The economics of the Export-Import Bank: a teaching note

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Abstract

The U.S. Export-Import Bank provides financing for U.S. exporters. Recently there has been a debate over the continued existence of this governmental agency. We present an economic efficiency analysis of activities of the Export-Import Bank in a small open economy model. The economic analysis provides clarity to the ongoing political debate regarding this institution. We follow with a discussion of some key arguments in support and against the continued activities of the bank.

Keywords: Export-Import Bank, export credit agencies, Ex-Im, export subsidies
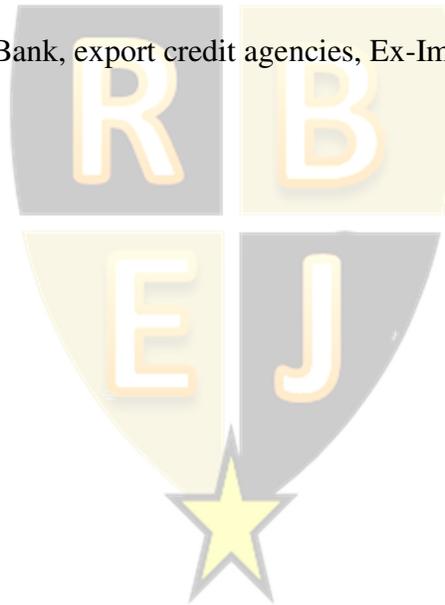
INTRODUCTION

The current authorization of the Export-Import Bank is set to expire on October 1, 2014. Over the last few months, there has been open debate over whether or not the U.S. should continue authorizing funds to support the Export-Import Bank. On one side of the debate, we hear that "without an Export-Import Bank … there'd be little incentive for American manufactures to actually make their goods in the United States" (Pathe, 2014). On the other side of the debate, we hear that the Export-Import Bank amounts to corporate welfare because a large percentage of the subsidies go to wealthy companies (Pathe, 2014).

To better understand the present debate, we provide a brief history of the Export-Import Bank. In this section, we highlight the primary functions of the bank, which are: to offer subsidized loans, loan guarantees, and export-credit insurance. Next, we use a simple open economy trade model to explore how economic efficiency is impacted when a subsidy is provided under two scenarios: 1) the domestic economy is an exporter and 2) the domestic economy is an importer. The final section offers a discussion of the results and highlights additional points of consideration for a robust classroom discussion.

HISTORY OF THE EXPORT-IMPORT BANK AND THE PRESENT DEBATE

The United States Export-Import Bank was established in 1934. The bank was part of President Franklin Deleno Roosevelt's New Deal program that was implemented as the U.S. and the rest of the world struggled to emerge from the Great Depression. President Roosevelt saw the Export-Import Bank as a means to help firms in the U.S. take advantage of foreign opportunities, and in doing so strengthen the domestic economy.

The bank has been used not only as a means to encourage the export of U.S. goods and services, but also as a tool of foreign policy. Some of the earliest transactions of the U.S. Export-Import Bank include deals with Cuba in 1934, a $22 million loan to China in 1938 used to construct the Burma Road, the financing of the Pan American Highway in 1941, and $2 billion in financing for European reconstruction as part of the Marshall Plan in 1946. The bank often provides funding or loan guarantees[1] for U.S. exports to countries that are emerging from economic or political crises, when traditional sources of financing are unavailable.

There are three programs that the Export-Import Bank administers as part of their mission: loans, loan guarantees, and export-credit insurance.[2] First, the Export-Import Bank directly loans money to foreigners that buy U.S. goods. There were $6.9 billion loaned out of this program in 2013. Second, the Export-Import Bank provides loan guarantees to banks that finance the purchase of U.S export goods and services by foreign buyers and it provides loan guarantees to domestic banks extending working capital loans

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[1] A loan guarantee by the Export-Import Bank is defined as a promise that Export-Import Bank will assume the debt obligation if the borrower defaults on the loan.

[2] See:
<http://www.exim.gov/about/library/reports/annualreports/2013/FY%202013%20Authorizations%20Summary_revised%2012%2003%2013.pdf >.

to domestic exporters. There were $14.9 billion in such guarantees in 2013. Third, the Export-Import Bank provides loss insurance to U.S. banks and exporters that extend credit directly to the foreign buyers. The Export-Import Bank provided over $27 billion in export credit insurance in 2013.

