Hungarian panel studies: three examples

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TECHNICAL WORKSHOP FOR THE DISCUSSION OF INTERNATIONAL EXPERIENCES REGARDING LONGITUDINAL PANELS STUDIES ON POVERTY
23 October 2013, Brasilia, Brazil
Outline

• Introduction (TÁRKI, country)

• Hungarian Household Panel
• Hungarian Life Course Survey
• Survey of Health, Ageing and Retirement

• Conclusions
TÁRKI

• Privately owned (by management and researchers)
• Established in 1985
• Applied social research (separate branch on economic research): poverty, income distribution, social policy, roma, migration, values-attitudes
• Number of staff: 35-40
• Data collection unit
• European/international orientation (EU: FP and DG EMPL, UNESCO, UNDP, World Bank, OECD)
Magyarország, Hungria, Hungary

Small-medium size country: 93,036 km²
Population: 9,937,628 (Census 2011)
Capital: Budapest 1,729,040 (17.4%)
Magyarország, Hungria, Hungary

- GDP: 20,000 USD (PPP) World ranking: 71
- GDP per capita (EU27=100)
Magyarország, Hungria, Hungary

Employment rates by sex, 2011

(1) The figure is ranked on the average of employment rates for men and women.
Source: Eurostat (online data code: ifsi_emp_e)

6
Employment rate by education level (male), 1993-2010
Magyarország, Hungria, Hungary

- Age & male-female (1981)
- Age & male-female (2011)
Challenges and analytical/survey tools

• TRANSITION – SYSTEM CHANGE
  • Hungarian Household Panel & Hungarian Life Path Survey
• LABOUR MARKET, EDUCATION
  • HHP, Hungarian Life Course Survey
• AGEING
  • Survey of Health, Ageing and Retirement
1: Hungarian Household Panel

- Between 1992 – 1997 annually, six waves
- 2600 hholds, adults (age 16+: 4266)
- 75 settlements
- Household (40min) and individual (30min) questionnaires
- Retrospective set of Q (1993: social mobility, 1994: home-, work-, education history)
- labour market, income (net), sources, consumption, savings and ‘soft issues’
- TÁRKI & Univ. of Economic Science, Budapest
- First three years financed by a grant of the National Research Council and National Labour Market Centre, Welfare Ministry, Local Council of Budapest
Hungarian Household Panel

- Data collection involved 240 interviewers
- Network of supervisors (3 in BUD, 13 elsewhere)
- Pilot
- Training (two stages: train the trainers)
- 9 week survey period (peek at 2nd, 3rd weeks)
- Respondent incentives: invitation letter, calendar, lottery + thank you letter some weeks later
Hungarian Household Panel

• More than 100 articles, annual reports
• Hungarian data of LIS, used by OECD

HOWEVER

• Attrition to base was 46%, in 6th wave had only 1392 hholds, 3087 adults
• Finance: short term contracts, ad-hoc
• No chance for re-sampling

Died in 1997!
BUT, afterlife

- Household Life Path Survey
  panel after 15 years in 2007 by a grant
- Household Monitor Survey
Poverty rate around 2010 in the EU and Hungary

Income poverty, material deprivation and joblessness combined, 2012
EU 2020 poverty reduction target categories
(% of total population)

Income poverty: 17.7%
Material deprivation: 36.7%
Low WI: 19.2%
Total (at least one risk): 46.6%
Total (all combined): 8.1%

Source: TÁRKI Monitor estimate
1b: Household Life Path Survey

- Winners and losers of intergenerational mobility
- Employment turbulences
- Entrepreneurial ability and its implication
- Demographic adaptation
- Dynamics of personal networks
- Childhood background and education
- Optimism and depression: objective and subjective status
- Living standard paths
- Religious behaviour: trends and life cycle
- Voting fidelity
Household Life Path Survey

