

“Language, internet and platform competition: the case of search engine”

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The problem

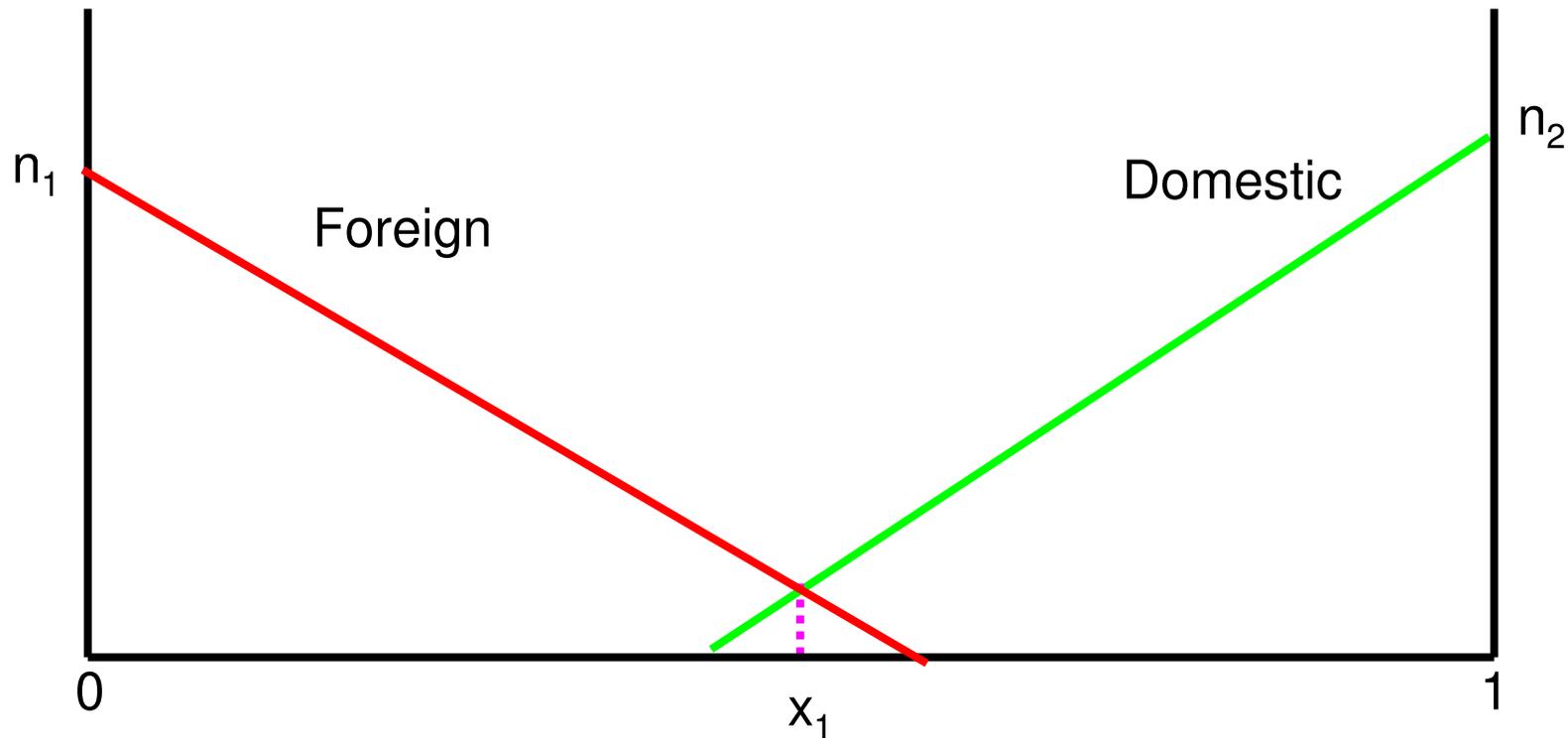
- Bilingual consumers can use a foreign platform to access foreign merchants – what's the resulting effect on competition between the foreign platform and a domestic platform that hosts only domestic merchants?
- More generally, what's the competitive effect of the ability of consumers to buy from foreign merchants?

