

# [Economic analysis of sugar industry brazil and australia economics essay](https://assignbuster.com/economic-analysis-of-sugar-industry-brazil-and-australia-economics-essay/)

Australia as the second largest exporter of sugar in the world is not really one of the biggest producers. Brazil is a thousand pound guerrillas. Compared with the sugar industry of Brazil, from overall consideration, Australia sugar industry has an obvious competitive disadvantage that cannot have the scale effect.

Scale effect is also called economies of scale, that is, enlarging the scale could bring the economic benefits increasing (John & Scott, 2010). Any production embraces costs, generally including fixed costs and variable costs. To achieve profitability, the sales revenue must be higher than production costs. As the fixed costs are unchanged, more production will bring the average fixed costs decreasing and the average profit increasing. According the economics, economy of scale is derived from the diminishing marginal costs. Therefore, Scale effect demands that the production scale should meet or exceed the breakeven point. The following Figure-1 shows the theory of Scale effect

Scale effect Inverted-U curve

Production Scale

Profit Growth Rate

Critical point

Figure 1

The relative size of Australia as a producer of sugar is not as large as the size of Brazil so that it can conclude that Australia sugar industry is not as easy as Brazil sugar industry to achieve the scale effect. Then from the consideration of economy of scale, Australia sugar industry may shares a higher fixed cost level than Brazil for producing the same quantity of sugar with the assumption that other variables keep to be a same level. Thus here it can be said Brazil sugar industry has a scale competitive advantage compared with Australia sugar industry.

2 The sugar equilibrium price analysis

Equilibrium price

Demand curve

Supply curve

Quantity

Price

Figure 2

The equilibrium price of sugar depends on many factors, the main two of which are the sugar demand quantity and the sugar supply quantity in the world market. Before exploring the sugar equilibrium price analysis, the introduction of equilibrium price will be stated as follows.

Equilibrium price refers to a commodity price as the supply curve intersects with the demand curve, that is, the price for commodity demand quantity equals the commodity supply quantity (Donald, 2010). In a market that is competitive in strict economic terms, the demand force of a commodity interacts to its supply force, and then the commodity market price tends to be the equilibrium price. If the market price is higher than the equilibrium price, excess supplies will be achieved and the market price tends to fall; on other hand, if the market price is lower than the equilibrium price, excess demands will be presented and the market price tend to rise to the equilibrium price level. Therefore, it can be said that the market competition drives the equilibrium price to be formed. The equilibrium price formation principle is shown as the following Figure-2.

As to the equilibrium price formation, the sugar industry has to consider the sugar demand and the sugar supply. So the quantity of demand and demand for sugar should be analyzed for exploring the equilibrium price formation. Sugar, as a type of life necessity, its demand elasticity is comparatively small, that is, no matter the changes of sugar supplying, people have a certain level of demanding for sugar. Thus it can be said that the sugar demand is fixed and rigid. For analyzing the sugar supply, since the cane manufacturing places are located in different countries and sugar manufacturing has a close connection with the manufacturing technology, the natural climate, the farmers’ cultivation, and national polices, etc, it therefore can be said the sugar supply elasticity is big, that is, cane supplying depends on several human factors and natural factors.

If the cane supplying factors, like the manufacturing technology, the natural climate, the farmers’ cultivation, and national polices, play a positive role on sugar manufacturing, then the sugar supply quantity is large. Compared with sugar demand quantity, if the sugar supply quantity is larger the demand quantity, then the dominant right of forming sugar price lies in the demand side; if the sugar supply quantity is smaller than the demand quantity, no matter how large the supply quantity of sugar is, the dominant right of forming sugar price lies in the supplying side. Then the above in this paragraph is how the sugar equilibrium price to be formed.

Through deeper analyzing the sugar equilibrium price formation process, the assumption of sugar supply being smaller than its demand can be subdivided specifically. Firstly, when sugar supply is smaller than its demand and the sugar and cane market a perfect competitive market, generally saying, individual sugar firm is a price-taker, because the sugar industry is a global industry and the individual sugar firm has to accept the price established by the forces of the whole market. Secondly, if the sugar and cane market is not a perfect competitive market but a monopolistic market or policy-orientation market, then the status of individual firm may be changed, that is, individual sugar firm may not be a price-taker anymore, but a price-maker. If the individual firm has the monopolistic ability to control the sugar price and it adopt monopolistic competition method to suppress its rivals, then it will be the price-maker for sugar; if the host country issued some laws or regulations to limit the lowest price of sugar for protecting the cane farmer’s benefits, the monopolistic firm may be not the price-maker anymore, but the price-taker.

3 Sugar demand elasticity Analysis

3. 1 Price elasticity of demand

Before discussing the sugar demand elasticity, the definition of Price elasticity of demand will be briefly introduced here. Price elasticity of demand (PED) is used to measure the percentage change in quantity demanded (Q) which is caused by a one percent corresponding change in the price variable (P) (Dorothea & Philipp, 2005). Through mathematical description, PED = (âˆ‚ Q/âˆ‚ P) (P/Q). If the perfectly elastic demand curve is horizontal to X axis, then it represents infinitely elastic; if the perfectly inelastic demand curve is perpendicular to the X-axis, then it represents zero elasticity; if PED equals one, then demand is unit-elastic; if the PED value is between zero and one, then the demand is inelastic; and if the PED value is larger than 1, then demand is said to be elastic. Curves D1 to D4 in the following Figure-3 show the different situations of elasticity of demand.