The actions of the Export-Import Bank can be viewed as a subsidy to U.S. exporting firms. The three programs offered by the Export-Import Bank provide financial assistance that would ordinarily be unattainable or at minimum more expensive in the open market.

While the presence of Export-Import Bank support may indeed result in additional export deals being transacted, many perceive that intervention as a form of corporate welfare. Why do these exporters get financial assistance in their private business transactions when a domestic transaction does not receive such help? Advocates suggest that private commercial banks are 1) not equipped to, 2) are unwilling to, or 3) regulations restrict them from participating in the type of transactions the Export-Import Bank supports.

A related criticism of the Export-Import Bank is that the support flows predominately to well-connected large corporate interests. While 90 percent of the Bank's customers are classified as small businesses, the largest of the customers—for example, Boeing—do represent the vast majority of the financial exposure and support. Of course this is because the scale of the loans and guarantees are much bigger for large firms relative to the support needed by small firms. Indeed, most small businesses request working capital loans that are typically structured as revolving lines of credit. Lines of credit have balances that are drawn up and are paid down several times throughout the year. As a result, the large number of working capital loans represents a larger volume of transactions than the reported exposure represents at any given time of the year.

The U.S. is not alone in its support of export transactions. Especially in the sectors related to the export of expensive capital products, many industrialized and emerging markets, such as the European Union, Japan and China, offer aggressive support in the financing of their nations' exports. Proponents of the Export-Import Bank maintain that the U.S. government must continue its involvement in financing exports so as to level the playing field relative to their global competitors. If the U.S. unilaterally removes this financial assistance, our global competitors will have an advantage.

Recently both pundits and politicians have been debating the very existence of the U.S. Export-Import Bank. The bank is up for reauthorization of its lending authority. Many are arguing for the elimination of the bank, while others maintain that the organization has a unique and valued role in our economy and therefore its operations should continue. In either case, there is a role for economic analysis to highlight how the activities of the Export-Import Bank, or its elimination, would impact the domestic economy.

A SIMPLE INTERNATIOAL TRADE MODEL

To gain a better understanding of the economics behind the Export-Import Bank, let's simplify the story to one market: the market for tires. Suppose tires are made in many countries around the globe and the global market for tires is large. Next, we will use the competitive open economy model to show how a country's welfare changes when

international trade subsidies are imposed.[3] Further, for purposes of this discussion, let's focus on a small economy. That is, assume that our economy—let's call it Henryville— is small relative to the world market and that its domestic decisions have no effect on the international marketplace. [4]

The pleasant country of Henryville has all that a free community would desire, including the right to import or export goods or services. Citizens of Henryville are price takers in the world marketplace. They take the price in the world marketplace as given because no consumer would pay more than the world price and no producer would accept less than the world price.   Thus, consumers and producers make their decision to exchange in the world marketplace based on the world price.

Henryville Exports Tires

Figure 1 depicts the Henryville market for tires, domestic consumers are represented on the curve labeled "Domestic Demand " and domestic producers are represented on the curve labeled "Domestic Supply".

If Henryville were a closed economy, the domestic market equilibrium price would equal $125 per tire and 100,000 tires would be exchanged in equilibrium. However, Henryville is an open economy that participates in international trade. As a result, domestic producers are able to sell tires at the going world price and are not interested in selling at the lower domestic price.

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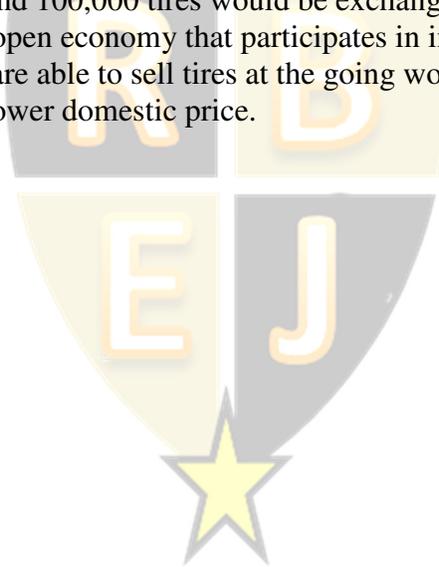
[3] The model presented here is similar to those presented in Mankiw (2012) and Hubbard and O'Brien (2015)

