Assessment 1: Applied Writing

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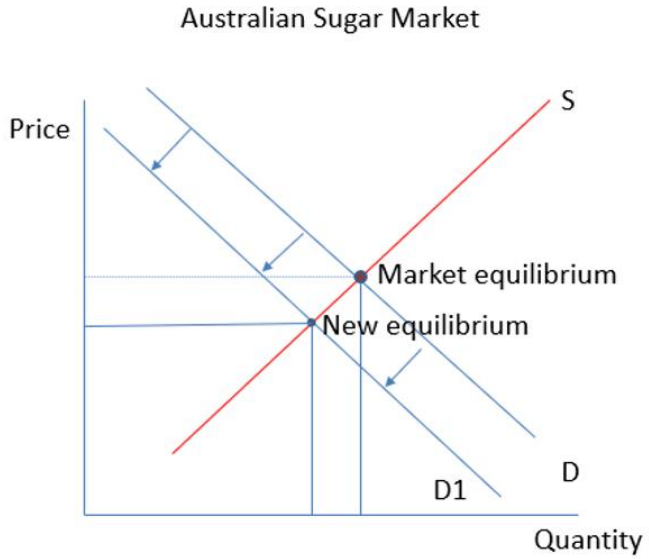
Word Count: 1245

Q1 (a). *Using the demand and supply model, explain and illustrate graphically the effect of some Australian State government action on the sugar market. In your answer, make sure you discuss the equilibrating process, and clearly outline the factors affecting demand and its impact on price and quantity.*

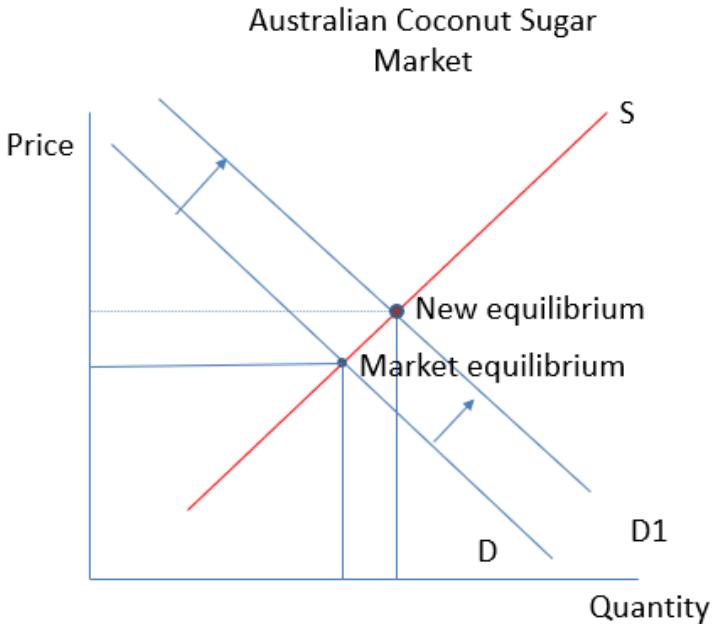
As a result of the action by state governments, Australians are consuming less sugar, which means the demand for sugar and sugar-based products in Australia is decreasing. "Prices adjust to maintain market equilibrium— keeping quantity demanded equal to the quantity supplied." (Parkin & Bade, 2015). After the campaigns led by state-governments, demand for sugar decreased from D to D1 on the graph below. This created a surplus which brings a fall in the price to restore market equilibrium, subsequently the quantity supplied also decreases. Observing the graph, we can determine that overall demand for sugar in the Australian market will decrease as a result of these government campaigns.



Q1 (b). Using the demand and supply model, explain and illustrate graphically, how these government actions will affect the market for coconut sugar. In your answer, make sure you clearly discuss the effect on price and quantity.

As a result of the anti-sugar campaigns of various Australian state governments, Kombucha is becoming utilized as a substitute for sugar-products. As such this will cause an increase in demand for coconut sugar as the decrease in demand for normal sugar causes consumers to seek out substitutes. In addition, coconut sugar costs a relatively low proportion of income. "The greater the proportion of income spent on a good, the greater is the impact of a rise in its price on the quantity of that good that people can afford to buy and the more elastic is the demand for the good." As shown in the graph below, the rise in demand for coconut sugar will see a shortage in quantity

supplied, which will in turn increase the price to reach a new market equilibrium. The longer the time that has elapsed since the price of a good changed, the more elastic is the demand for the good. Considering the price for coconut sugar has changed recently, demand for coconut sugar will remain inelastic. As a result of the state governments actions, we can determine an overall increase in demand for coconut sugar in the market.



