

# Market and price formation

## Worksheet 2B

### Task 1: Changes in the market for raw sugar

Raw sugar is extracted from sugar beet or sugar cane. Sugar beet thrives in a temperate climate, while sugar cane requires a subtropical climate. While around two thirds of sugar produced around the world is consumed directly in the country of origin, the remaining third – about 65 million tonnes in the 2015/16 financial year – is traded on global markets, with the main exchanges located in London and New York.

The following chart shows the development of global market prices for raw sugar in recent years:

**Global market prices for raw sugar**

In US cents per pound



Source (in German): <http://www.zuckerverbaende.de/zuckermarkt/zahlen-und-fakten/weltzuckermarkt/zuckerhandel.html>

1. The following article appeared in a Swiss agrarian newspaper in summer 2015:

10 August 2015

### **Sugar prices at a low**

According to market analysts, the latest downturn in prices for raw sugar is the result of oversupply on the global sugar market, but more especially the weak Brazilian real. The currency of the largest global producer of sugar has depreciated by more than 9% against the US dollar since mid-July, and thereby exerted further downward pressure on sugar prices. Furthermore, experts say that the last five years have seen global production exceed consumption, with inventory levels climbing to record highs. Just recently, a market study by Rabobank predicted that sugar prices were likely to continue declining, due also to good harvests in Thailand and India, the latter being the second largest sugar producer after Brazil.

Source (in German): <https://www.schweizerbauer.ch/markt--preise/marktmeldungen/zuckerpreise-im-keller-23880.html>

Explain the price development of raw sugar according to this article with the help of the market model. Assuming the sugar price is 70, depict the situation on the following chart. Determine the supply and demand amounts. How large is the excess supply?

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2. The market price for raw sugar fluctuates substantially, since it is subject to various factors on the supply and demand sides. How do the following market situations influence the equilibrium price? Provide a brief explanation for your answers.

- a. In October 2013, a fire broke out in the Port of Santos in Brazil, the most important port of loading for raw sugar in the world. The fire destroyed 300,000 tonnes of sugar.

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- b. Brazil's use of its sugar cane harvest for the production of ethanol increases to 40%, meaning that less of the harvest is available for producing sugar.

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- c. Sugar has an increasingly serious image problem, with health campaigns frequently singling it out as the number one cause of obesity.

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- d. Heavy rains in Russia take a toll on the sugar beet harvest; the wet weather also diminishes yields in Brazil.

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- e. From 2017 onwards, EU sugar and isoglucose production quotas were abolished and the support price for beet sugar repealed. Producers in the EU thus face fiercer international competition.

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- f. The consumption of sugar is steadily increasing due to the growing world population and rising per capita income.

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## Task 2: Efficiency and the housing market

Your friend Joanna will begin her studies in Zurich in two months' time, and is urgently looking for an apartment. She's desperate: 'I'm forever travelling to Zurich and standing in queues to see apartments – which usually turn out to be not that great anyway.'



A queue of people seeking accommodation in Zurich in March 2014.  
Photo: Keystone / Walter Bieri

Other friends have also mentioned that it's difficult to find reasonably priced accommodation in Zurich.

1. What is the situation on the housing market where you live, or in the nearest city? Discuss your experiences.

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2. Answer the first two questions and then discuss question 3.

- a. What is an efficient market?

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b. What are the characteristics of an efficient market?

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c. Discuss whether the housing market has these characteristics. Is the housing market an efficient market?

[illegible]

3. Both the public and the private sector are attempting to make the housing market more efficient. Give examples of the sorts of measures being implemented to this end.

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### Task 3: The grey market for concert tickets

Sitting at her PC, Megan Roth is on tenterhooks. In a few minutes, tickets for the Zurich Hallenstadion concert of the British singer Adele will go on sale. As a big fan, Megan really wants to buy one of the 13,000 tickets available on the online platform. But half an hour later, it's all over – all the tickets have been sold, and Megan wasn't able to get one of them. That evening, she tries her luck on ricardo.ch; a number of tickets are on offer at prices between 400 and 1,200 francs.

1. Have you ever bought tickets for music concerts or sports events that were sold out from unofficial sellers? Discuss your experiences.

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2. Why did a grey market<sup>1</sup> – i.e. second-hand tickets on offer at inflated prices – spring up immediately for the Adele concert? Explain your answer using the market model.

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3. If lots of fans are prepared to pay a higher price, why doesn't the concert organiser simply raise the official price?

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4. While the resale of event tickets is not prohibited in Switzerland, the grey market is problematic for fans, organisers and the state. From the perspective of each of these three market participants, explain why.