[4] The small economy assumption is used to simplify the model. The conclusions we reach and the lessons we will learn hold true when the small economy assumption is dropped.
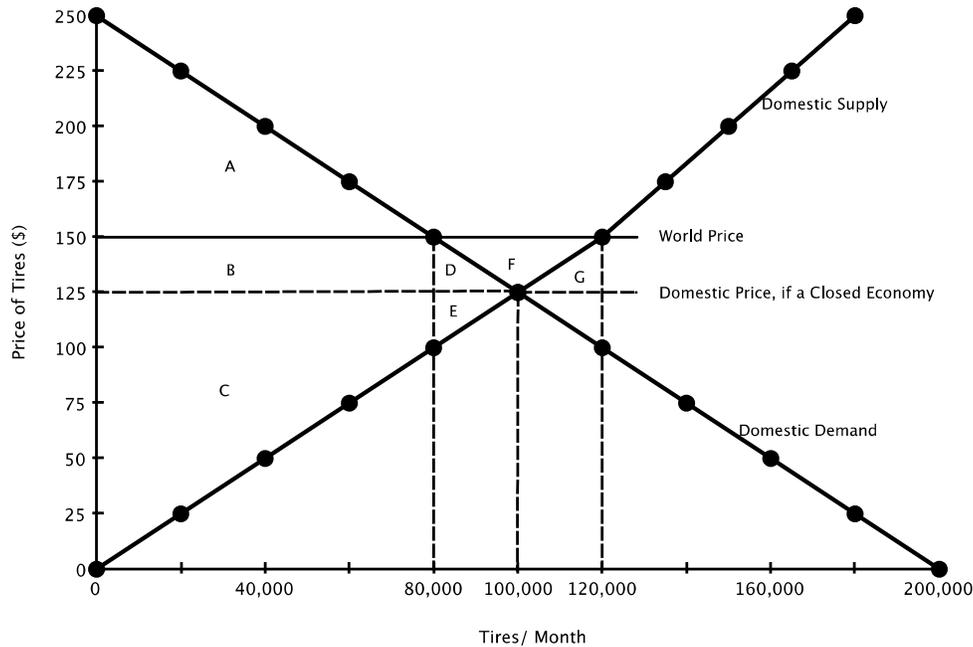
Figure 1
Henryville's Market for Tires

Table 1: Free International Trade

	World Price = $150
Quantity Demanded Domestically	80,000
Quantity Supplied Domestically	120,000
Quantity Exported	40,000
Consumer Surplus	A
Producer Surplus	B+C+D+E+F
Total Economic Surplus	A+B+C+D+E+F

Suppose the world price is $150 per tire. We've demonstrated this price in figure 1 by inserting the horizontal line labeled "World Price" at $150. The world price is the equilibrium price in the international market for tires, which is made up of an international supply curve and an international demand curve.

Table 1 summarizes Henryville's tire market when the world price of $150 per tire. We can make three observations. First, because the world price is higher than the domestic price, local producers are interested in exchanging 120,000 tires at $150 per tire. Second, domestic consumers are only interested in buying 80,000 tires at the higher world price. Third, because of international trade, domestic producers are able to export 40,000 tires outside of Henryville.

Table 1 also reports how economic wealth, created in the domestic tire market, is distributed in Henryville. First, the consumers have a consumer surplus equal to the area

A. Second, the producer surplus equals the area B+C+D+E+F. Third, the total economic surplus, which measures how much better off consumers and producers are because they have exchanged tires, is equal A+B+C+D+E+F.

Now we want to measure this free market outcome against two alternative cases: 1) all countries except Henryville offer their producers a subsidy and 2) Henryville's government decides to retaliate by offering its producers a subsidy to level the playing field.

