

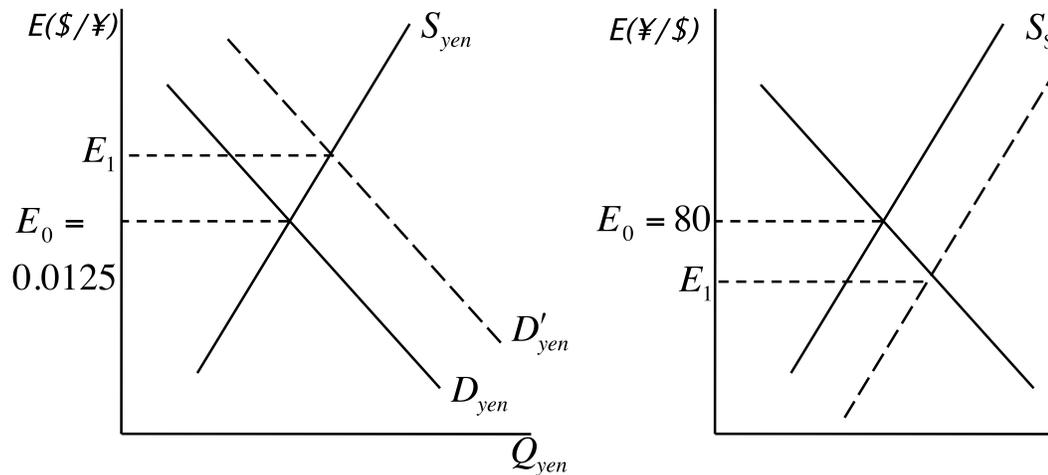
Name \_\_\_\_\_

UMID \_\_\_\_\_

**Midterm Exam**  
**November 1 or 3, 2010**

Answer on these sheets. Use the indicated point values as a guide to how extensively you should answer each question, and budget your time accordingly. The exam has a total of 60 points.

1. (7 points) I, a U.S. resident, have just been awarded a MacArthur Genius Award for my clever exam questions, and I have received the award of \$1,000,000. Watching the news, I am concerned that keeping the money in US dollars might be a bad move, so I use all of it to purchase bonds issued by the Japanese government. The current yen-dollar exchange rate is 80¥/\$.
  - a. Use the market for supply and demand of foreign exchange (or alternatively, excess demand for foreign exchange) to show how this transaction would affect the values of both the yen and the dollar. (Realistically, this is probably not a big enough transaction to matter noticeably, so for this purpose suppose that my award was quite a bit larger, enough to matter for the market.)



*Ans: Depending on whether you choose to model the market for yen or for dollars, the demand for yen shifts right or the supply of dollars shift right. Either way, the yen appreciates and the dollar depreciates.*

- b. Focusing now only on the single transaction stated above (and ignoring any effects on or through the exchange market), how would this transaction appear in the U.S. balance of payments? That is, would it be a credit or a debit? And under what category of transactions would it appear?

*Ans: This is an increase in US holdings of assets abroad, and appears as a debit in the US Financial Account.*

- c. Continuing to ignore the exchange market, there must as discussed in class be some other transaction that also takes place, accompanying this one, that will keep credits and debits equal. For each of the following categories from the balance of payments, describe an example of such a transaction that would serve the purpose. The first is done for you, to illustrate.

- i. The trade account. *Answer: the Japanese bond dealer who sells me the bonds accepts payment in dollars and uses them to buy a large number of iPhones from Apple in the US, intending to use them later as gifts, thus causing a (positive) export for the U.S. and a credit on the U.S. current account.*
- ii. Change in U.S. assets abroad. *Ans: I exchange my dollars for yen in the foreign exchange market, buying the yen from a US investor who has just sold property in Japan, thus causing a decline in US assets abroad that matches my increase in US assets abroad.*
- iii. Change in foreign assets in the U.S. *Ans: I buy yen from a Japanese investor who uses the proceeds to buy shares of of stock in Microsoft, thus causing an increase in foreign assets in the US, which is a debit on the Financial Account.*
- iv. Transfer payments. *Ans: I buy yen from the Japanese parents of students in America, who use the dollars to make large gifts to those students. That is a transfer into the US and thus a credit in the current account.*