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<sup>1</sup> In Switzerland, since reselling tickets is generally not prohibited, there exists what is termed a 'grey' and not a 'black' market.

5. In recent years, the Federal Council has repeatedly affirmed its unwillingness to prohibit or restrict the resale of tickets, since it does not regard this as an urgent priority of the state.<sup>2</sup> Countering these abuses therefore falls to the concert organisers themselves. As an organiser, discuss the possible actions you could take.

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<sup>2</sup> Postulate 15.3397 'Sale of event tickets at inflated prices. Sanctions.' 4.5.2015 by Olivier Feller.  
[http://www.parlament.ch/d/suche/seiten/geschaefte.aspx?gesch\\_id=20153397](http://www.parlament.ch/d/suche/seiten/geschaefte.aspx?gesch_id=20153397) (unavailable in English)

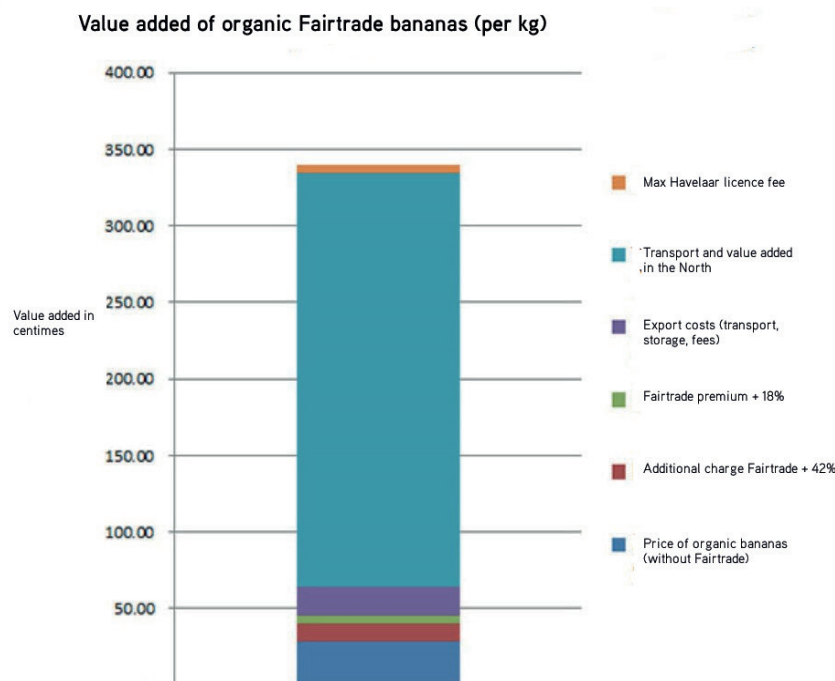
#### Task 4: Fair trade products with minimum price

In Switzerland, consumers have the option of buying goods bearing the Max Havelaar Foundation (Switzerland) label, which promotes fairly traded products. This Fairtrade certification aims to enable small farmers and local producers in developing countries and emerging economies to achieve sustainable improvements in their living conditions, e.g. through the use of minimum prices.

The Fairtrade minimum price seeks to cover the costs of sustainable production, thereby guaranteeing producers a minimum income even during phases of low world market prices. It is fixed following negotiations between all Fairtrade participants, regularly reassessed and – if necessary – adjusted. It therefore functions as a security net, since it only comes into play when the world market price is so low that sustainable production can no longer be supported by sale proceeds. When the world market price is higher, a correspondingly higher price is negotiated for Fairtrade products, and the Fairtrade minimum price is no longer in effect.

Furthermore, a Fairtrade premium is paid to the producers at cooperative level. In a cooperative, various producers band together, as in a farmers' association. The cooperative decides democratically on how the premium should be used, e.g. for the construction of schools, hospitals or production facilities, or to increase product quality and quantity. In this way, the whole group benefits.

The following chart shows the value added per kilogram of Fairtrade bananas:



In this example, banana farmers earn 50% more – i.e. 46 centimes instead of 29 centimes per kilo – by trading Fairtrade bananas. Source (not in English): [www.maxhavelaar.ch](http://www.maxhavelaar.ch)



1. Do you or does your family buy Fairtrade products? If yes, which ones and why? If no, why not?

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2. Referring to the preceding chart showing the value added of Fairtrade bananas, compare the price that producers receive with and without Fairtrade. Then, contrast the price that producers receive with Fairtrade against the final sales price. Finally, when referring to the various components of the whole price, what do you notice?