Figure 2
Henryville as an Exporter of Tires
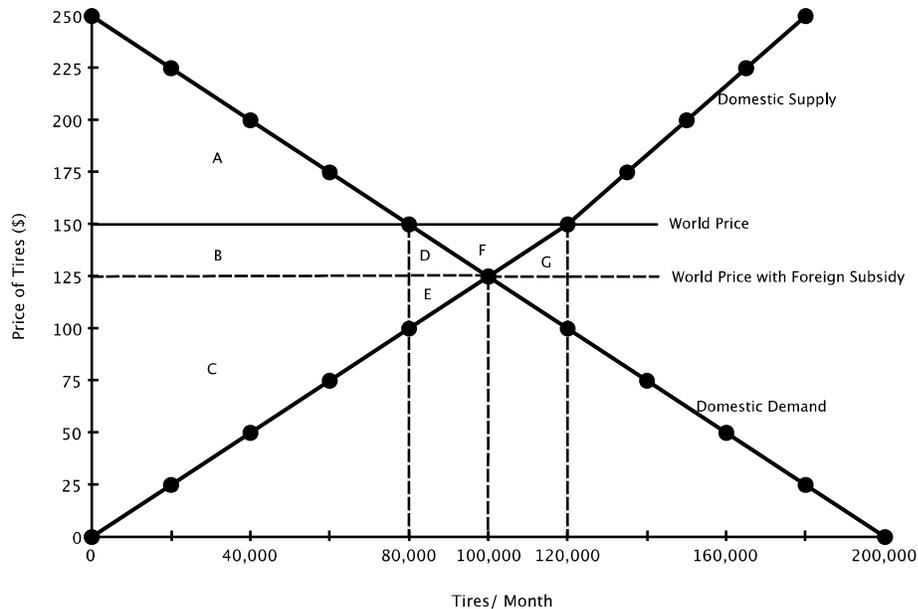
Let's assume that all countries except Henryville offer their producers a subsidy for each tire they sell in order to compete with Henryville's producers. The net impact of the foreign subsidy causes the world price to decrease to $125 per tire. We've demonstrated this price in figure 2 by inserting the horizontal line labeled "World Price with Foreign Subsidy" at $125.

Table 2 summarizes Henryville's tire market with a world price of $125 per tire. First, local producers are interested in exchanging 100,000 tires at $125 per tire. Second, domestic consumers are interested in buying 100,000 tires at the world price.   Third, because of the lower subsidized world price, domestic producers no longer export tires outside of Henryville.

Because of the lower world price, domestic consumers have a higher consumer surplus equal to the area A+B+D. Second, the domestic producer surplus has been decreased to area C+E. Third, the total economic surplus *decreases* to equal A+B+C+D+E.

In this case, the net impact of foreign subsidy harms Henryville—it causes Henryville's total economic surplus to decrease by an amount equal to area F.

Table 2: International Trade with Foreign Producer Subsidy

	World Price + Foreign Producer Subsidy = $125	Change
Quantity Demanded Domestically	100,000	+20,000
Quantity Supplied Domestically	100,000	-20,000
Quantity Exported	0	-40,000
Consumer Surplus	A+B+D	B+D
Producer Surplus	C+E	-(B+D+F)
Total Economic Surplus	A+B+C+D+E	-F

The open question for us now is: does it make sense for Henryville to retaliate—to level the so-called international playing field—by subsidizing the production costs of local Henryville producers? To study this question, suppose Henryville offers a $25 subsidy for each tire produced in Henryville.

Table 3 summarizes the results. First, domestic consumers in Henryville do not receive a subsidy and thus they continue to pay $125 per tire. At this price, consumers buy 100,000 tires. Second, each domestic producer receives $125 per tire from consumers and $25 per tire from the government of Henryville. So at the combined price of $150 per tire, local producers are willing to produce 120,000 tires. Third, because of international trade, domestic producers are now able to export 20,000 tires outside of Henryville.

Because the price has not changed for consumers, domestic consumer surplus has not changed—it is equal to the area A+B+D in figure 2. Second, the producer surplus now increases to area B+C+D+E+F. Third, the total cost of the subsidy equals the area B+D+F+G ($25 for each of the 120,000 tires produced in Henryville. Fourth, the total economic surplus is the sum of the consumer surplus and producer surplus minus the subsidy or A+B+C+D+E-G.

Thus, if Henryville retaliates by offering its own subsidy to "level the playing field," Henryville is actually made *worse off* by the value of area G. In summary, if a foreign government decides to subsidize the production of its local producers, Henryville is better off—in terms of efficiency—by not retaliating.

Table 3: International Trade with Foreign Producer Export Subsidy and U.S. Subsidy for Producers

	World Price with Foreign Producer Subsidy, and a U.S. Producer Subsidy	Change
Quantity Demanded Domestically (P=125)	100,000	0
Quantity Supplied Domestically (P=150)	120,000	+20,000
Quantity Exported	20,000	+20,000
Consumer Surplus	A+B+D	0
Producer Surplus	B+C+D+E+F	B+D+F
U.S. Subsidy	B+D+F+G	B+D+F+G
Total Economic Surplus (Consumer Surplus + Producer Surplus – U.S. Subsidy)	(A+B+C+D+E)-G	-G