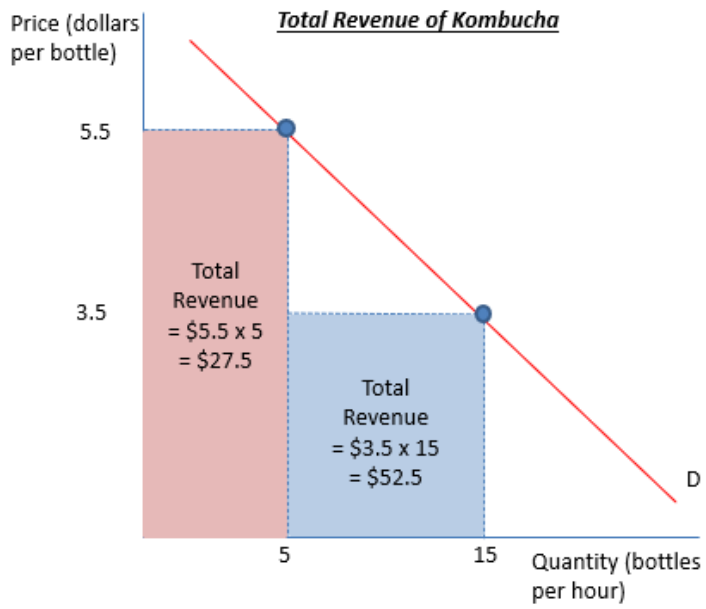
Q2 (a). Use the determinants of price elasticity of demand to analyse whether demand for Kombucha in the health food industry is likely to be price elastic or inelastic.

The influences on the price elasticity of demand are primarily the availability of substitutes and the proportion of income spent. Demand is elastic if a substitute for it is easy to find. In this instance, coconut sugar is a substitute of normal sugar, but elasticity can fluctuate depending on the consumers narrowness of definition. Not all consumers will substitute the demand for normal sugar with Kombucha. However, Kombucha is considered a luxury good, which has many substitutes (such as sugar-free drinks) and can be considered elastic. Should the price for coconut sugar increase, consumers in the health food industry can easily replace Kombucha drinks for other sugar-free substitutes. Demand can be price elastic or inelastic based on the proportion of income spent on Kombucha. However, the overall demand for non-alcoholic drinks with reduced sugar is inelastic as it is a broadly defined good. The specific demand for Kombucha drinks is elastic as it is a narrowly defined good. Further, Kombucha and non-alcoholic drinks are considered luxury goods, which makes overall demand for Kombucha in the health food industry price elastic. Based on these factors we can determine the demand for Kombucha in the health food industry is price elastic.

Q2 (b). Based on your analysis in Q2 (a), explain and illustrate graphically what will happen to the total revenue of the Kombucha industry following a change in the market trend.

The link between total revenue and price elasticity is that when the price changes, total revenue can change in the same direction, the opposite direction or remain constant. Which of these outcomes occurs depends on the price elasticity of demand.
If demand is elastic, a given percentage rise in price brings a larger percentage decrease in the quantity demanded, so total revenue which is price multiplied by quantity, decreases.
According to the article, the change in market trend is the change in preference of consumers for a substitute to sugary drinks such as Kombucha. As a result, the overall demand for Kombucha will

increase. The graph below details the effect of an increase in demand on the total revenue for Kombucha.

