

TA Session 3: Exercises on Product Differentiation

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Roadmap

- 1 Hotelling Model: the Linear City
 - Exercise 7.2
- 2 Salop Model: the Circular City
 - Exercise 7.3

Product Differentiation

- Product differentiation can be horizontal or vertical (often it's both, but most of the literature studies them separately).
- We call it *horizontal* when neither good is intrinsically better (it's only a matter of taste), while *vertical* differentiation refers to when everyone agrees on the ranking of products (agreeing on the ranking doesn't mean that everyone consumes the same product, all of them have a market, mostly because of the price spread).

Horizontal differentiation

- The following two models are known under the name of spatial horizontal differentiation.
- The most common interpretation is that the competitors sell the same good but at different locations. Buyers live also in different places and, since they incur a transport cost, they have a preference for buying from the closest shop (as long as the price is the same).
- *Spatial* is just an interpretation. More broadly, those models represent the case of heterogeneous consumers, each having different preferences for one or another seller. In this broader interpretation, goods are similar but each with some characteristics that make the product unique (think of pepsi versus coca-cola).

Hotelling Model: the Linear City

Hotelling Model

- The hotelling model has the advantage of being very simple and fits very well some real settings, such as political competition.
- Its main drawback is that results, at least when one is interested in the location choice of firms, is very sensible to the assumptions on transport costs.

Exercise 7.2 of Tirole (1988)

Salop Model

- The salop model was mostly introduced to study the entry choice of firms and is often used when the main interest is in computing the equilibrium number of operating firms on a market.

Salop Model: the Circular City

Exercise 7.3 of Tirole (1988)

References

- Tirole, J. (1988). *The Theory of Industrial Organization*. MIT press. Chapter 7