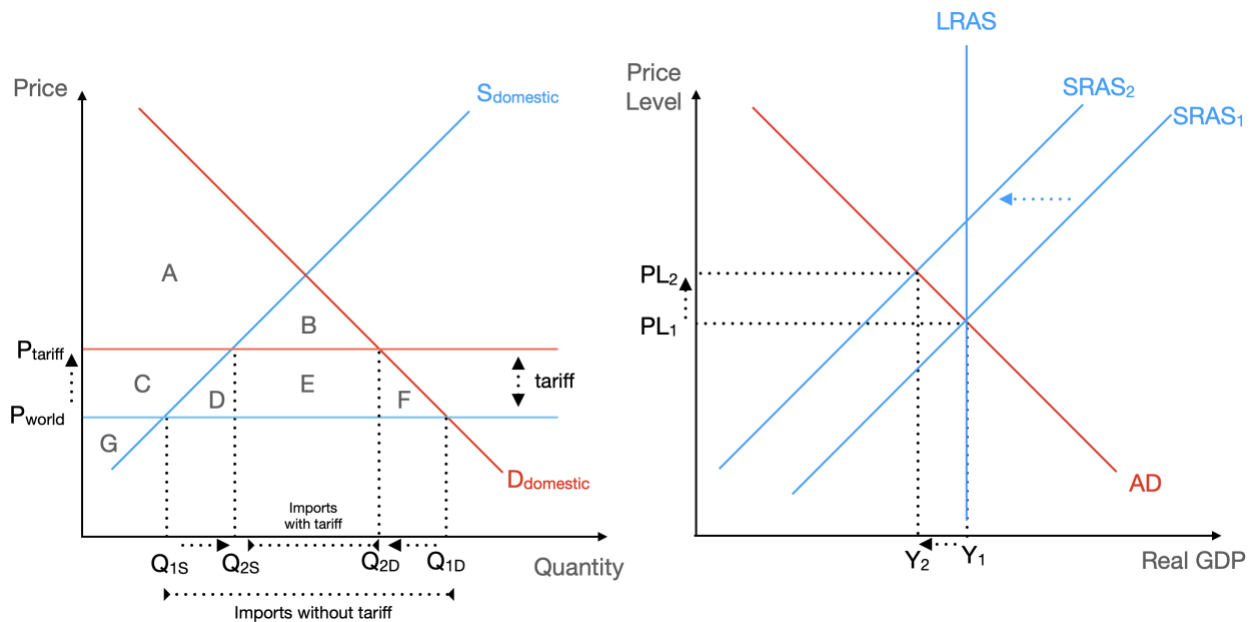


Figure 8. Effect of US' high tariff on EU's steel and aluminum

To address the issue, “tariff-rate quotas” (Nardelli and Martin, 2021, para. 6) are involved in the deal. A quota is “a legal limit to the quantity of a good that can be imported over a particular time period” (Tragakes, 2020, P448). Figure 2 below is used to illustrate the effect of quota. Imports before quota is  $Q_{1D}-Q_{1S}$ , and imports after quota is  $Q_{2S}-Q_{2D}$ . The new import is greater than before because the previous import is described as “more than \$10 billion each year” (Nardelli and Martin, 2021, para. 1). Higher import pushes up the aggregate supply on some extent. Furthermore, entrepreneurs can import cheaper raw materials of higher quality from foreign market. This act reduces the cost for production effectively, resolving the issue of supply-chain disruption. With the quota, exporters can make more profit because the price is higher; hence, the “tariff-rate quota” (Nardelli and Martin, 2021, para. 6) act could benefit both exporters and importers interdependent on the international trade.