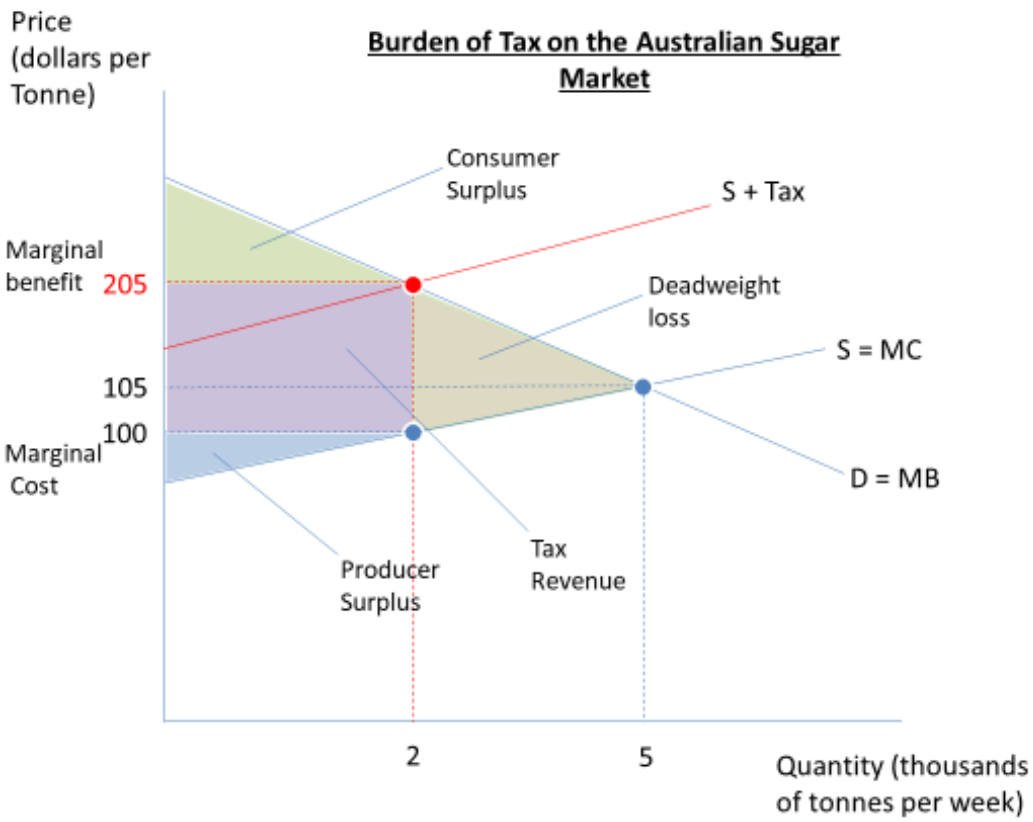


This graph illustrates how an increase in price will cause an overall decrease in total revenue for Kombucha, due to the elasticity of demand. When the price is $3.50 a bottle, the quantity demanded is 15 bottles an hour and total revenue equals $52.5 an hour. When the price rises to $5.50 a bottle, the quantity demanded decreases to 5 cups an hour and total revenue decreases to $27.5 an hour. The link between total revenue and the price elasticity of demand can be seen in the graph above. In response to a change in market trends, the demand for substitute drinks for sugary products has increased the overall demand for Kombucha. This results in a shortage of supply, causing producers to increase prices. However, as the demand for Kombucha is price elastic, this will cause a decrease in total revenue.

*Q3 (a). Assume that Australian government has imposed tax on sugar. Discuss how tax creates **inefficiency** in the market. Further, assuming demand for sugar is elastic, explain and illustrate graphically how the burden of tax will be shared between consumers and producers.*

In your answer, make reference to the concepts of consumer and producer surplus.

Taxes create inefficiency in the market, as it fundamentally drives a wedge between the buyer's price and the seller's price. As a consequence, "the equilibrium quantity is set below the efficient quantity, and a deadweight loss arises" (Parkin & Bade, 2015). Inefficiency is created when the marginal benefit does not equal the marginal cost, further a dead-weight loss occurs as total surplus is not maximised by the seller. However, this can be beneficial in some markets. For instance, the taxation on cigarettes by the Australian government is imposed for the social good of the population (i.e. to warn consumers about health defects). As discussed, demand for sugar is elastic, the below graph illustrates how the burden of tax is shared between producers and consumers.



When a tax is imposed, the marginal benefit exceeds marginal cost. Consumer and producer surplus shrink. Park of each surplus goes to the government as tax revenue, shown by the purple area, and part of each surplus becomes a deadweight loss, shown by the tan-coloured area. The incidences of tax and its excess burden depend on the elasticities of demand and supply. In the case of the Australian sugar market, there is a given elasticity of demand the supply for sugar is more inelastic and thus, the larger burden of tax lies with the seller. In this way, it can be determined that taxation creates inefficiency in the market by as the marginal benefit does not equal the marginal cost, resulting in a dead-weight loss as total surplus is cannot maximised by the seller.

References:

1. *Parkin, M., & Bade, R. (2015). Microeconomics. Melbourne: P. Ed Australia.*