2. (9 points) Write a short essay explaining the Most Favored Nation principle. Include in your essay:
- a. What the MFN principle says.  
*That a country should treat each other country within the group (e.g., GATT/WTO members) as well (i.e., apply on their exports the lowest tariff) as they treat any other members of the group.*
  - b. The role of MFN in US trade agreements prior to the GATT/WTO.  
*The US included MFN in bilateral trade agreements, promising that if it later lowered tariff further on other countries, it would match those decreases for the country in the agreement.*
  - c. What MFN requires members of the WTO to do.  
*Apply the same tariff rate, on a particular imported good, on exports from all other WTO members.*
  - d. What exceptions from MFN are permitted by the WTO
    - *Zero tariffs on essentially all imports from a partner country in a free trade area*
    - *Higher than MFN tariff on a product that has been exported unfairly, either dumped or subsidized*
    - *Retaliatory tariffs levied in response to a WTO dispute settlement case when the offending country does not remove its violation of WTO rules.*
    - *(Safeguards tariffs are not allowed to be discriminatory, except under the special safeguards agreement negotiated with China when it entered the WTO.)*



- c. Say in words and indicate also in the figures above, as appropriate, how the welfare of each of the constituencies (suppliers, demanders, and government) are affected by this fall in world price.

*Ans: In Country Beta, the fixed quota prevents imports from rising at all and so domestic price stays unchanged. Therefore neither supplier nor demanders are affected at all. The government was earning no revenue from the quota, and it still does not, so it too is unaffected. One might note that there is an "opportunity cost" here, since the quota has prevented all such changes, including the benefit that the country could have enjoyed from cheaper imports. But the question did not ask about that.*

*In Country Alpha, it is very different. Since the domestic price falls from  $x$  to  $y$ , suppliers lose  $-(a+e)$  while demanders gain  $+(a+b+c+d+e+f+g+h)$ . At the same time, the government's revenue from the tariff changes from  $+c$  to  $+(i+j+k)$ . Since it is a specific tariff, the height of rectangles  $c$  and  $j$  are the same, as are their widths. So the government gains  $+(i+k)$ . The country as a whole gains  $+(b+c+d+f+g+h+i+k)$ .*

- d. How would any of your answers to parts (b) and (c) have been different if
- i. The tariff in Alpha had been ad valorem rather than specific?

*Ans: The price difference caused by the tariff would have been a fixed percentage rather than a fixed dollar amount. As the world price fell, the domestic price would therefore fall by more. This would cause a greater fall in supply and loss to suppliers, and a greater rise in demand and gain to demanders. The government would collect less tax per unit of imports but on a larger quantity of imports, so it's not clear whether revenue would be larger or smaller.*

- ii. The quota in Beta had been auctioned off by the government (and re-auctioned after the world price drop)?

*Ans: Now the government is collecting revenue equal to the quota rents, area m, is thus the same as area c that government in Country Alpha collects in tariff revenue. However, when the price drops, it is still true that neither the domestic price nor any of the quantities change. The only change is that the government is able to collect more revenue from auctioning off the quota, and thus revenue rises by the amount n. What's happened is that the drop in world price has made the right to import under the quota that much more valuable, since imports can still be sold for the initial price. And by auctioning the government collects that revenue.*

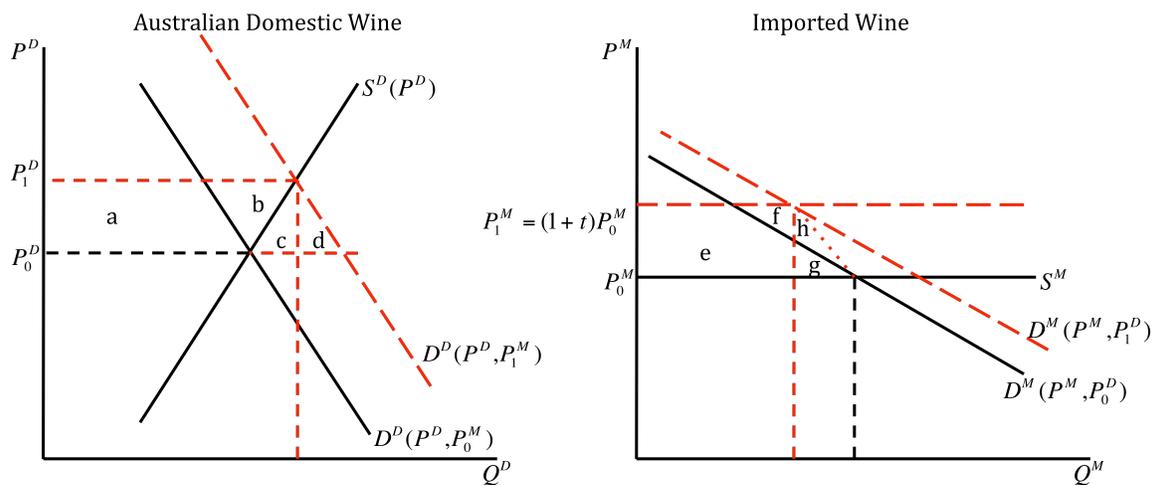
4. (10 points) In the space below, write a short essay describing the role that exchange rates are playing in the world economy today – specifically in the two months that this course has been underway. Which exchange rates are moving, and why? Which are not moving, and why? And what are governments saying about exchange rates?

