

# Telephone Household Non-coverage and Mobile Telephones

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# Overview

- ✚ **Why we should deal with non-coverage issues by mobile phones for telephone surveys?**
  
- ✚ **Mobile Effects in 15 Countries of the European Union**
  - Cross-over
  - Fixed Telephone Household Coverage
  - Characteristics of Mobile Only Households(**MOH**)
  - Introduction of Mobile Phone Samples for Telephone Surveys

## **Mobile Effects in North America**

- Mobile Penetration
- Fixed Telephone Household Coverage on National Level
- Fixed Telephone Household Coverage by Selected States in the U.S.

## **Conclusion**

# Why we should deal with non-coverage issues by mobile phones for telephone surveys?

- ✓ Dramatic Growth of the Number of Mobile Phone Subscribers in the world
- ✓ Abandoning Fixed Telephone and Moving to Mobile Only Status
- ✓ Rapid Decrease of Fixed Telephone Households Coverage Rates, especially in European Countries
- ✓ Non-coverage Problem due to MOH and Non-telephone Households
- ✓ Appearances of Telephone Samples combined with Mobile Phone Samples in Some European Countries

## The Findings are based on materials from

- International Telecommunication Union(ITU)
- Government Statistical Organizations
- Government Telecommunications Organizations
- European Commission(EC)
- European Commercial Survey Research Companies
- Federal Communications Commission(FCC)

## Mobile Effects in 15 Countries of the European Union

- **Main Telephone Lines(MTL):**

Fixed lines connecting households, business, government, public telephone, etc.

- **Mobile Telephone Subscribers(MTS):**

Users of portable telephones using mobile systems

- **Penetration Rates:**

Main Telephone Lines per 100 inhabitants (**Tele Penetration**)

$$= (\# \text{ of MTL} / \text{Population Size}) * 100$$

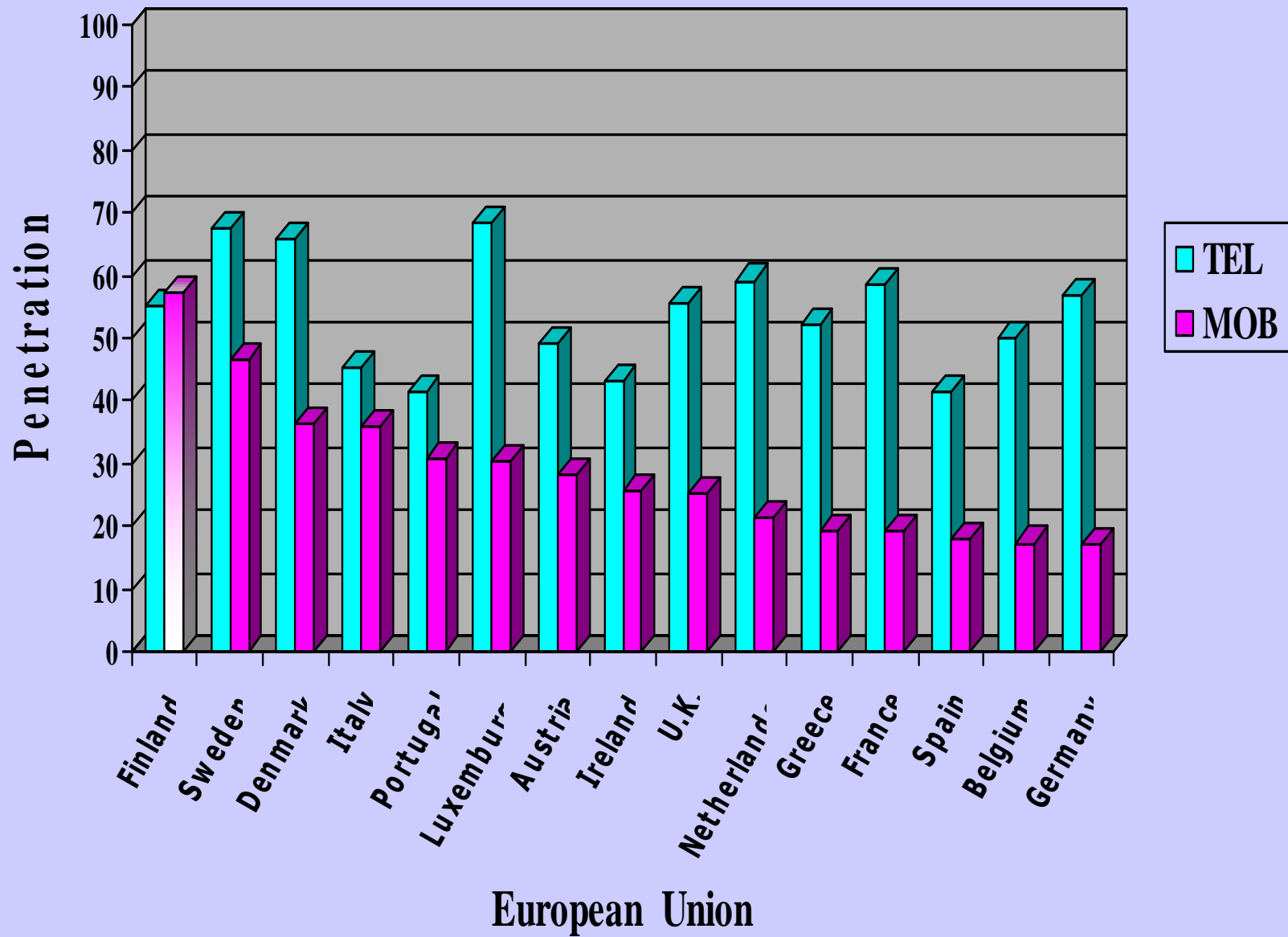
Mobile Telephone Subscribers per 100 inhabitants(**Mobile Penetration**)

