Toulouse School of Economics

INSTITUT D'ECONOMIE INDUSTRIELLE

Discussion of

"The ambiguous effect of contracts on competition and prices in restructured electricity markets"

by F. Murphy and Y. Smeers

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overview

- an extension of the Allaz-Vila model in three directions
  1. capacity choice before Cournot competition
  2. several spot markets (periods or states of nature)
  3. heterogeneous firms
- an impressive work using both economic analysis and simulation; also the authors provide good intuitions.

timing

a complex set of interactions

- a capacity effect:
  - the larger the capacity, the smaller the operating cost, which results in high margins … if competition is not too hard: actually Cournot;
- a contract (Allaz-Vila) effect:
  - by pre-committing a part of its output, each firm induces its rival to reduce its production (à la Stackelberg);
  - as all producers simultaneously sign contracts, they collectively commit to produce more output and final prices will be lower than in the no-contract setting (prisoner's dilemma);
- a peak-load effect:
  - capacity is a "public input", used in several spot markets, then fixed costs are allocated among one or several periods
  - competition has different outcomes depending on the heterogeneity of demand periods.

the Allaz-Vila effect under attack

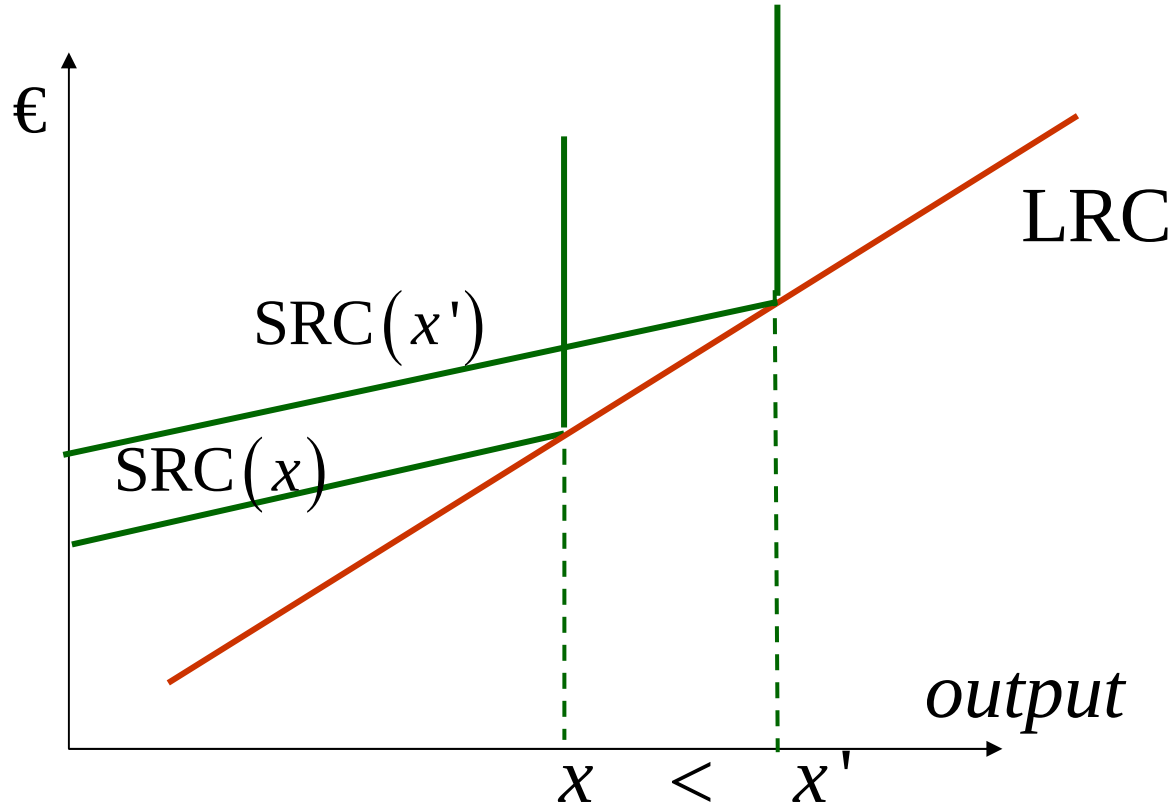
- my main criticism: the paper seems devoted to the knocking down of the AV model (ex: end of page 27)
- actually
  - the AV effect can be invalidated under much simpler hypotheses; ex: Mahenc-Salanié JET 2004
  - the paper would gain from a more positive packaging
- contracts may have pro-competitive effects … or may have not: that's good news for the economists.