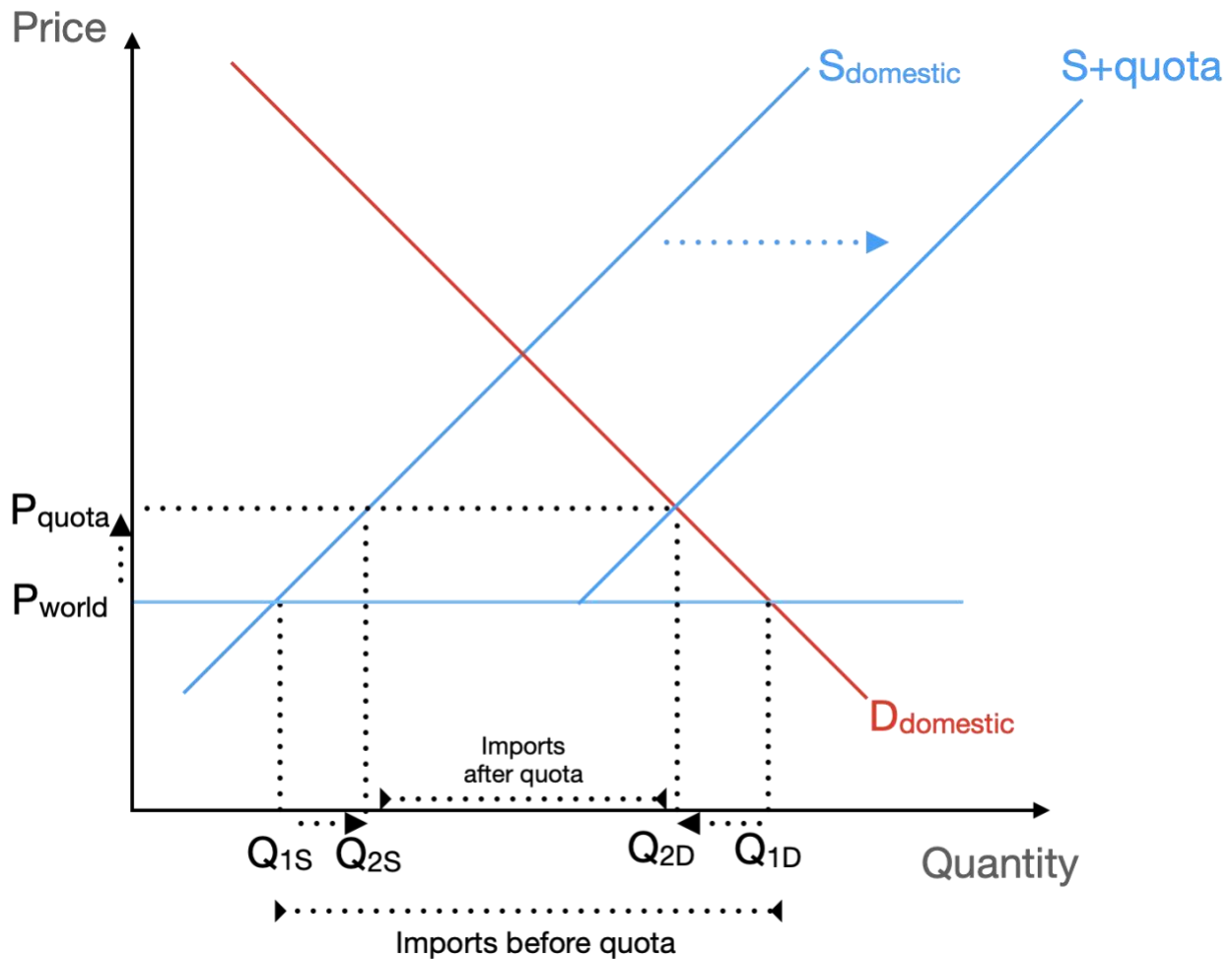


Figure 9. Effect of quota on US' steel and aluminum market

However, the problem occurred from this quota is worth worrying. With lower costs and lower prices, imports can outweigh domestic products on a large scale to “undermine competitiveness” (Nardelli and Martin, 2021, para. 17). Moreover, the purchase of raw material from imports has a price higher than before (change from  $P_{\text{world}}$  to  $P_{\text{quota}}$ ), “adding significant supply chain costs and disproportionately affect small and medium sized companies” (Nardelli and Martin, 2021, para. 17). If the previous tariff is considered a protective mechanism for domestic producers, the current approach of allowing more imports may harm domestic market unexpectedly – smaller firms lose sales and only large firms survive, turning the market into oligopoly or monopoly that harms consumers and most producers.

In this scenario, a better policy could be **production subsidy**. Production subsidy is “payment per unit of output granted by the government to domestic firms that compete with imports” (Tragakes, 2020, P454). In figure 3 below, subsidy on domestic producers will shift the supply curve downward from  $S_{\text{domestic}}$  to  $S_{\text{+subsidy}}$ . This approach would reduce import from  $Q_{1D}-Q_{1S}$  to  $Q_{1D}-Q_{2S}$ , so domestic producers are protected on some extent. Although this method will reduce foreign exports without any compensation, it benefits the importer by protecting its domestic producers and solving its supply-chain issue. The exporter can also switch to export in other countries, so they are affected insignificantly, and this method is proved to be the optimal one in interdependent international economics.

