Macroeconomic final exam practice problems: comparative advantage

(The attached PDF file has better formatting.)

*Question 1.1: Corn and Mushrooms

Corn and mushrooms are grown in the U.S. and Mexico.

- Mushrooms grow in the wild and are harvested by hand (with no machines).
- Corn is grown on large farms using tractors and harvesters.

The capital per worker is higher in the U.S. than in Mexico. In all other respects, the two countries are the same: the quality of the work force and investment risks do not differ.

- U.S. farms have all the tractors and harvesters they can use.
- Mexican farms have no tractors or harvesters and must rely on hand labor.

All but which of the following is true?

A. The U.S. has a comparative advantage in growing corn.
B. Investors prefer to invest in the U.S. rather than in Mexico.
C. Farmers trade U.S. corn for Mexican mushrooms.
D. The U.S. runs a current-account surplus.
E. Mexico runs a current-account deficit.

Answer 1.1: B

Growing corn requires much capital to buy tractors and harvesters. Capital does not help growing mushrooms, since all work is done by hand.

The U.S. has more capital per worker, so it has a comparative advantage in growing corn. U.S. farmers grow corn and exchange it for Mexican mushrooms.

Mexico has less capital per worker, so it has a comparative advantage in growing mushrooms. Mexican farmers grow mushrooms and exchange them for U.S. corn.

U.S. farms already have all the capital they can use and more investment won't help. But some Mexican farms may want to grow crops that require much capital. They are willing to pay higher interest rates for the capital, so investors prefer to invest in Mexican farms.

The current-account deficit reflects national savings minus domestic investment.

- U.S. citizens save money and invest in Mexico.
    - U.S. national savings exceeds domestic investment, so the U.S. runs a current-account surplus.

- Mexican farmers borrow money from U.S. investors.
    - Mexican national savings is less than domestic investment, so Mexico runs a current-account deficit.

Jacob: This seems counter-intuitive. If Mexico is the better place to invest, why does the U.S. have so much more capital? People invest in developed countries with much capital, not in developing countries with little capital.

Rachel: This exercise stipulates that all else is equal in the two countries. People invest in developed countries because the labor force is better educated, the economies are more open, the governments are more stable, and business contracts are subject to law, not to the personal interests of bureaucrats.