Roaming Free?

Roaming network selection and Inter-operator tariffs

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In spite of the general fall in prices of mobile services, roaming charges have remained high.

Concerns about failure of competition and collusion in setting roaming charges (e.g. EU sector inquiry).

However, an alternative explanation for high roaming charges exists: price competition in roaming is ineffective because of technological and institutional constraints.
Limits to price competition

- Effective competition requires that demand faced by individual firms responds strongly to changes in the prices they set.

- Problems:
  - At the wholesale level, selection of visited network is largely random.
  - At the retail level, lack of price transparency may dampen price competition.

- Each operator’s demand is relatively insensitive to demand.
Approach

- Simple model
  - 2 countries,
  - 2 retail operators in one country
  - 2 wholesale operators in the other country

- Differentiated Bertrand competition at the retail level (depending on weighted average price of roaming with each retail operator)
Approach

2 stage price setting
- First stage: wholesale operators set inter-operator tariffs (IOTs)
- Second stage: retail operators set mark-ups on IOTs

Number of scenarios
- Independent operators without traffic re-direction
- Cross-border merger (vertical integration) without traffic re-direction
- Cross-border merger with incentives for manual network selection through simplified calling plans
- SIM-based traffic redirection
Independent operators

Key results

- IOT(1) ↓ ⇒ IOT(2) ↑
- Independently set IOTs are larger than jointly profit maximising IOT
- Operator with higher default share of roaming traffic sets lower IOT

Interpretation

- High IOTs can be explained without resort to collusion (collusive IOTs might even be lower)
- Lack of ability to attract traffic by lowering IOTs creates externality and perverse incentives
Cross-border merger

- Merger eliminates any ‘double marginalisation’ that may have existed as a result of imperfect retail competition, but does not solve the problem of high IOTs

- The average IOT even increases
  - Merged entity lowers IOT
  - Independent wholesaler increases IOT disproportionately

- Merger unprofitable ...

- ... unless combined with re-direction of traffic to merged entity’s own network
User-based traffic redirection

- Simplified calling plans can provide incentives for manual network selection by users.
- The merged entity can offer unified cheaper rates for roaming on its own network.
- Incentives for manually selecting the cheapest network drive traffic to visited network belonging to the merged entity.
Merger with simplified tariffs

- Merged entity is largely unaffected by IOT set by independent wholesale operator
- Own IOT is only an internal transfer, but a true cost to independent retailer
  - Increase IOT to raise rival’s cost
- Independent wholesaler lowers IOT (in order to keep independent retailer competitive)
- Average IOT (paid by independent retailer) falls
- Merger is profitable
SIM-based traffic redirection

- With SIM-based traffic redirection retail operators can respond to IOT differences
- The externality is removed as visited networks enjoy the full benefit of increased traffic when lowering prices
- Wholesale operators may benefit from moderate competition, but will lose as IOTs are driven towards cost
- Retail charges for roaming fall in response to falling IOTs
Conclusions

- Technological and institutional constraints and lack of price transparency lead to prices which can be higher than those achieved by collusion.

- Cross-border mergers do not solve this problem unless accompanied by some sort of traffic redirection (e.g. simplified calling plans).

- SIM-based traffic redirection removes the externality on IOTs and allowing price to become the focus of competition.