Fieldwork, timing

Fieldwork, geo-coverage
## Household Life Path Survey

### Success rate as of the 1992 sampled individuals

<table>
<thead>
<tr>
<th>successfully questioned</th>
<th>N</th>
<th>%</th>
<th>% of living</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2682</td>
<td>36.92</td>
<td>45.37</td>
</tr>
<tr>
<td>Refuse answering</td>
<td>1480</td>
<td>20.37</td>
<td>25.03</td>
</tr>
<tr>
<td>Moved to unknown place</td>
<td>1317</td>
<td>18.13</td>
<td>22.28</td>
</tr>
<tr>
<td>Died since finish of HHP</td>
<td>982</td>
<td>13.52</td>
<td>16.61</td>
</tr>
<tr>
<td>Died during HHP</td>
<td>371</td>
<td>5.11</td>
<td>6.28</td>
</tr>
<tr>
<td>Abroad</td>
<td>89</td>
<td>1.23</td>
<td>1.51</td>
</tr>
<tr>
<td>Not able to cooperate</td>
<td>77</td>
<td>1.06</td>
<td>1.30</td>
</tr>
<tr>
<td>Temporary away</td>
<td>72</td>
<td>0.99</td>
<td>1.22</td>
</tr>
<tr>
<td>Unknown place. not followed</td>
<td>21</td>
<td>0.29</td>
<td>0.36</td>
</tr>
<tr>
<td>Other reason out in 2007</td>
<td>174</td>
<td>2.40</td>
<td>2.94</td>
</tr>
<tr>
<td>Living</td>
<td>5912</td>
<td>81.38</td>
<td>100.00</td>
</tr>
<tr>
<td>Total</td>
<td>7265</td>
<td>100.00</td>
<td></td>
</tr>
</tbody>
</table>
## Household Life Path Survey

### Childhood determinants of education attainment – logistic regression analysis (odds ratios)

<table>
<thead>
<tr>
<th>Socio-demo characteristics</th>
<th>Education attainment of the child</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>At least graduation</td>
<td>Higher education diploma</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>E1. model</td>
<td>E2. model</td>
<td>E3. model</td>
<td>E4. model</td>
<td>D1. model</td>
</tr>
<tr>
<td>Highest educ. of parents</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(ref.: below graduation)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Graduation</td>
<td>7,53</td>
<td>6,10</td>
<td>5,07</td>
<td>4,87</td>
<td>3,88</td>
</tr>
<tr>
<td>Above graduation</td>
<td>17,76</td>
<td>12,57</td>
<td>10,82</td>
<td>9,42</td>
<td>11,63</td>
</tr>
<tr>
<td>Hhold income in 1992</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(cont., log.)</td>
<td>7,84</td>
<td>4,70</td>
<td>3,29</td>
<td></td>
<td>3,71</td>
</tr>
<tr>
<td>Sex (ref.: male)</td>
<td>2,20</td>
<td>2,15</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>0,88</td>
<td>0,88</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Settlement in 1992</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(ref.: village)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Town</td>
<td>1,38</td>
<td>1,27</td>
<td></td>
<td></td>
<td>1,69</td>
</tr>
<tr>
<td>Budapest</td>
<td>1,62</td>
<td>1,58</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No. of parent(s)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(0 – other, 1– lone)</td>
<td>1,06</td>
<td>0,72</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No. of brother/sister</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(ref.: 1)</td>
<td>1,30</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>0,79</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3+</td>
<td>0,60</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ethnicity</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(ref.: non-roma)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>455</td>
<td>454</td>
<td>454</td>
<td>454</td>
<td>455</td>
</tr>
<tr>
<td>Log pseudo-Likelihood</td>
<td>-240,1</td>
<td>-231,6</td>
<td>-218,8</td>
<td>-196,0</td>
<td>-238,2</td>
</tr>
<tr>
<td>Pszeudo $R^2$</td>
<td>0,199</td>
<td>0,225</td>
<td>0,268</td>
<td>0,288</td>
<td>0,153</td>
</tr>
</tbody>
</table>

Significance level 1%, 5%, and 10%.
2: Hungarian Life Course Survey

• MOTIVATION
  – As we could already see: low level of employment, especially among low educated (LE)
  – LE size is relatively high & their employability is low – text understanding difficulties are high (twice as much as in SWE and among the worst 5 countries in Europe)
  – Education system produces this, a base for future unemployment and the poor.
Hungarian Life Course Survey