$$= (\# \text{ of MTS} / \text{Population Size}) * 100$$

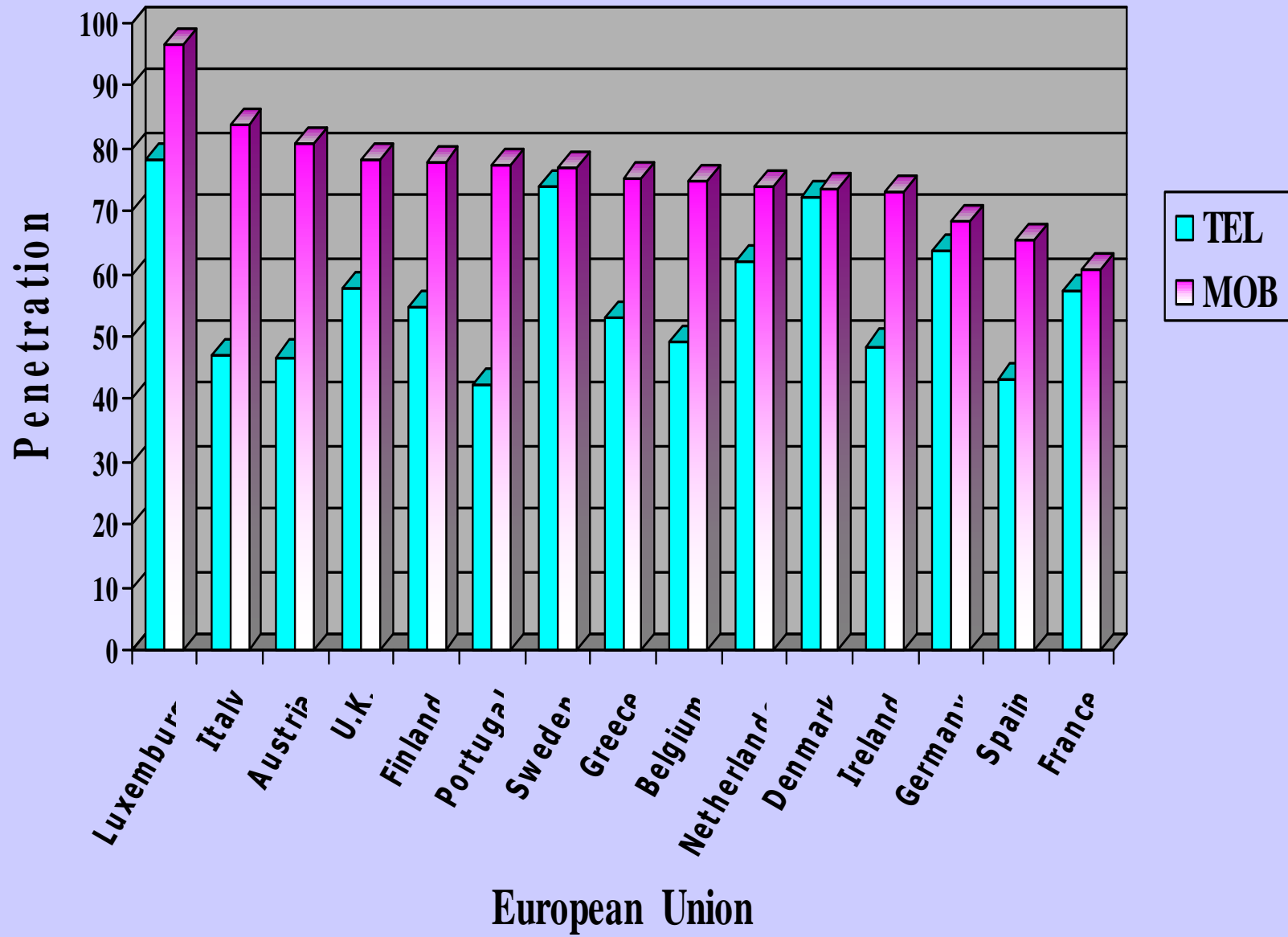
- **Cross-over :**