Henryville Imports Tires

Now suppose that we instead begin our analysis where the world price is $125 per tire. We've demonstrated this price in figure 3 by inserting the horizontal line labeled "World Price" at $125. As in the original case assume that the domestic producers in Henryville are represented by the curve labeled "Domestic Supply" and domestic consumers by the curve "Domestic Demand". In this case the world price for tires is equal to the equilibrium closed market domestic price in Henryville.
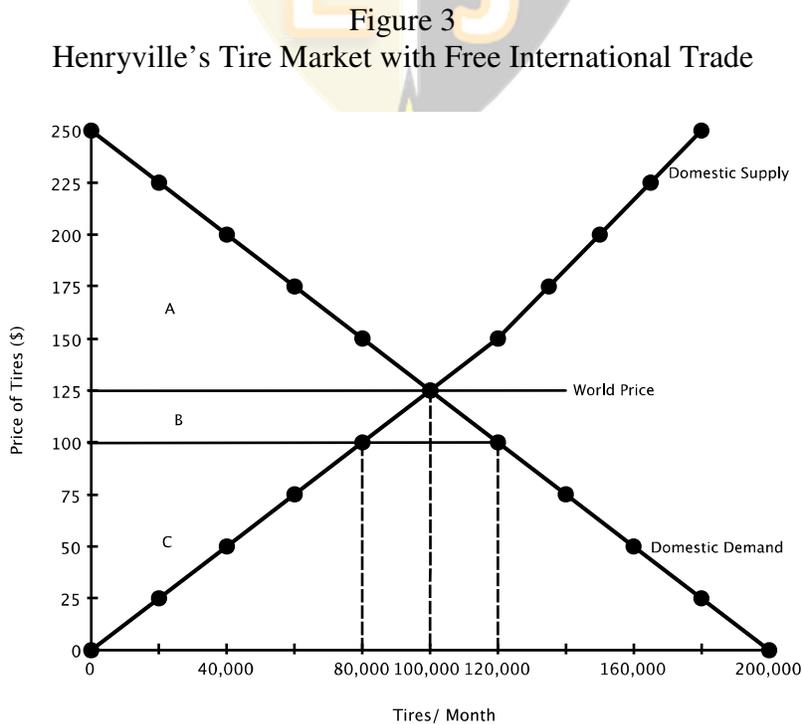
Figure 3
Henryville's Tire Market with Free International Trade

Table 4 summarizes Henryville's tire market when the world price of $125 per tire. First, local producers are interested in exchanging 100,000 tires at $125 per tire. Second, domestic consumers are only interested in buying 100,000 tires at the world price. Third, although free international trade is available, domestic producers sell all their production to local consumers and no tires are exported from Henryville nor imported into Henryville.

Table 4 also reports how economic wealth, created in the domestic tire market, is distributed in Henryville. First, the consumers have a consumer surplus equal to the area A. Second, the producer surplus equals the area B+C. Third, the total economic surplus is equal A+B+C.

Table 4: Free International Trade

	World Price = $125
Quantity Demanded Domestically	100,000
Quantity Supplied Domestically	100,000
Consumer Surplus	A
Producer Surplus	B+C
Total Surplus	A+B+C

Now we want to measure this free market outcome against two alternative cases: 1) all countries except Henryville offer their producers a subsidy and 2) Henryville's government retaliates by offering its producers a subsidy to level the playing field.

Suppose all countries except Henryville offer their producers a subsidy for each tire they sell. Let's assume that the net impact caused the world price to decrease to $100 per tire. We've demonstrated this price in figure 4 by inserting the horizontal line labeled "World Price with Foreign Subsidy" at $100.
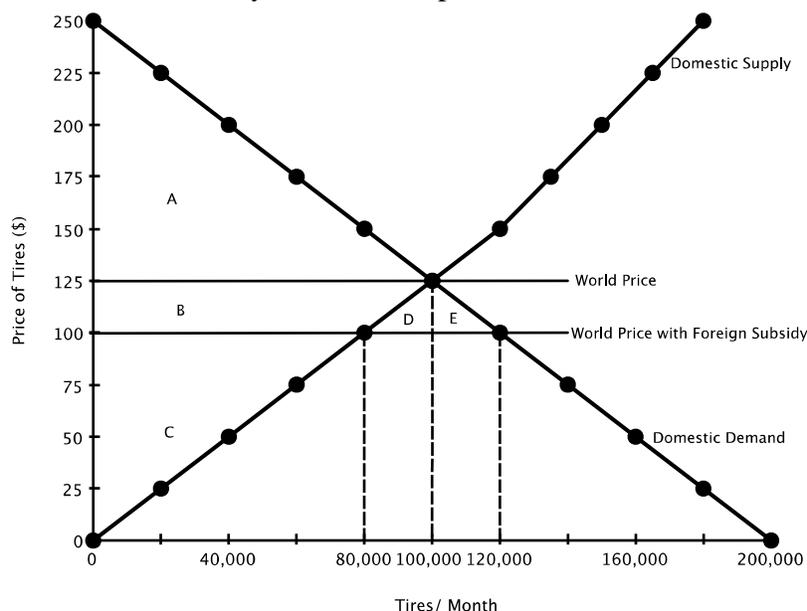
Figure 4
Henryville as an Importer of Tires