• Understanding the system: what are the roles of
  – Family
  – Personal attributes
  – Elementary school
  – Development in secondary school
  – Drop out
  – Decision making
Hungarian Life Course Survey

• Therefore we need to know
  – Income of the household, school history in elementary, educational practices, health history in childhood
  – Skill level before secondary
  – Other dimensions of personal characteristics (social skills, self-concept etc.)
  – Secondary school aspirations (fulfilled and failed)
• And follow them longitudinally, in sufficient number to know successful and drop out pupils as well.
Hungarian Life Course Survey

- Panel survey
- 8th grade in May 2006 (cohort)
- Filled competency test (both text and math.)
- and Hhold questionnaire
- Total frame: 119,363
- frame2: 37,000 (incentive of lottery)
- sample: 10,000

<table>
<thead>
<tr>
<th></th>
<th>Budapest and county seats</th>
<th>Towns</th>
<th>Villages</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>special needy</td>
<td>312</td>
<td>331</td>
<td>374</td>
<td>1,017</td>
</tr>
<tr>
<td>Lower third</td>
<td>940</td>
<td>1557</td>
<td>2,020</td>
<td>4,517</td>
</tr>
<tr>
<td>Middle third</td>
<td>650</td>
<td>795</td>
<td>790</td>
<td>2,235</td>
</tr>
<tr>
<td>Upper third</td>
<td>913</td>
<td>731</td>
<td>607</td>
<td>2,251</td>
</tr>
<tr>
<td>Total</td>
<td>2,815</td>
<td>3,414</td>
<td>3,791</td>
<td>10,020</td>
</tr>
</tbody>
</table>
Hungarian Life Course Survey

• Face to face interview
• Self filled – sensitive issues:
  2008: aggression, smoke, alcohol, drug, sex
  2009: self-esteem, immigration, roma, political views
  2012: smoke, alcohol, leisure time activity (with whom, what), offense, crime, punishment
Hungarian Life Course Survey

Fieldwork by wave

<table>
<thead>
<tr>
<th>Wave</th>
<th>Timing of fieldwork</th>
</tr>
</thead>
<tbody>
<tr>
<td>6th wave (2011/2012 school year)</td>
<td>4 May – 9 August 2012</td>
</tr>
</tbody>
</table>
## Hungarian Life Course Survey

### Sample size by wave

<table>
<thead>
<tr>
<th>Wave</th>
<th>Sample size</th>
<th>Attrition to previous</th>
<th>Attrition to base</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. wave (2006/2007 school year)</td>
<td>10,023</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. wave (2007/2008 school year)</td>
<td>9,000</td>
<td>10.2%</td>
<td>10.2%</td>
</tr>
<tr>
<td>3. wave (2008/2009 school year)</td>
<td>6,848</td>
<td>4.0%</td>
<td>13.7%</td>
</tr>
<tr>
<td>4. wave (2009/2010 school year)</td>
<td>8,110</td>
<td>6.3%</td>
<td>19.0%</td>
</tr>
<tr>
<td>5. wave (2010/2011 school year)</td>
<td>7,662</td>
<td>5.5%</td>
<td>23.5%</td>
</tr>
<tr>
<td>6. wave (2011/2012 school year)</td>
<td>7,092</td>
<td>7.5%</td>
<td>29.2%</td>
</tr>
</tbody>
</table>
results from a Kertesi- Kézdi study
Hungarian Life Course Survey

Despite the fact that young Roma included in the sample had been in the school system in lower proportions in previous wave, the fall of 2009 drop-out rate among Roma students (23.4%) and the proportion of school looser relationship (25.7%) are higher than among non-Roma students (13.6% and 15.8% respectively).
3: SHARE
- Survey of Health, Ageing and Retirement