$$(\text{Mobile Penetration} / \text{Tele Penetration}) > 1$$

# Cross-over in 1998

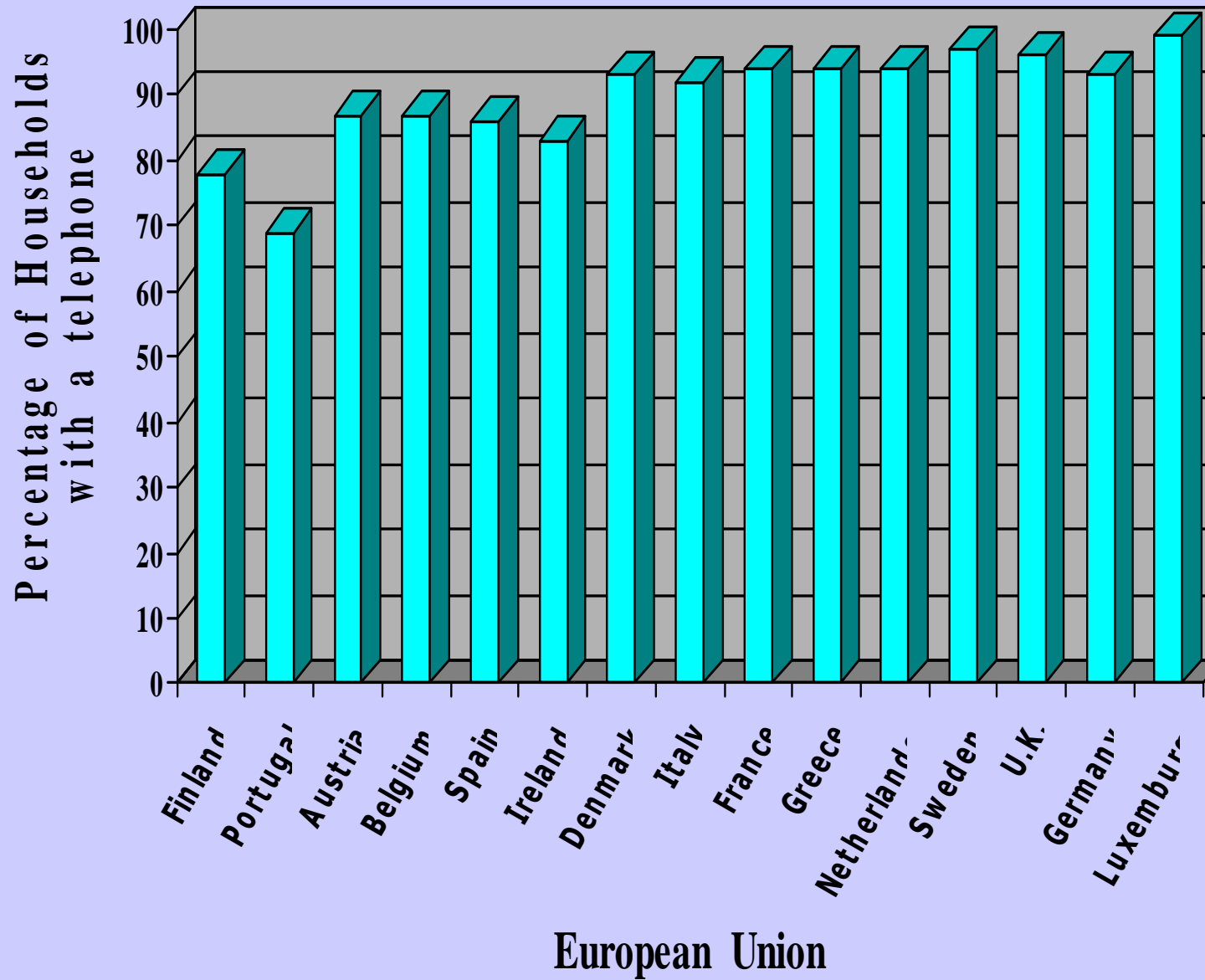


# Cross-over in 2001