The main idea

- Other things equal, bilingual consumers prefer the foreign platform as it gives them access to foreign merchants on top of access to domestic merchants
- The main tradeoff: domestic merchants have access to more domestic consumers on the foreign platform, but they face more competition from foreign merchants (more buyers vs. more rivals)
- The share of domestic merchants on the foreign platform may increase or decrease depending on which effect dominates (positive demand effect or negative competition effect)

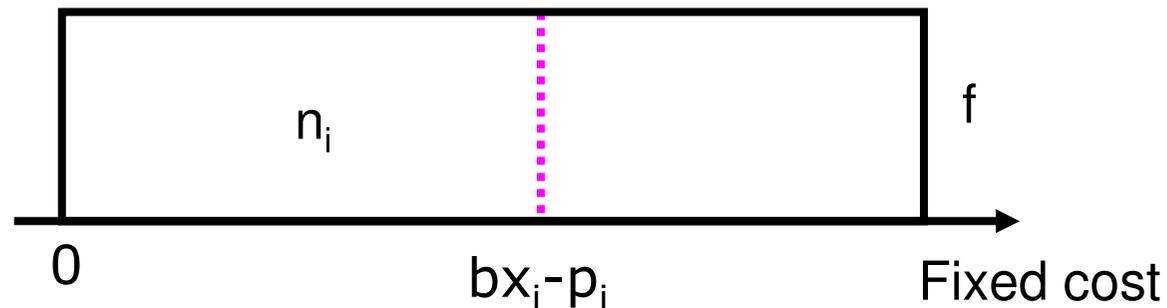
Monolingual consumers

- Each consumer joins one platform
- The foreign platform serves domestic merchants (a restaurant in Tel Aviv advertizes on google.co.il)



Domestic merchants

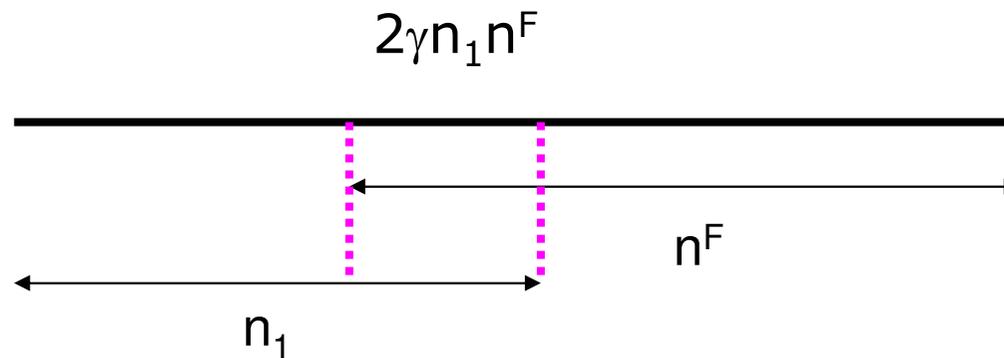
- The mass of domestic merchants on each platform is determined by free entry



- $x_i \uparrow \Rightarrow n_i \uparrow$ (but as we saw before, $n_i \uparrow \Rightarrow x_i \uparrow$)
- Each platform chooses p_i to maximize $p_i n_i$