*Ans: Points to make:*

- *China's currency was pegged for several years to the US dollar and, though it has risen recently, it is still widely viewed as undervalued.*
- *The value of China's currency continues to be determined primarily by Chinese intervention in the foreign exchange market, primarily buying US dollars that add to its international reserves.*
- *The US dollar had been falling in value in recent months relative to other major currencies, such as the euro and the yen.*
- *The reason for the falling dollar is likely the result of the low interest rates and expansionary monetary policy conducted by the US Federal reserve. This cause capital to flow out of the US and into other countries with higher interest rates.*
- *Many countries are concerned that their own currencies are appreciating, making it difficult for them to sell their exports and, in some cases, difficult to increase employment after the recession.*
- *Countries (e.g., Japan) that previously had allowed their currencies to float freely have attempted to intervene in the exchange market to prevent appreciation.*
- *Other countries see such efforts as harmful to themselves and threaten to do the same.*
- *Some (in the US congress) argue that maintaining an undervalued currency is, in effect, subsidizing exports and should qualify under trade law for a countervailing duty.*
- *Governments have been trying to find agreement on multilateral action, either by major countries acting in concert or through an international institution such as the IMF, to prevent countries from using their currencies to seek advantages in trade.*

5. (14 points) Using appropriate diagrams, fully labelled, analyze the effects of a tariff levied by Australia (a small country) on wine. Take carefull account of the fact that wine is a differentiated product, with Australian wine being viewed as not a perfect substitute for imported wine. However, the demand for each depends on the price of the other, as well as on its own price. Assume initially that the supply curve of Australian wine is upward sloping.
- Show how the tariff on imported wine will affect the price of Australian Domestic Wine in the Australian market (you can assume – sorry Ausie’s – that the Australian wine is not sold at all outside Australia).
  - How will the tariff affect the welfare of Australian wine consumers and Australian wine producers? What is the net effect of the tariff on the country of Australia as a whole?
  - How would your answers to parts (a) and (b) have been different if the Australian supply curve for wine had been perfectly elastic (i.e., horizontal)?

*Ans: We use the model of a “Differentiated Product Import, Small Country”:*



- a) *The tariff raises the price of imported wine by the full amount of the tariff, since Australia is a small country facing a fixed world price for foreign wine. This increase in price makes Australian domestic wine more attractive to buyers, who substitute toward it. This shifts the demand curve in the domestic market to the right, as shown. With an upward sloping supply curve, the price of domestic wine rises as a result. (This is all you need to say. If interested, you can also point out that the rise in domestic price must be a smaller percentage than the tariff and thus the rise in the import price. The reason is that, if domestic price rose as much as the price of imports, then there would be no reason to substitute toward it, and the increased quantity supplied would not be demanded.) (It is also not essential that you show the additional rightward shift of the import demand curve*

- that occurs because of the effect of this rise in domestic price. But I do show it above.)*
- b) *The two price increases, for imported and for domestic wine, both cause loss of consumer surplus. These are measured in the figure as  $-(e+g)$  for imports and  $-(a+b+c+d)$  for domestic wine. Domestic wine producers benefit from the rise in domestic price, the increase in producer surplus being  $+(a+b)$ . The government also gains tariff revenue (shown as  $+(e+f)$ , but I'm happy if you miss the shift if import demand and only record a smaller rectangle in the import market). Combining all of these, the net effect on welfare of Australia is  $-(c+d+g-f)$ . If you get all this, you may say reasonably that the presence of  $+f$  in this last means that it is possible for Australia to gain. I believe however that constraints we have not discussed on the shifts of the two demand curves could rule this out. If you simply say that this net welfare effect is negative, that's fine.*
- c) *If the domestic supply curve had instead been horizontal, then much of this would not happen. The domestic price would not rise (since it would have to remain on the horizontal supply curve), and there therefore would not be any induced shift of the import demand curve. The quantity of domestic wine produced and consumed would rise, at that fixed price, but there would be no effects on welfare there. Producers would sell more, but there would be not increase in producer surplus since they would simply be covering their costs. The only welfare effects would therefore be in the import market, where consumers would lose more than the government would gain in tariff revenue.*