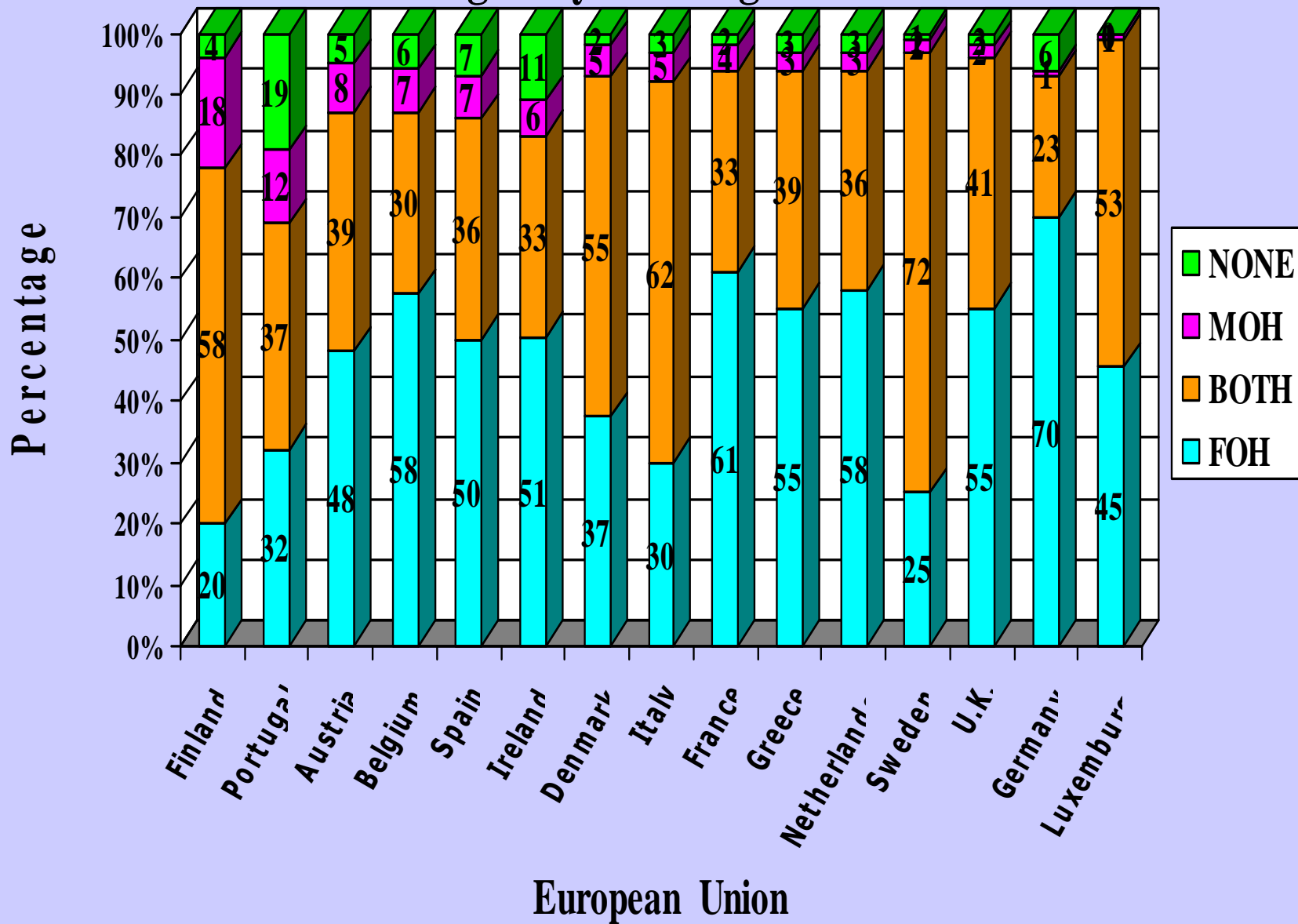




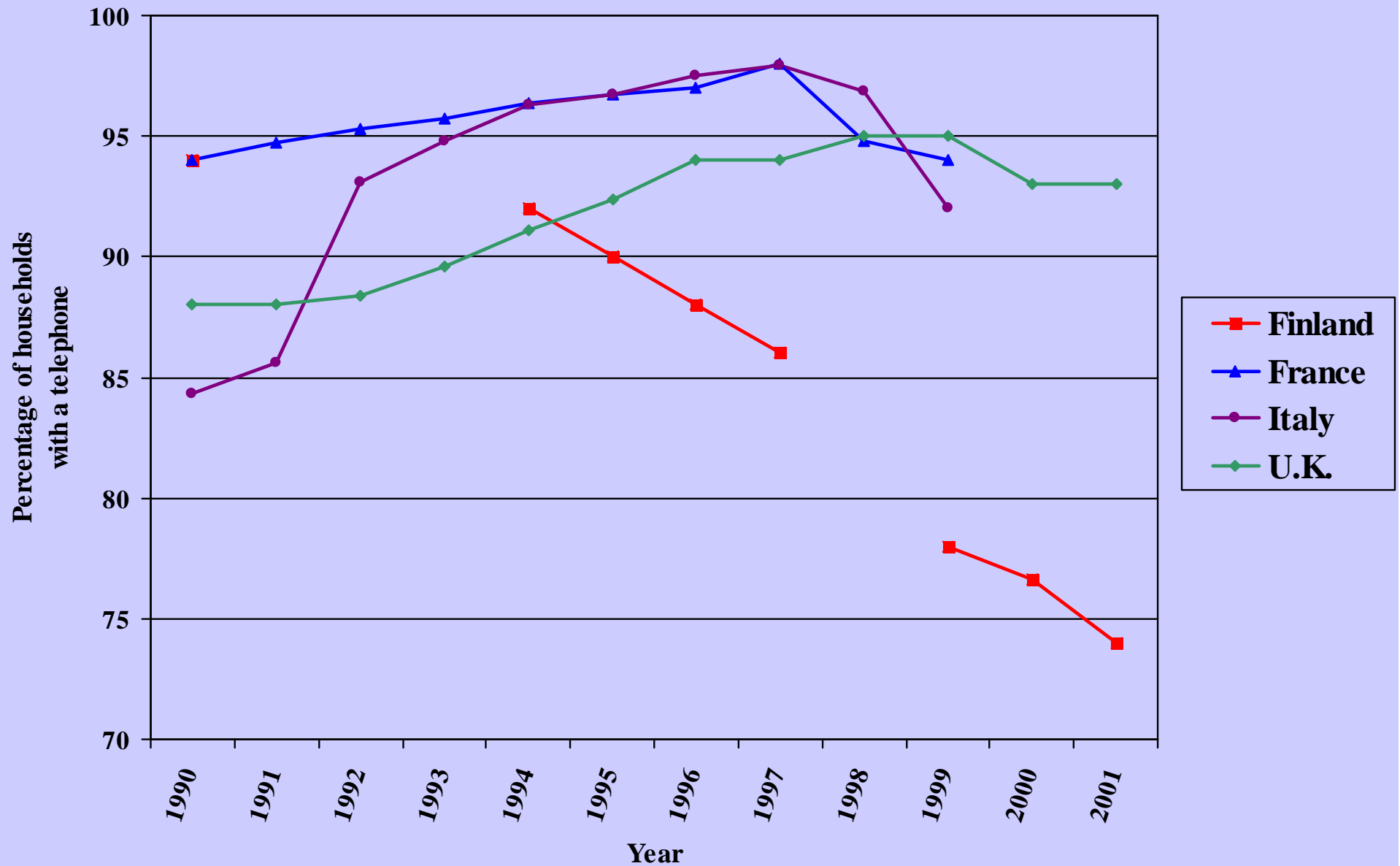
# Fixed Telephone Household Coverage in 1999