Table 5 summarizes Henryville's tire market when the world price of $100 per tire. First, local producers are interested in exchanging 80,000 tires at $100 per tire. Second, domestic consumers are interested in buying 120,000 tires at $100 per tire. Third, because of the lower world price, domestic consumer import 40,000 tires from outside of Henryville.

Because of the lower world price, consumers have a higher consumer surplus equal to the area A+B+D+E. Second, the producer surplus has decreased to area C. Third, the total economic surplus has *increased* to area A+B+C+D+E.

Because of the foreign subsidy, Henryville becomes an importer of tires. Henryville's producers are worse off; its consumers are better off; and on net Henryville is better off by the area D+E.

Table 5: International Trade with Foreign Producer Subsidy

	World Price with Foreign Producer Subsidy = $100	Change
Quantity Demanded Domestically	120,000	+20,000
Quantity Supplied Domestically	80,000	-20,000
Quantity Imported	40,000	+40,000
Consumer Surplus	A+B+D+E	B+D+E
Producer Surplus	C	-B
Total Surplus	A+B+C+D+E	D+E

Once again, the open question is: does it make sense for Henryville to retaliate—to level the so-called international playing field—by subsidizing the production costs of

local Henryville producers? To study this question, suppose Henryville offers a $25 subsidy for each tire produced in Henryville.

Table 6 summarizes the results. First, consumers do not receive a subsidy and continue to pay $100 per tire. At this price, consumers buy 120,000 tires. Second, each local firm receives $100 per tire from consumers and $25 per tire from Henryville. So at the combined price of $125 per tire, local firms are willing to produce 100,000 tires. Third, because of international trade, domestic consumers import 20,000 tires into Henryville.

Because the price has not changed for consumers, consumer surplus has not changed—it is equal to the area A+B+D+E in figure 4. Second, the producer surplus increases to area B+C. Third, the total cost of the subsidy equals the area B+D ($25 for each of the 100,000 tires produced in Henryville). Fourth, the total economic surplus is the sum of the consumer surplus and producer surplus minus the subsidy or A+B+C+E.

Thus, if Henryville retaliates by offering its own subsidy to "level the playing field," it will be made *worse off* by area D.

Table 3: International Trade with Foreign Producer Subsidy and U.S. Subsidy for Producers

	World Price with Foreign Producer Subsidy, and a U.S. Producer Subsidy	Change
Quantity Demanded Domestically (P=100)	120,000	0
Quantity Supplied Domestically (P=100+$25 subsidy)	100,000	+20,000
Quantity Imported	20,000	+20,000
Consumer Surplus	A+B+D+E	0
Producer Surplus	B+C	B
U.S. Subsidy	B+D	B+D
Total Economic Surplus (Consumer Surplus + Producer Surplus – U.S. Subsidy)	A+B+C+E	-D

In summary, if a foreign government decides to subsidize the production of its local producers, Henryville is better off—in terms of efficiency—by not retaliating.

DISCUSSION

The proposal to fund the Export-Import Bank is viewed very differently by different groups of people. If we use the concept of economic efficiency to judge how the bank benefits or harms groups of people, then we learn from the examples presented above that domestic producers benefit from the subsidy, domestic consumers are neutral, and Export-Import Bank interventions lead to a diminution of total economic surplus for the domestic economy.

The open question remains: why do we have an Export-Import Bank? Many believe government should not intervene when it comes to international trade because it negatively impacts economic efficiency. Thus, there should be no Export-Import Bank, and its current authorization should be allowed to expire.

