Social networks and residential ICT adoption and use
EURESCOM P903

Zbigniew Smoreda & Frank Thomas
France Télécom R&D & FTR
Why is it necessary to understand the effect of social networks on residential ICT adoption and use?

Up to now,
• marketing studies focussed mainly on the effects of socio-demographic influences (age, sex, income, etc.) on telecom budgets.
• Service development is technology-driven.

Today,
• understanding social networks enhances our understanding of the everyday context within which new services will be used.
• Service development will be user-driven to be successful.
P903 - the objectives

- Explaining adoption & use structures
- Comparing European trends with national characteristics
- Focus on private use
- Explaining adoption & use through
  - socio-demography,
  - & attitudes & values,
  - & leisure time activities & social networking & geographical mobility.
Central analytical questions:

- Do ICT users socialise more than non-users?
- How are social networks patterned?
- In which way do social networks impact on the use of ICTs?
The data: the P903 survey

- Representative data about users and non-users of mobile phone and Internet
- Focus on PRIVATE use
- 9 countries, advanced and starters
- More than 9,000 respondents
A social network is composed of ...

- **local**
- **national**
- **abroad**

**friends**

**kin**

**acquaintances** (relations, work-, school mates...)

*with whom the respondent is in contact (f2f, phone, mail...)*
How respondents described their ego-centred networks

The size & composition of the networks of
• kin,
• friends,
• acquaintances,
• neighbours

- The geographic distance to contacted kin, friends, acquaintances

Communications media used:
• visits,
• fixed line telephone calls,
• mobile phone calls,
• emails,
• SMS,
• letters,
by distance groups, separately for kin, friends, acquaintances

- The social distance to contacted kin, friends, acquaintances, neighbours
Email and mobile phone users have larger networks than non-users.

source: EURESCOM P903, weighted

age of respondent

source: EURESCOM 903, weighted
Sociability orientation changes with life cycle

![Graph showing sociability indices for different life stages](image)

- **Face to face sociability (visits)**
- **Telephone sociability**

EURESCOM Summit 2001 “3G Technologies and Applications”
Europeans’ social networks are spatially focused: the example of voluntary relations

Contacts with friends

- visits
- fixed-line calls
- mobile calls
- SMS
- email
- letter

% of friends living in distance group

% of friends visiting

below 50 km above 50 km abroad
The effect of the residential immobility: Family and friends live in the same region.
Social networks have a common basic structure

<table>
<thead>
<tr>
<th></th>
<th>Size &amp; spatial range</th>
<th>Social orientation</th>
</tr>
</thead>
<tbody>
<tr>
<td>% local contacts</td>
<td>++</td>
<td></td>
</tr>
<tr>
<td>Length of residence</td>
<td>++</td>
<td></td>
</tr>
<tr>
<td>Overall size of network</td>
<td>− −</td>
<td></td>
</tr>
<tr>
<td>% family in network</td>
<td></td>
<td>++</td>
</tr>
<tr>
<td>% friends in network</td>
<td></td>
<td>− −</td>
</tr>
<tr>
<td>Social distance towards friends</td>
<td></td>
<td>+</td>
</tr>
</tbody>
</table>

Rotated factor loadings, above .50: ++ between .25 and .50: + below -.50: − −
Communication means used for socialising cluster in specific technology profiles

<table>
<thead>
<tr>
<th>% network members contacted by</th>
<th>Electronic means</th>
<th>Meeting &amp; calling</th>
<th>Writing &amp; calling</th>
</tr>
</thead>
<tbody>
<tr>
<td>• SMS</td>
<td>+ +</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Mobile phone calls</td>
<td>+ +</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Emails</td>
<td>+</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Meetings</td>
<td></td>
<td>+ +</td>
<td></td>
</tr>
<tr>
<td>• Fixed phone calls</td>
<td></td>
<td>+</td>
<td>+ +</td>
</tr>
<tr>
<td>• Letters</td>
<td></td>
<td></td>
<td>+ +</td>
</tr>
</tbody>
</table>

Rotated factor loadings, above .50: + +  between .25 and .50: +
Social Networks and ICT

Network characteristics and technology profiles go together...

People with large networks of friends living predominantly outside their region use mobile phones as well as SMS and email to contact them more than anyone else.

network size & spatial range

social orientation

family
friends

source: EURESCOM P903, weighted
...and have a positive impact on consumption levels

Large networks of friends who live outside the same region have high telecom budgets

Source: EURESCOM P903, weighted

Network size & spatial range

Social orientation
- Family
- Friends

Household telecom budget (national deciles)
Segmentation: Who are the people who use electronic means to contact their large, spatially wide social network, oriented towards friends the most? (1)

Socio-demography
- Country
- Age group
- Gender
- Length of residence

Leisure activities

Common use of mobile phone calls & SMS & emails to contact network members

Values
Segmentation: Who are the people ... ?(2)

Overall: 6.2

- Aged 15-24: 7.4
  - CR, D, ES: 6.7
  - Other countries: 7.7
    - Non-Socialiser: 6.8
    - Socialiser: 8.0
      - Becoming rich & important (low): 8.2
      - Becoming rich & important (high): 7.6

- Aged 24-34: 6.6
- Aged 45-64: 5.1
- Aged 64+: 3.9

Value: indicator for combined use of mobile phone, SMS, email for network communications
Segmentation: Who are the people ...? (3)

Overall: 6.2

Aged 15-24: 7.4

Non-Socialiser: 5.6

Aged 24-34: 6.6

Average Socialiser: 6.5

Aged 45-64: 5.1

High Socialiser: 7.4

Aged 64+: 3.9

NOT Becoming rich & important: 6.8

NO creative hobbies: 7.6

Becoming rich & important: 6.1

creative hobbies: 6.2

CR, D: 5.1

Other countries: 6.5

NOT Leading a regular life: 8.4

Leading a regular life: 7.1
Conclusions

• The analysis of ego-centred social networks sheds additional light on the ways ICTs are adopted and used.

• The influence of network variables on ICT adoption and use is significant and strong.

• The direction and the strength of influences depend upon both social & national contexts.

• The impact analysis of these contexts should be integrated in future market studies.