## Percentages by 4 Categories in 1999

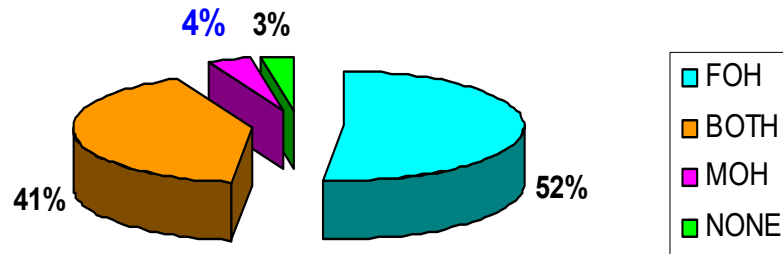


# Fixed Telephone Household Coverage in 4 Selected Countries (1990 : 2001)

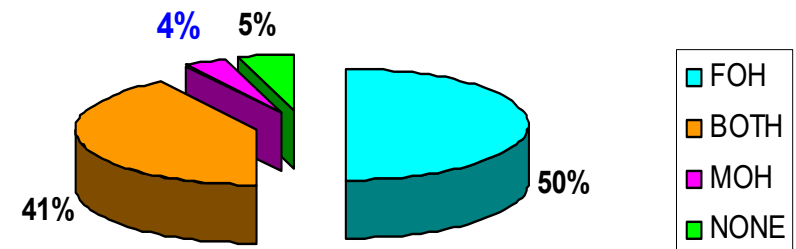


# E.U. Consolidated Percentages by Urbanization in 1999

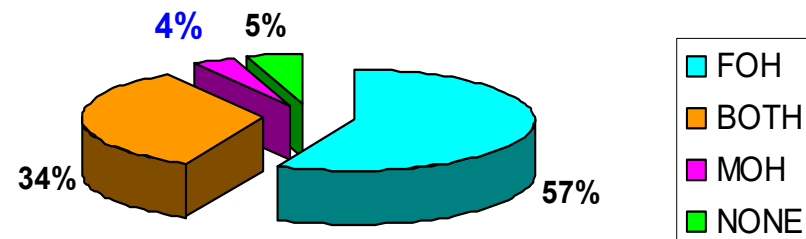
## Metropolitan



## Urban

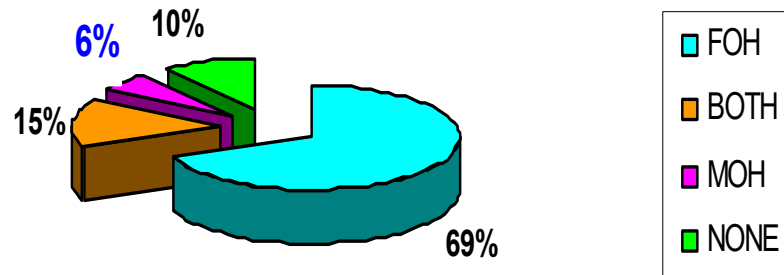