Bilingual consumers

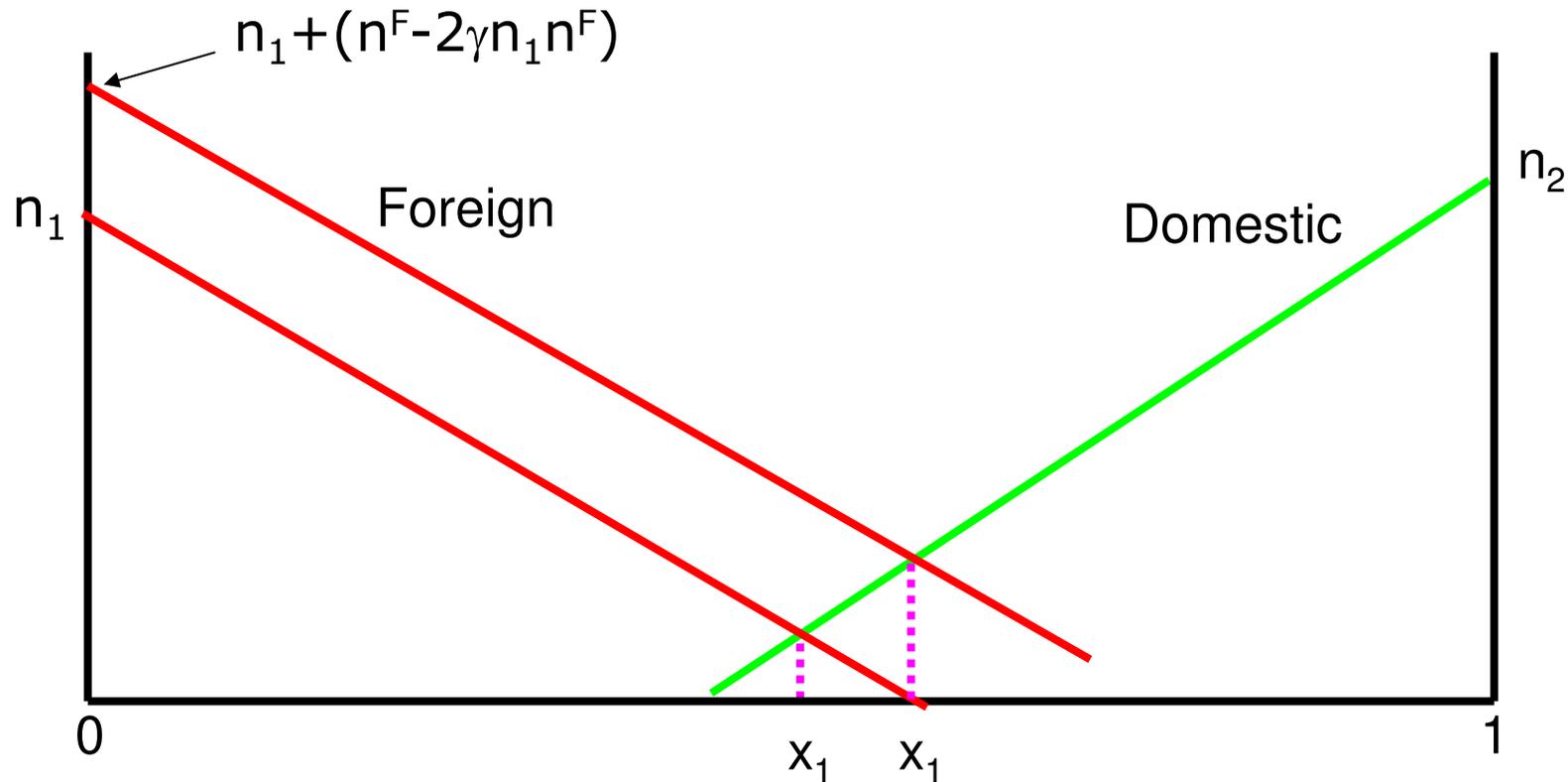
- The foreign platform hosts $n^F - 2\gamma n_1 n^F$ unique foreign merchants



- Overlapping merchants are split equally:
 - $n^F - \gamma n_1 n^F$ foreign trades
 - $n_1 - \gamma n_1 n^F$ domestic trades
- Competition with foreign merchants lowers the volume of domestic trades (quantity) but not the margin of actual trades (price)

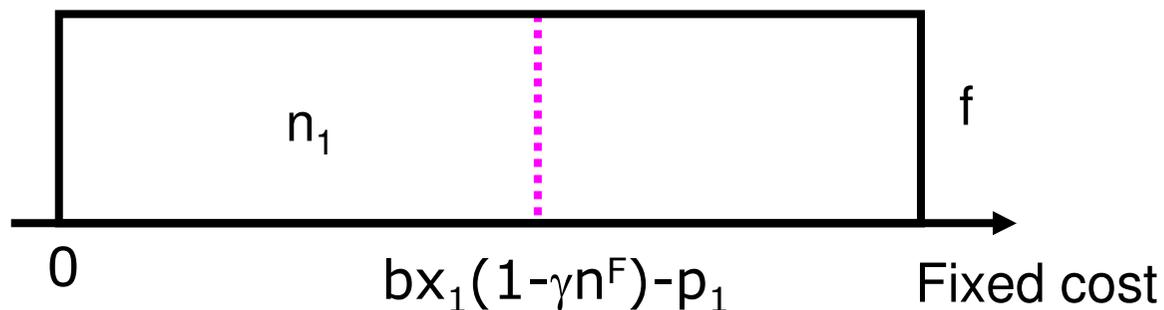
Bilingual consumers

- Bilingualism opens the door to foreign merchants
- Holding n_1 fixed, bilingualism raises x_1