Others argue that government has to intervene and the current authorization for the bank should be renewed. There are four common arguments for Export-Import Bank intervention: 1) protection of domestic jobs, 2) national security concerns, 3) unfair competition and / or 4) market failure. Next, we briefly explore each of these arguments for intervention. Regardless of the impact the Export-Import Bank has on economic efficiency the ultimate decision to intervene or not is political. Economic analysis, however, serves an important role in that it helps decision makers better understand the benefits and costs of their political decision.

Protection of Domestic Jobs

Many producer groups are proponents of the Export-Import Bank because it protects some domestic jobs; and without the bank, many of these jobs would be destroyed. Without the bank's subsidies, all goods and services will be produced outside the country at a lower cost.

However, the concept of comparative advantage reminds us that even if a country is better at producing everything, each country can still become better off trading with the other. That is, free and open trade creates jobs at the same time that it destroys jobs. The new jobs may be created at other more efficient firms within the country or even in other more efficient industries. The subsidies provided by the Export-Import Bank lower total economic efficiency, and therefore the overall level domestic job creation is diminished, not enhanced because of the bank.

National Security

Some industries might need legitimate protection for national security reasons. That is, there is a concern that we would be a safer nation if we retained the ability to produce certain goods domestically rather than rely on imports from a foreign supplier. However, such examples are likely few, not many. The concern economists typically have with a national security argument is that the call for intervention typically comes from a self-interested business or an industry-lobbing group, especially those in the defense industry. Mankiw (2012) suggests that in a case where a national security issue is raised, policy makers should listen harder when the call for intervention is coming from the decision makers in governmental positions related to defense, rather than from industry representatives. This is so because the governmental decision makers would have a vested interest in maximizing the value of their respective defense budgets. Indeed, defense establishment budget expenses would be lower with free and open trade.

Unfair Competition

Different countries have different regulations, subsidies, and in general different rules of the game. And this makes international trade unfair. Thus, governments must

intervene with programs such as the Export-Import Bank to make international trade fairer.

For example, as we have demonstrated in section 3, foreign counties often intervene and do give production subsidies to their business. Although many economists might regard this as a bad policy for the foreign government (in terms of its own economic efficiency), it is not a bad policy for the domestic consumer because the price they pay for goods and services decreases. Worse, as we demonstrated in section 3, if the domestic government does intervene, it leads to a diminution of economic efficiency for the domestic economy: the gains from a subsidy are less than the costs of the subsidy.

Market Failure

Private banks do not offer the services provided by the Export-Import Bank, and this is why the bank is needed. Further, proponents of the bank point out that the institution returned $1.057 billion to the U.S. Treasury in FY 2013 and approximately $2 billion in surplus has been sent to the U.S. Treasury over the past 5 years. This demonstrates that the services provided by the bank are needed, and that the bank is well managed.

An open question is: why cannot private financial institutions provide the loans and loan guarantee products rather than this governmental agency? In our economic analysis we characterize the financial intervention of the Export-Import Bank as a governmental subsidy of the domestic producers. The implication is that those financial products would otherwise not be available to the domestic exporters, or that if available would be priced higher. In fact a vast majority of exports are financed privately, with the Export-Import Bank stepping in to support marginal transactions that the private commercial banks do not want to fund. It appears that the U.S. government is bearing financial risk at below market prices to promote additional exports. As long as the Export-Import Bank is able to price these transactions below market rates, the private market will not be competitive in those marginal deals. The Export-Import Bank is not solving a market failure, but it is instead crowding out private market transactions. Importantly, if the bank were to be eliminated we should not assume that the marginal export transactions wouldn't be able to find funding. The private market will likely step in for most of those transactions, though perhaps at a higher price.

CONCLUSION

The U.S. Export-Import Bank provides financing for U.S. exporters. Over the last few months, there has been open debate over whether or not the U.S. should continue authorizing funds to support the Export-Import Bank. We've presented an economic efficiency analysis of activities of the Export-Import Bank in a small open economy model. The main result of our economic analysis finds that if a foreign government decides to subsidize the production of its local producers, a country is better off by not retaliating with it own subsidy. For a robust classroom discussion, we've identified four key arguments used in support of the banks, and used against the continued activities of the bank. Finally, regardless of the impact the Export-Import Bank has on economic efficiency the ultimate decision to intervene or not is political. Economic analysis,

however, serves an important role in that it helps political decision makers better understand the benefits and costs of their decision.

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