## Rural

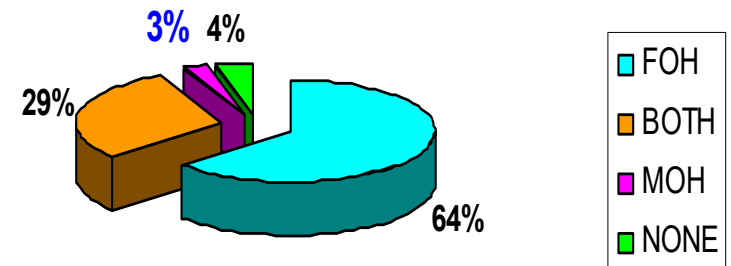


# E.U. Consolidated Percentages by Household Size in 1999

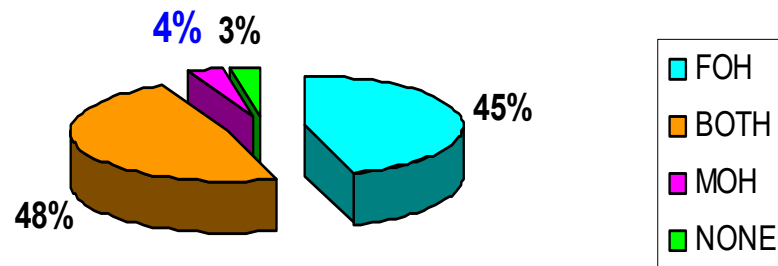
## One Person



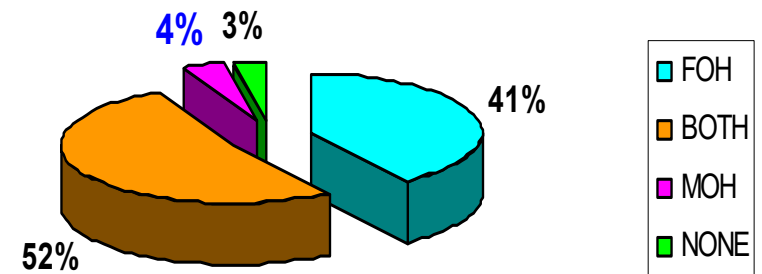
## Two Persons



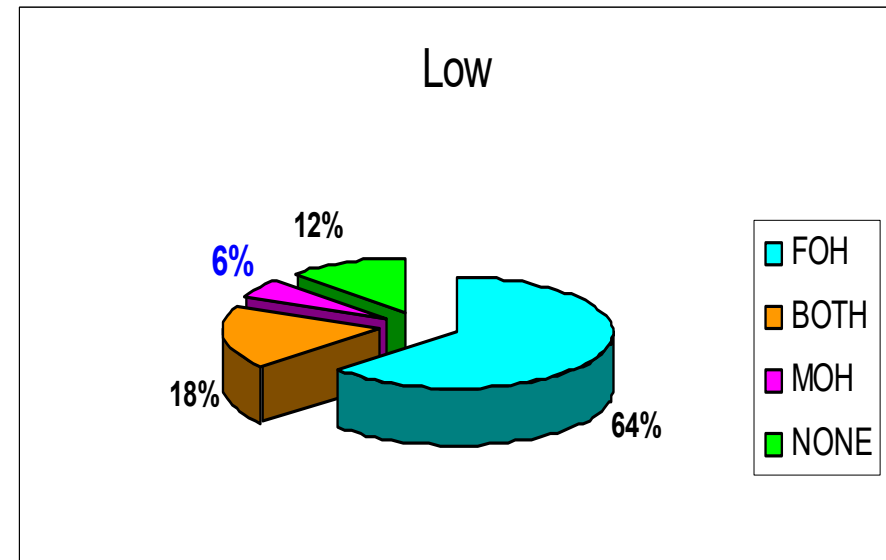
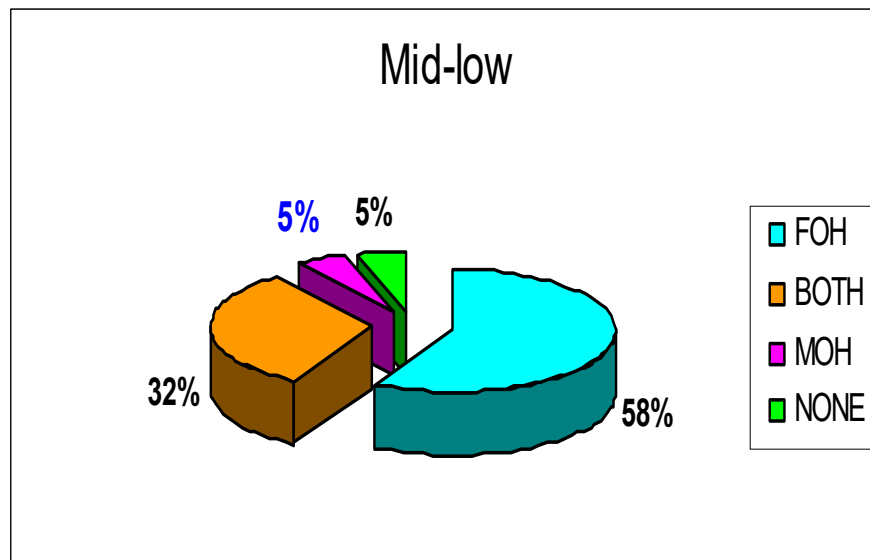
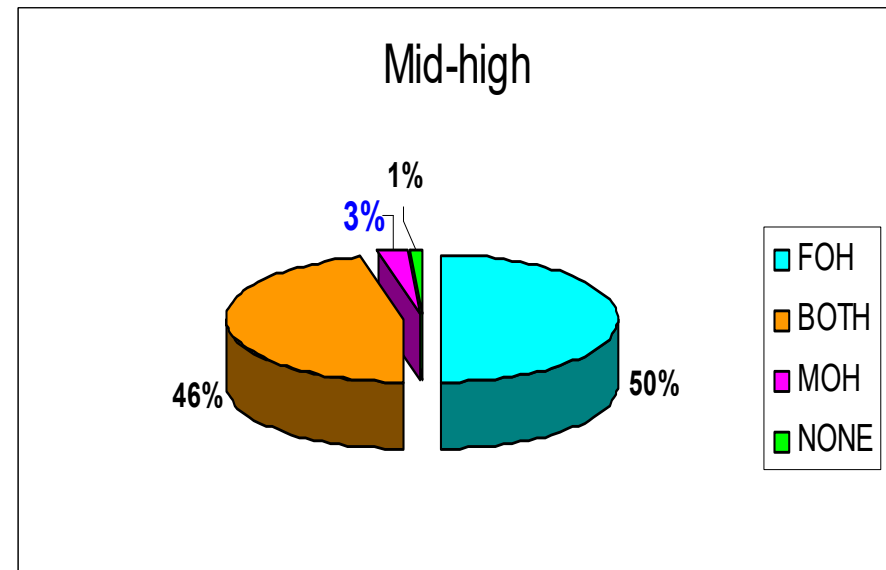
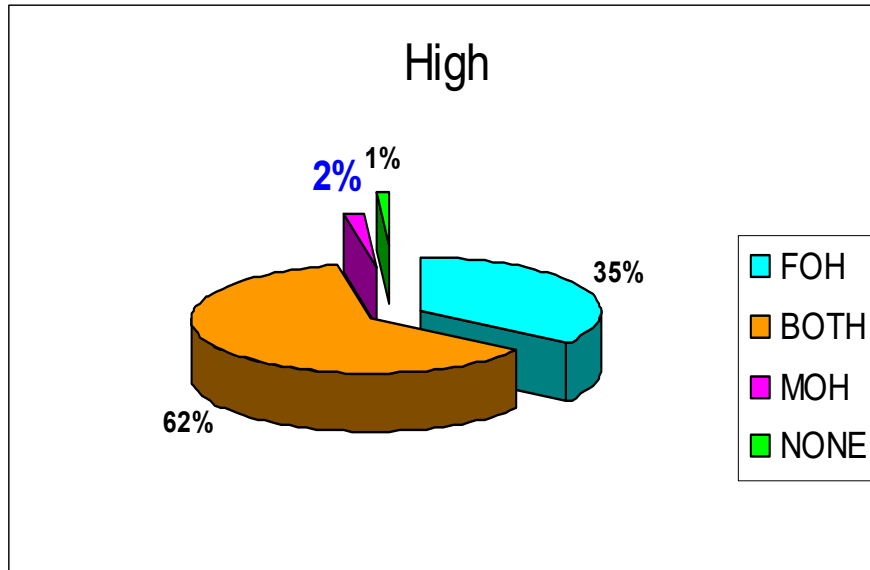
## Three Persons