Question 1

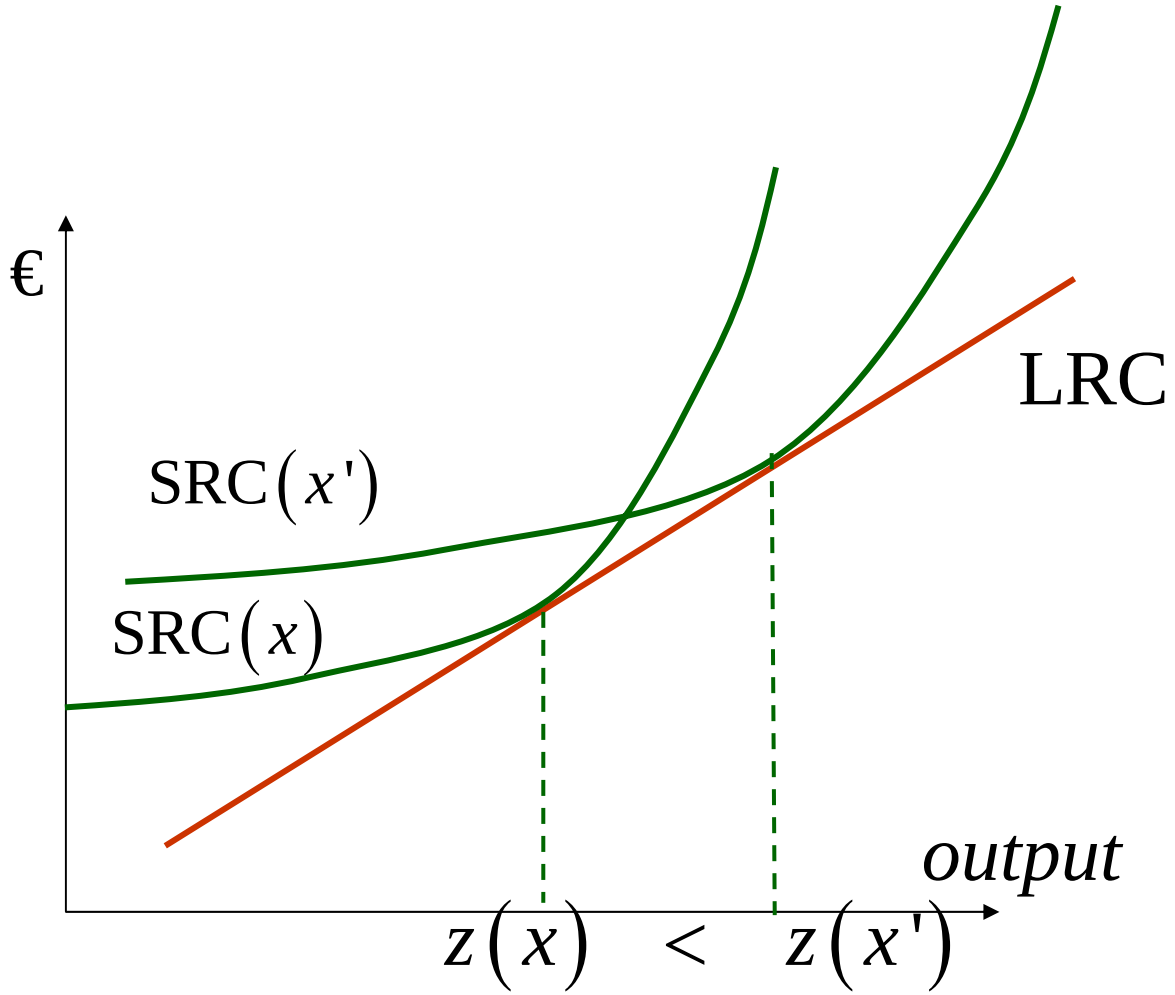
- contracts are indexed by "time segments" *s*
  $\Rightarrow$ there is a forward market for each *s*
- does it mean that the model cannot make it for the case where *s* would be an index of state of nature?
- corollary: did you consider the case where the same contract is signed for several (maybe all) *s*?

Question 2

- the cost function corresponding to each technology generates corner solutions
- did you consider the “smooth case”?



smooth technology



Question 3

- you determine the effects of contracts on capacity, production and prices;
- we know that Cournot "competition" is intrinsically bad for welfare;
- did you analyze the effects of contracts on welfare?

Question 4

- since firms have different technologies, we could expect they do not install the same capacity
- how come $x_1 = x_2 = 73.3$ in the five cases of the simulation?