D1

Price

D3

D2

D4

Quantity

Figure 3

3. 2 The sugar demand elasticity analysis

Since sugar is a type of life necessity, it cannot be substituted by many other commodities, and people’ common expenditure on sugar does not account for a large proportion of their total expenditures, we can say that the sugar demand elasticity is infinite small, approximately zero, which is manifested by a similar form of D1 curve in the Figure 3. However, there also exit exceptional conditions that can change the price elasticity of sugar demand, if a new substitute is created and used to replace the sugar, then the sugar demand elasticity may be turned to be higher; under that assumption, the sugar will not be life necessity any more.

4 Competitive advantage analyses of Brazilian sugar producers.

Brazil is a country with thousand pound guerrillas on agriculture. Its sugar production occupies the number one status all round the world. And if compare the Australia sugar production to Brazilian sugar production, it will be clear that the Brazil set the tone for the worldwide sugar market because the sugar output in Brazil is much larger than other countries, even the second largest country Australia. Brazil sugar industry has its own special competitive advantage than Australia sugar industry.

Firstly, Brazil sugar industry has integrated production systems so that there is complete ownership from the field, through transport, right through the factory and down to the ports, while Australia does not have such integrated production systems. The integrated production systems can help Brazilian sugar producers effectively diminish the transformational cost of sugar manufacturing process; the critical information can be shared and different parties of sugar manufacture can be cooperated better within the systems, thus the management cost can be diminished. The diminished costs will definitely bring Brazilian sugar manufacturers a competitive price advantage.

Secondly, Brazil sugar producers have cheap labor, which is quite important for a farming industry development. Labor cost, as a main component of Variable Cost, has a huge influencing role on the overall cost. Under the assumption that fixed cost is stable, lower labor cost definitely bring lower overall cost. Compared with Brazil, Australian agriculture labors are comparatively scarce, so the Australia sugar production cannot rely on decreasing labor cost to diminish the overall cost. Then this is another advantage that Brazilian sugar industry has over Australian sugar industry.

Thirdly, Brazil has the advantage of setting the tone for the worldwide sugar market, which is similar with a type of monopoly advantage. The export output of Brazilian sugar is large enough to directly interfere with the sugar price formation; through the interference, the worldwide sugar price may be formed for the benefits of Brazilian sugar producers. This is a horrible competitive advantage of Brazil sugar producers over the Australian sugar producers, which could be called monopolistic competition, and is harmful to the world economy development and should be restricted and punished.

5 Competitive advantage analyses of Australian sugar producers

Even though Brazil has its competitive advantage of cheap labor and integrated systems, Australia has other competitive advantages over Brazil. Through summarizing Australia competitive advantages, I think at least two types of advantages exist, which will be stated as follows.

5. 1 Educated work force

Australia has advanced technologies of farming, processing, and cropping canes. To utilize these advanced technologies, educated work forces are needed. Though modern advanced technologies adopted and operated by educated work forces, the production output of cane and sugar can be achieved to be a higher level. Then the revenue can get enlarged. Under the assumption that the worldwide sugar cost is stable, no doubt this is a competitive advantage over Brazil, because the Brazilian sugar producers hire the cheap labors that cannot adopt and utilize the modern advanced technologies.

5. 2 Integrating the harvesting of transport

The other advantage Australia has over Brazil on the sugar competition is that that Australia is good at integrating the harvesting of transport. Australia gets the sugar mills and own railway lines that bring cane to the mills. The railway lines carry more during the crushing season than Queensland Railway and that transport system gets cane to the mill in double quick time. Therefore, it can be said that Australia gets efficient mechanical harvesting, efficient transport, efficient growing, efficient mills and a well integrated marketing system. All those efficiencies help Australia improve the sugar production management. And along with the management efficiency improvement is the diminishment of total cost. Obviously this is another competitive advantage of Australian sugar producers.

5. 3 The government support

Since Australian cane growing area has kept been reduced over the several past years (Ben, 2009), which means the scale of cane production is reduced and this is not helpful for the market competition, Australian governments intend to issue some policies that are engaged in enlarging the cane growing size. This will promote the Australian sugar industry development (http://www. 21food. cn/html/market/2009-7-14/1010470. htm). So getting the government support is another competitive advantage of Australian sugar producers.

6 Conclusions

Though comparing the sugar industry differences between Brazil and Australia, analyzing the sugar equilibrium price formation process and the characteristics of sugar demand elasticity, this essay illustrate the competitive advantages of both Brazil sugar industry and Australian sugar industry. Brazil sugar industry has competitive advantages of scale effect, cheap labor costs, and integrated production systems, while Australian sugar industry has advantages of modern technology, educated workforce, and the integrated harvesting of transport.