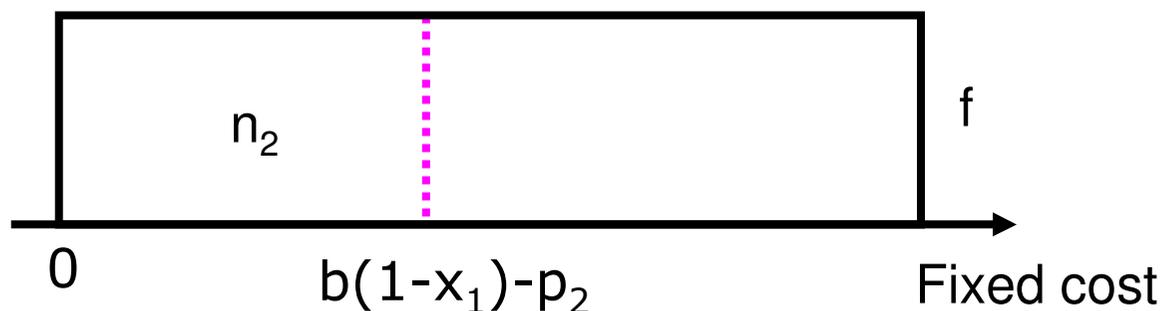


Domestic merchants under bilingualism

- The mass of domestic merchants on the two platforms:



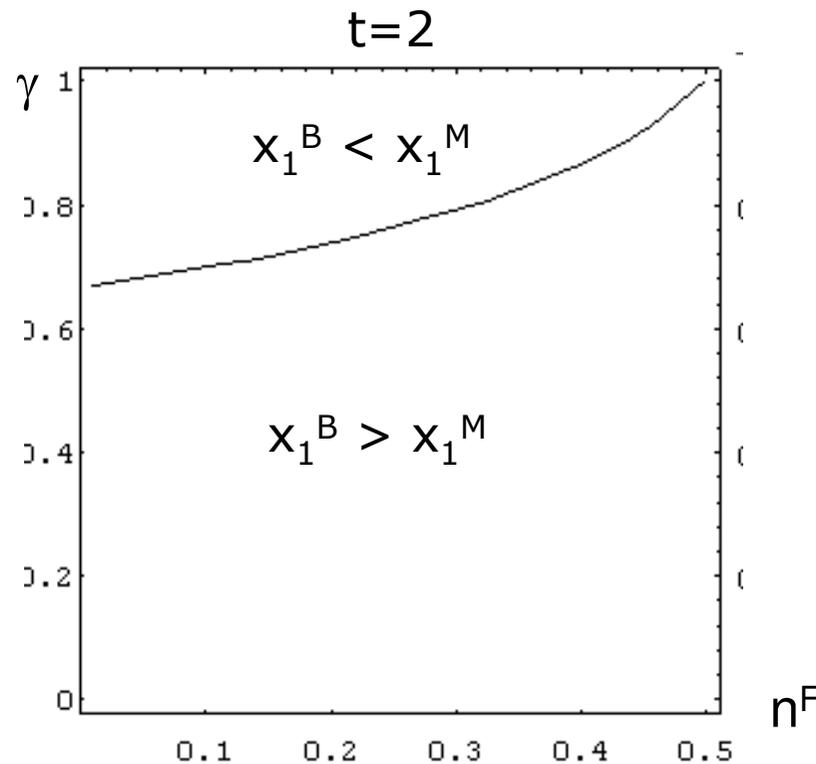
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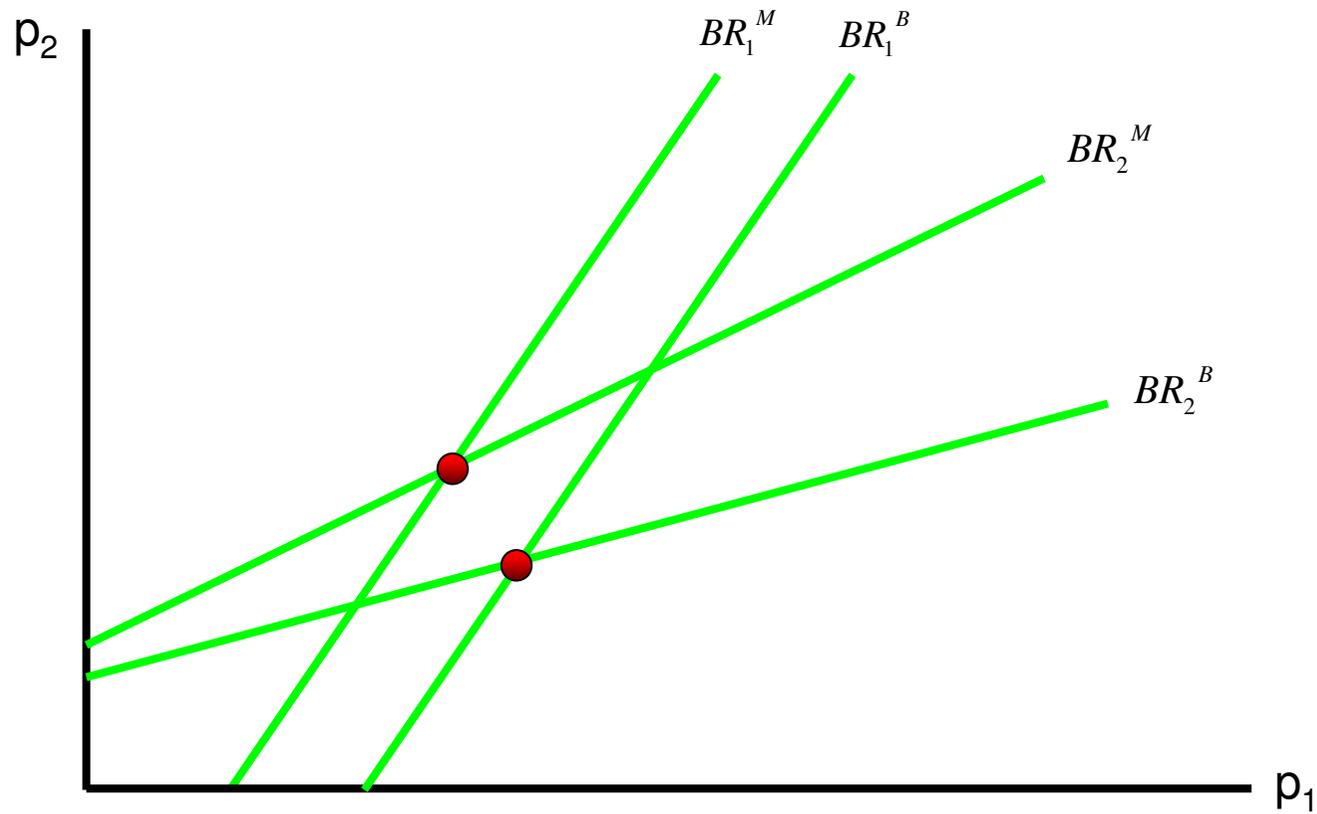
- Holding x_1 fixed, n_1 is smaller than under monolingualism due to competition with foreign merchants that lowers γ

The effect of bilingualism on the market share of the foreign platform

- If $n^F = 0$ (no foreign merchants) bilingualism is irrelevant
- The effect of bilingualism can be seen by comparing x_1^B with x_1^M (when $n^F = 0$, $x_1^B = x_1^M$)



The platform competition



Bottom line

- The paper finds a simple way of modeling the effect of access to int'l markets on local competition
- It brings together two-sided markets and int'l trade in a simple and elegant framework
- Language here could actually be any barrier to trade (this is the weakness and strength of the lean modeling approach)
- What happens if consumers can visit both platforms (search for airline ticket on Expedia and Kayak)?