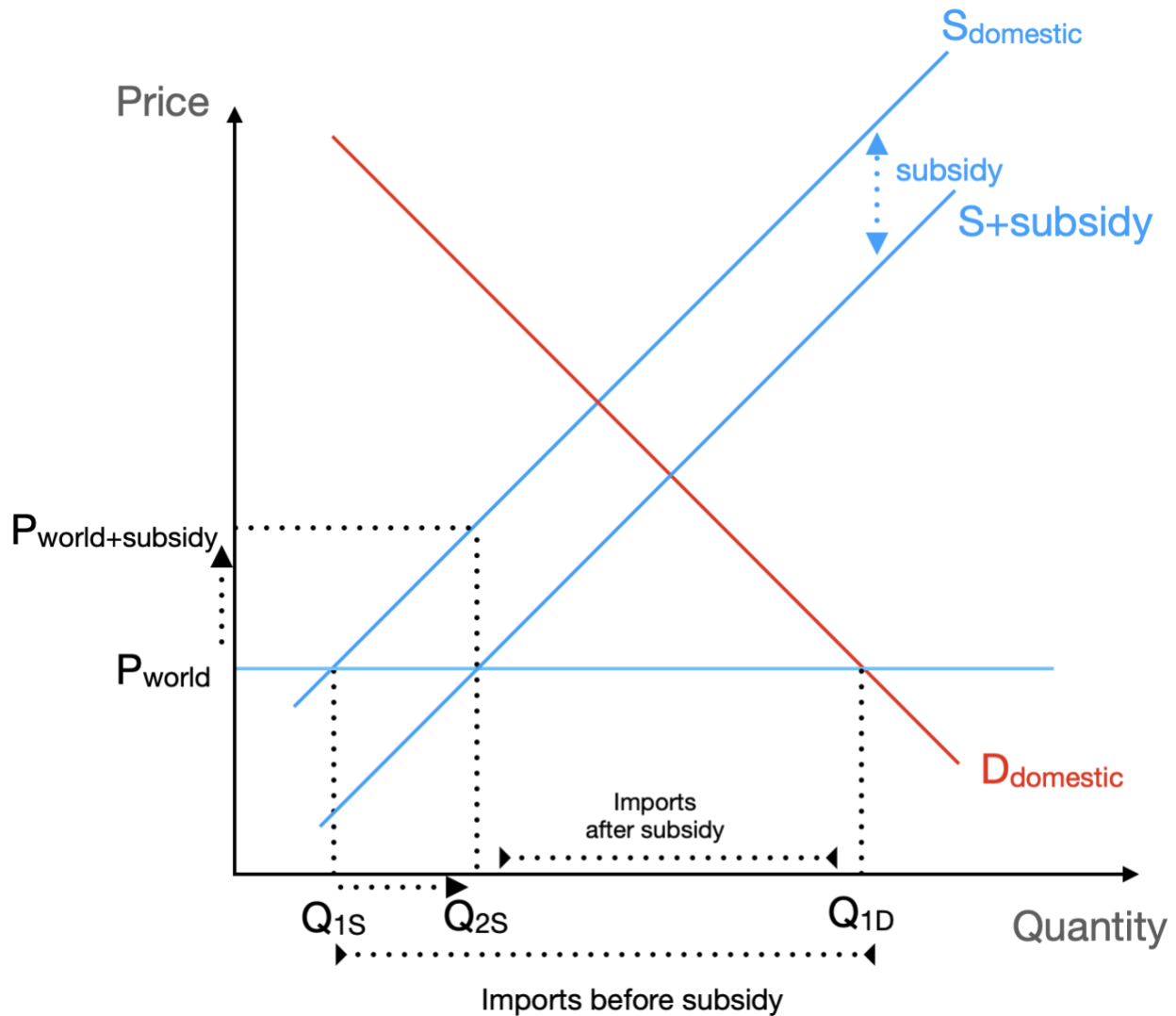


Figure 10. Effect of US production subsidy on steel and aluminum

In conclusion, US and EU both have high tariffs and face the issue of “supply-chain disruption” (Nardelli and Martin, 2021, para. 10). The governments reached an agreement to remove high tariff and use “tariff-rate quota” (Nardelli and Martin, 2021, para. 6). This decision eases the supply-chain disruption while benefiting both importers and exporters by promoting their GDP growth, but a potential drawback is that the domestic producers may face unfair competition. Thus, I propose an alternative of production subsidy to protect domestic producers and ease the supply-chain disruption simultaneously.

Word count: 671



## Reference

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