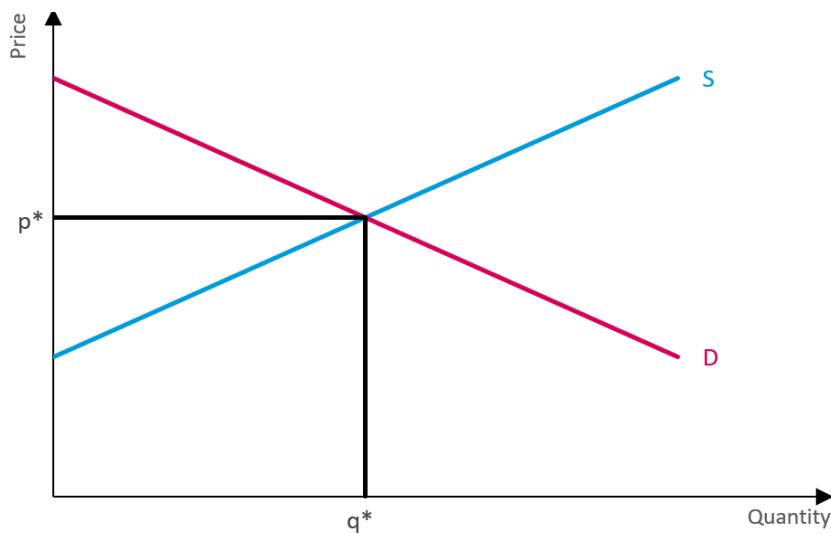
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3. Using the following chart, explain how the Fairtrade minimum price affects supply and demand in the market when the minimum price exceeds the world market price.

Minimum price




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4. 'For me, Fairtrade is an absolute must. I'm happy to pay a little more if it means that the producers receive a decent income.' Comment on this consumer's statement. Compare the possible advantages and disadvantages of a Fairtrade minimum price from the perspective of a small farmer.

[illegible]

### Task 5: Price elasticities in public transport

## Price elasticities

Price elasticity of demand shows how strongly the demand amount reacts when the good's price changes by 1%.

$$\text{Price elasticity} = \frac{\text{percentage quantity change}}{\text{percentage price change}}$$

Cross-price elasticity of demand shows how strongly the demand amount for good X reacts when the price of good Y changes by 1%.

$$\text{Cross-price elasticity Y-X} = \frac{\text{percentage quantity change of good X}}{\text{percentage price change of good Y}}$$

In December 2016, the SBB raised the prices of its rail cards and tickets.

Statistical surveys<sup>3</sup> show the following price elasticities for the Swiss railways. Solve the following tasks based on these results.

	Price elasticity PT	Price elasticity PMV	Cross-price elasticity PMV-PT	Cross-price elasticity PT-PMV
All journeys	-0.596	-0.311	0.58	0.39
Commuters	-0.709	-0.512	0.76	0.47
Leisure time	-0.697	-0.322	0.666	0.337

PT: Public transport / PMV: Private motor vehicles

1. Apply the concept of price elasticity to the following examples. For assistance, refer to the box on p. 10 containing the summary of price elasticities.

- a. The ticket price for a particular train journey increases from CHF 20 to CHF 22. By what percentage does the demand amount change? Round to two decimal places.

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- b. The ticket price for a particular train journey increases from CHF 20 to CHF 22. By what percentage does the demand amount for PMV change as a result of this price increase? Round to two decimal places.

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2. The price for a season ticket (2nd class) rises from CHF 3,655 to CHF 3,860. What will be the likely percentage drop in sales according to the price elasticity? What does this mean in volume terms, if around 472,000 season tickets (status 2016) are sold per year?

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<sup>3</sup> Source (in German): Vrtic, M., & Fröhlich, P. (2006). Was beeinflusst die Wahl der Verkehrsmittel? Der Nahverkehr, 24(4), 52–57.

3. An increase in SBB ticket prices often leads to heated discussions in Switzerland. Assess the following statements by comparing the price elasticities of commuters and day trippers:

a. Jacques Russi has the following complaint: 'If ticket prices rise, day trippers can occasionally skip a journey. But I depend on the train to get to work. Higher prices really affect me.'

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b. According to Lisa Menzi: 'The costs of driving my car – e.g. insurance, petrol and repairs – are always rising. Nevertheless, that doesn't mean I'm going to give up my car.'

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c. Herbert Gross says: 'Even if ticket prices go up again, I'll certainly not switch over to a car.'

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d. Nicole Heinzmann claims the following: 'The SBB are in a comfortable position. In the short term we're dependent on trains, which means they can put the prices up. But in the long term it'll catch up with them.'

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