- Population ageing is one of the challenges of the 21st century in Europe
- Panel study is needed to understand the process of ageing: the impacts on the living conditions of older people and their families and the influences of state policies on these living conditions
- SHARE is an international panel database of people aged 50+ and their partners
- SHARE followed a call of the EC and explores the European ‘natural laboratory’ across scientific disciplines and over time by interviewing Europeans aged 50+
- Similar studies: HRS (US), ELSA (UK), China, Japan, Korea, India, Mexico, Argentina,
- Brazilian Longitudinal Study of Health, Ageing and Well-being (ELSI, 2014-15)
SHARE: aims and principles

Figure by Börsch-Supan 2013

**ECONOMIC**
Income security, personal wealth, education, employment

**SOCIAL NETWORKS**
Living arrangements, partnership, family, social ties, social support

**HEALTH**
Physical and mental health, health care, disability, morbidity, mortality

**Dynamic**
Longitudinal
SHARE: Geographical scope

- Wave 1, 2004-05
  SE, DK, NL, DE, BE, FR, CH, AT, ES, IT, GR
- Wave 2, 2006-07
  + IE, CZ, PL, IL
- Wave 3, 2008-09 SHARELIFE
  Retrospective life histories
- Wave 4, 2010-11
  + PT, SI, HU, EE / -GR
  150,000 interviews from 19 countries

Wave 5 fieldwork period: 2012-13
- HU, GR

6 more waves till 2024
Economic questions in SHARE

- Detailed blocks about the respondent and his/her partner or the whole household:
  - income (from all sources, employment, self-employment, first and second job, temporary job, benefits, pensions etc.);
  - wealth, assets, bequest
  - transfers, other supports
  - housing
  - consumption

- Separate block in the questionnaire concerning poverty and social exclusion and the effects of the crisis (only Wave 5):
  - Unmet needs (*could not do things, because of the costs, e.g. visiting a doctor, dentist, having glasses*), worn out clothes, shoes, put up with feeling cold, questions about the neighborhood
Studying poverty in SHARE

• Studying the effects of the crisis (Wave 4)


Topics covered:

• Household composition and the crisis
• The effect of the recession on wealth and financial distress
• Poverty and transitions in key areas of quality of life

SHARE Wave 4 data reflect the negative effect of the crisis on short and long term material conditions of older people
Other blocks in SHARE

• Detailed demographics
  – incl. questions about social status (education, employment) of partner, parents and children concerning

• Social network, family, social support, generational transfers, leisure time

• Health and health care
  – Subjective and objective health, mental health, cognitive functioning, behavioral risk, psychological blocks (expectations)

• In Wave 3: Retrospective life history
SHARE: organisation issues

- To gather international, comparative data
- Ex ante and ex post harmonisation
- Centrally coordinated by the Munich Centre for the Economics of Aging (MEA),
- leader: Prof. Axel Börsch-Supan
- CAPI (Computer Assisted Personal Interview)

Sample design in HU: stratified two-stage procedure in which the inclusion probabilities were equal across strata
- 3100 interview in 2300 households
- Fieldwork period: 11 months

http://www.share-project.org
Conclusions: main

• Own the issue: dedicated team
• Panel is for understanding process and mechanism
• Good base: extra importance of the 1st wave
• Panel maintenance – keep contact, keep info up-to-date and provide feedback
• Make interest in the different communities: good, timely and different analysis
• Stabilize finance (it is a relatively expensive tool)
Conclusions: practical

- Use incentives (voucher, little gifts in the case of the respondents; higher salaries in the case of interviewers)
- Train the interviewers well
  - there are trainings, manuals and daily contact with the interviewer if necessary
- Have clear contact and eligibility rules
- Monitor the interviewer rates (refusal rates usually depend on interviewers)
- Contact refusals by specialized / experienced interviewers
Conclusions: practical

- Send advance letter before personal contact
- Contact in person, not by phone
- Explain the study and objectives
- Highlight the future importance of a panel study
- Offer alternative times for interviews (interview can be also restarted)
- Stress good reputation
- Explain means of sampling (random selection), data-protection and stress that respondents are free to choose to answer a question
- Send thank you letter or contact respondents with simple results after they have been published, send link of the website of the panel study
Thank you for your attention!
Have a good luck to your panel survey!

For further contact: szivos@tarki.hu

Also thanks to my colleagues who helped to prepare this presentation.