## Four and More Persons



# E.U. Consolidated Percentages by Income Level in 1999



## Introduction of Mobile Phone Samples for Telephone Surveys in Commercial Companies

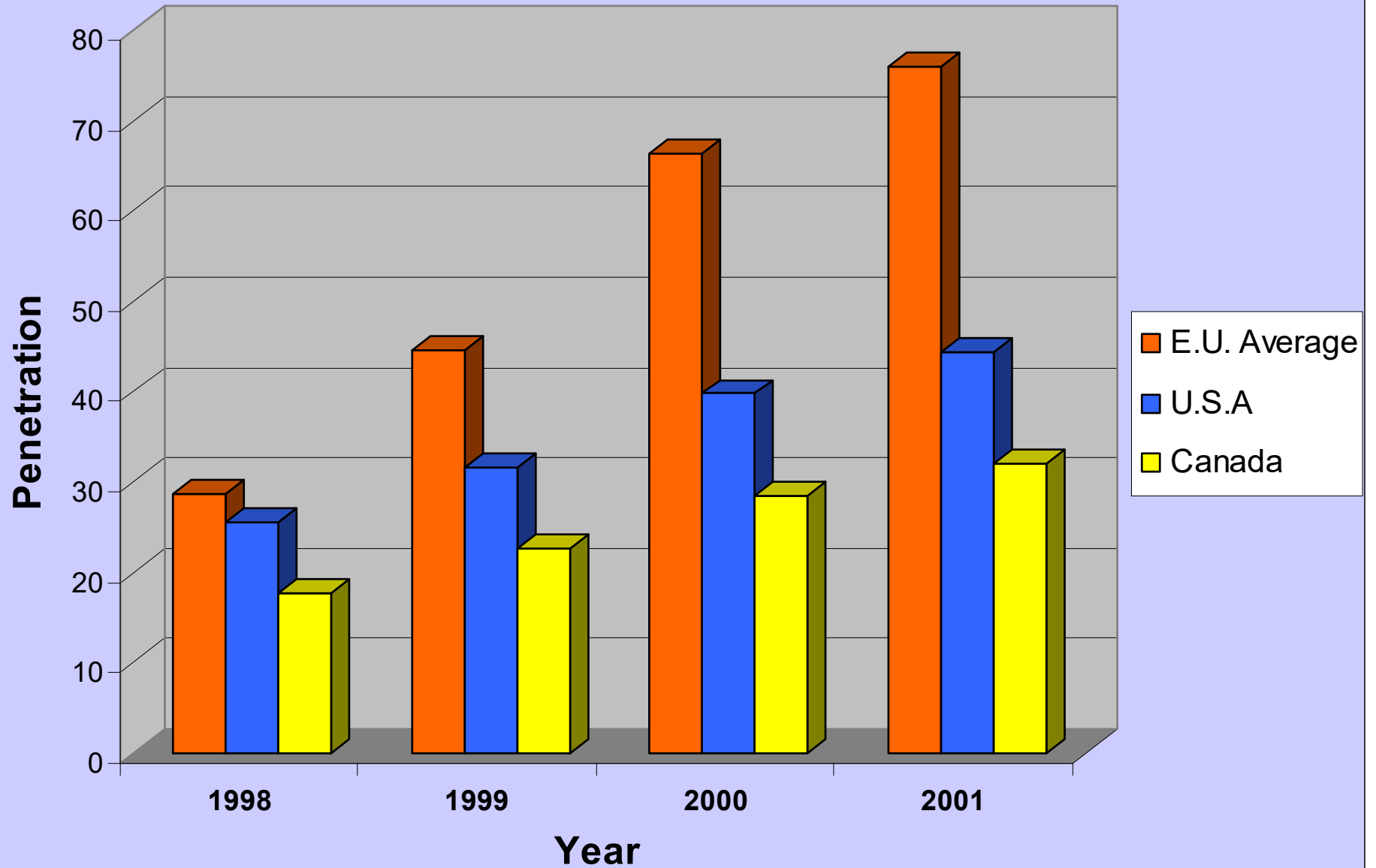
Country	Contact	Response	Answer
<b>Finland</b>	<b>19</b>	<b>4</b>	<ul style="list-style-type: none"> <li>● “We use a sample in our telephone omnibus where people are being sought either their fixed telephone line or from their mobile phone.”</li> <li>● “We started contacts to mobile this year(2001). We have decided to contact 10% of the interviews in households with a mobile number only.”</li> </ul>
<b>Austria</b>	<b>15</b>	<b>6</b>	<ul style="list-style-type: none"> <li>● “We contact when conducting telephone surveys about 12% of respondents via mobile. Thus they are represented in the sample.”</li> <li>● “Mobile phone respondents are offered to do the interview on an ordinary telephone line on another time within the field time.”</li> </ul>

## Introduction of Mobile Phone Samples for Telephone Surveys in Commercial Companies

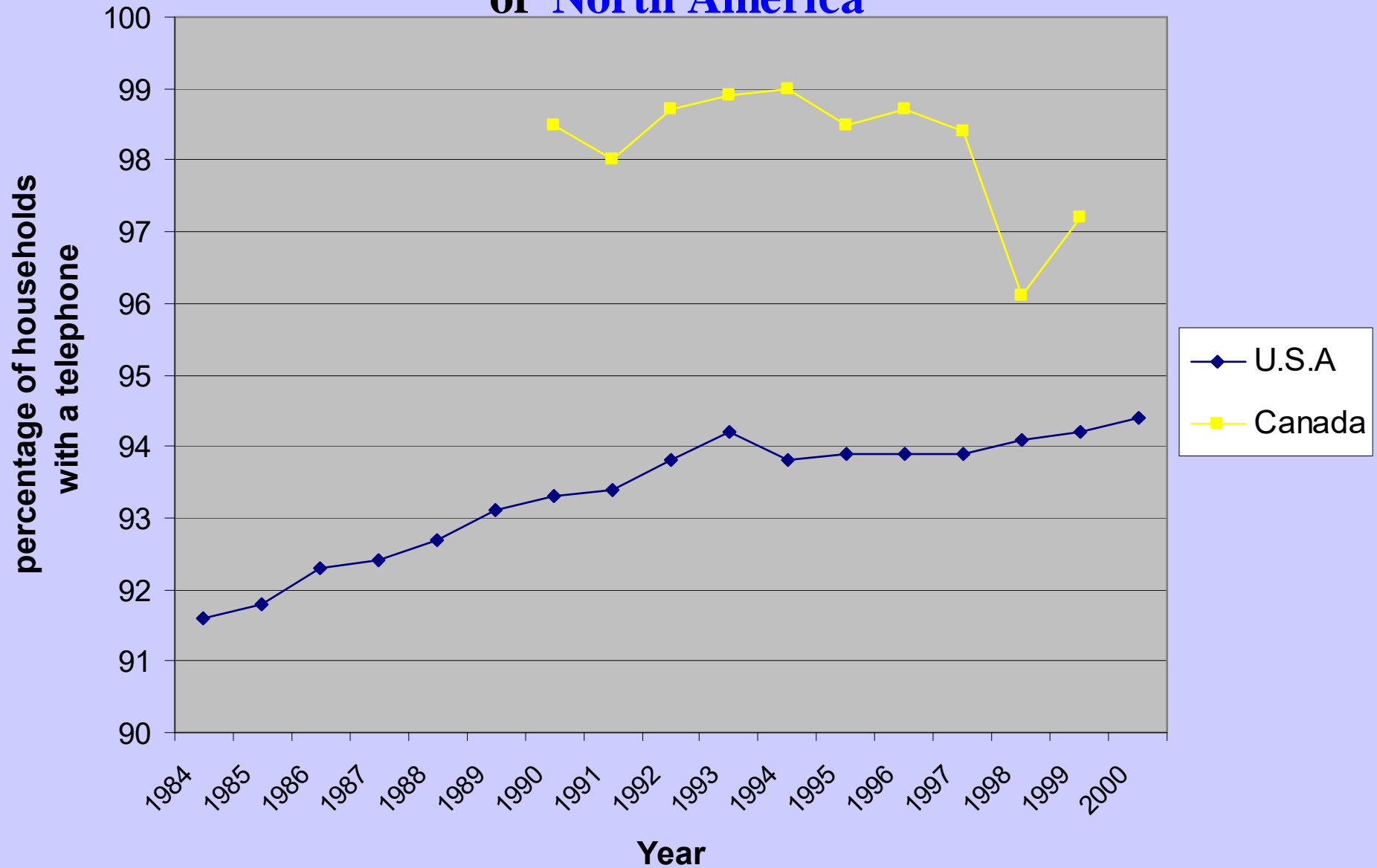
Country	Contact	Response	Answer
<b>Belgium</b>	<b>27</b>	<b>6</b>	<ul style="list-style-type: none"><li>● “We contact a mix of mobile and fixed phone numbers for telephone surveys.”</li><li>● “We don’t have any problem with contacting people on their fixed telephone lines, so there is no non-coverage problem.”</li><li>● “We call fixed phones, and mobile only if there is a list of mobile telephone numbers provided by the companies of the sector. So there is a problem of non-coverage.”</li></ul>



