Understanding changes in market prices and output: Coffee and Steel

When supply and demand are in balance a market is said to have reached an equilibrium resulting in a state of rest. In microeconomics, equilibrium is reached at a price when quantity supplied balances with demand, there is no surplus or shortage that might drive prices lower or higher. The equilibrium is also called the “market-clearing price”. When a market is in a stable equilibrium, it requires an external event to cause this to change. Changes in market demand and/or market supply will bring about a new equilibrium price and quantity traded.

Section 1: The international market for coffee

This question asks you to think about supply and demand conditions in the world market for coffee. Read the extracts below and use these and the charts to answer the questions that follow.

Chart A:

Extract A: Emerging market drive global demand for coffee to fresh highs

Global demand for coffee keeps climbing. Faster-paced lifestyles in China and other Asian economies where GDP growth has been strong have helped to keep consumption of coffee on an upward path. The International Coffee Organization (ICO) estimates that global coffee consumption rose 2.4 percent to a record 134.0 million 60-kg bags in 2010 - and the average growth rate is 2.5 percent per annum even at a time of global economic uncertainty. The growth in demand in China, where coffee is drunk chiefly in cafe chains or restaurants, is not expected to slow. A rise in prices has also failed to deter consumers in India although some blends have substituted cheaper robusta supplies for more expensive arabica coffee.

Starbucks Coffee plans to more than triple its cafes in mainland China, from 450 currently to 1,500 by 2015. Starbucks, the world's largest coffee-shop operator, uses the forward market to buy coffee ahead of the roasting process. It has purchased most of the coffee it needs for the year ending in September 2012,

Scandinavian countries are the world's top coffee drinkers on a per capita basis, led by Finland, while the United States and Brazil are the top consumers in absolute terms. Demand for coffee has also remained strong in mature markets such as Germany, where consumers have been largely shielded from price rises by fierce competition between retailers.

The world price of raw coffee beans has been surging but only a small portion of the rise in the cost of the commodity has filtered through into retail prices for consumers.
On the supply-side of the market, world coffee production until recently has struggled to keep pace with the steady growth of demand. Supplies of high quality arabica coffee in 2010 were low with key supplier Colombia suffering three consecutive below-par crops. Production in some Central American countries has also been in long-term decline following a prolonged period of low prices between around 2000 and 2004 which forced many poorer coffee growers out of the industry. The World Bank reported recently that farmers in northern Ethiopia are swapping coffee for khat as falling prices put a squeeze on their profits. The farmers prefer to grow khat because they say it brings more money. Ethiopia, Africa’s biggest coffee grower, unveiled a five-year plan in December that targets annual economic growth of as much as 14.9 percent by expanding agriculture and boosting savings to fund investment. But higher returns for sugar producers may sway investment away from coffee plantations towards sugar.

Recently there has been better news for coffee farmers from Vietnam to Brazil are now expected to supply a record robusta crop in the year that begins in October 2011. Production will rise 5.4 percent to 3.29 million metric tons (54.9 million 60-kilogram bags) in the 2011-12 season and Vietnam and Brazil, the biggest producers, will reap the most beans ever. Prices for arabica beans, favored by Starbucks have dropped 19 percent to $2.335 a pound on ICE Futures in New York since early September, reacting to traders’ expectations of increasing supply. But the anticipated price slump may be curbed if Vietnam implements a plan to stockpile beans rather than export them to avoid domestic shortages.

Emerging market and producing countries will account for more than 50 percent of all the coffee consumed in the world by 2020. Brazil could overtake the U.S. as the world’s largest coffee consumer in the next 3 years. As producing countries such as Brazil become more important they will put pressure on prices because they will export less.

Source: Adapted from news reports

Section 1 Questions

a) Describe two significant features of the data shown in Chart A (6 marks)

b) With the help of a supply and demand diagram for each part, explain (i) Why the world price of coffee rose sharply during 2010 (5 marks) and (ii) Why coffee prices have been falling and are expected to fall further in 2011 (5 marks)

c) “The world price of raw coffee beans has been surging but only a small portion of the rise in the cost of the commodity has filtered through into retail prices for consumers.” Using chart B, to what extent is this true in the UK? Explain why higher coffee bean prices may only have a small effect on the retail price of coffee in stores in the UK (7 marks)

d) Who might stand to gain from a sustained period of higher coffee prices in the world economy? (7 marks)
Section 2: Changing prices and production in the world market for steel

This question asks you to think about supply and demand conditions in the world market for steel. Read the extract below and use these and the chart to answer the questions that follow.

Chart C

Steel is a manufactured product that has a derived demand and because of this demand and production levels are affected by changes in the global economic cycle. Steel production has been highly cyclical in recent years but the long-term fundamentals for the steel industry remain bullish due to growing demand from emerging economies.

Steel prices have recovered from the lows of the summer of 2009 in large part due to a strong recovery in demand, but also account of rising iron ore and coking-coal prices. The world supply of steel has been limited by limits to production capacity and the effects of the Japanese Tsunami - Japan is the world’s largest exporter of steel.

Section 2 Questions

(a) Explain what is meant by the term “derived demand” and why steel has a derived demand. (5 marks)

(b) Describe two significant features of the data shown in Chart C above (steel production) (6 marks)

(c) Using a supply and demand diagram, show and explain how the following changes in the market might affect the world price of steel (6 marks for each diagram + brief explanation)

(i) A rise in the world price of iron ore and coking-coal
(ii) A second recession affects the economies of the Euro Area and also the United States

(d) “The long-term fundamentals for the steel industry remain bullish due to growing demand from emerging economies.” Why are emerging economies the main source of increasing demand and also increasing supply in the world steel industry? (7 marks)