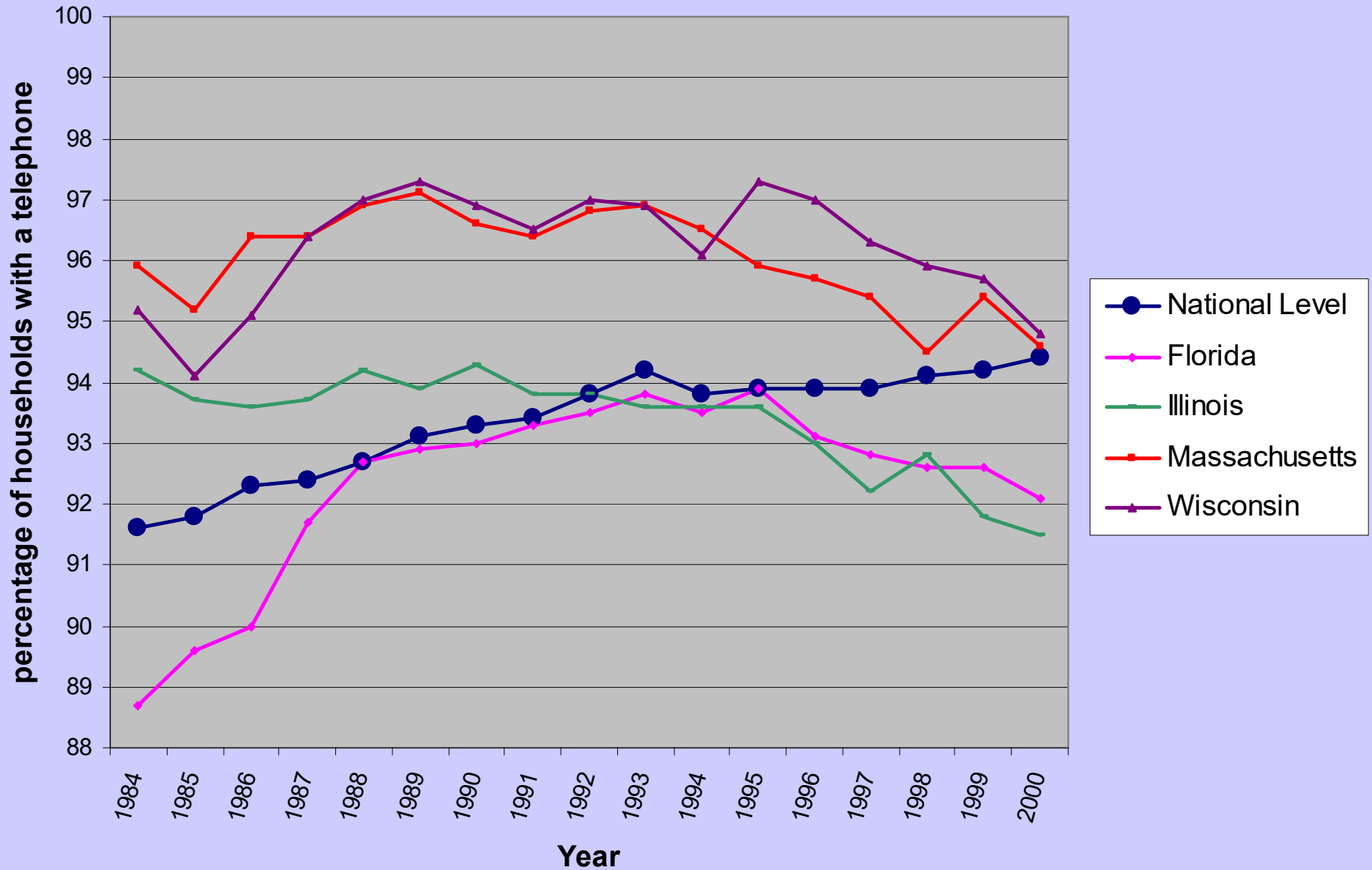
# Mobile Penetration of North America



# Fixed Telephone Household Coverage of North America



## Fixed Telephone Household Coverage of 4 Selected States in the U.S.



# Conclusion

- **Mobile effects in several Asian countries**
- **One of main factors to make mobile penetration in U.S. and Canada lower :**
  - **Different mobile system :**
    - 15 Countries in European Union : Single System(GSM)
    - U.S. and Canada : Multiple System  
(CDMA, TDMA, AMPS, GSM, etc.)
- **Fixed telephone household coverage on national level within next few years**