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Family consumption and time use

How is intra-household consumption and time use impacted by income decrease, following an economic recession?

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HÁSKÓLI ÍSLANDS

Family Consumption and Time Use

How is intra-household consumption and time use impacted by income decrease, following an economic recession?

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In the current economic turmoil where old enterprises and established banks have been hit hard, Iceland has been particularly affected. The quick economic shock from boom to bust has made this little country one of the hardest hit by the gloom.

It is important to consider the economic effects not only on macro economic entities, but also in a micro perspective on micro entities like the family. Has the economic change caused a change in the way things are organized within the family? Has it affected the time and money parents devote to their children, and if so, how? Can this be captured by an effective measurement procedure? Has anyone measured it simultaneously before?

This research project involves a study of the economics of the family. In particular, it studies the distribution of income, consumption and time use within Icelandic families. This can provide a basis for international comparisons and potentially guide the design of policies intended to increase welfare of children and families. Conducting a survey using the structure of a unique Danish household study that measured consumption and time-use simultaneously, brings the opportunity for a valuable comparison of Icelandic households to other Nordic households.

A consumption and time-use survey for Iceland allows analysis of the following: To which degree do couples pool their income and does it matter for their consumption and activity pattern? Is pooling affected by background or education? Is income pooling affected by reduced salaries or unemployment? How is consumption and time-use within the household? How is income pooling affected by an economic recession? To which degree does consumption of both partners change with wage changes of either spouse?

The proposed research is unique since these factors have not been estimated before in Iceland for the same family simultaneously. Plus, since the model of this research is another Nordic study, the results of both can be compared to find if there are any analogous factors within the two countries. Last but not least, the survey results can be used to help design public policies aimed at improving the welfare of families with children.

Statistics Iceland (2010) has conducted household expenditure surveys, measuring prices and consumption for a number of years. However, consumption and time use have not been estimated simultaneously before in Iceland, and neither has the distribution of consumer goods within the household been the subject of data-collection.

Figure 1. Families, 1000s and per cent, by family type, reporting country, marital status and time (Nordic council of ministers, 2010)

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Families with children aged 0-17														
Denmark														
Total	644	645	644	645	648	653	658	663	667	670	673	675	756	762
Married couples in per cent	64	64	64	64	64	64	63	63	63	62	62	62	62	62
Cohabiting couples in per cent	18	18	18	18	18	18	18	18	18	17	17	17	17	16
Single people in per cent	19	19	18	18	18	18	19	19	20	20	20	21	21	22
Total in per cent	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Finland														
Total	640	635	630	625	620	613	605	599	595	593	592	589	588	585
Married couples in per cent	70	69	68	67	66	65	64	64	63	63	62	62	62	62
Cohabiting couples in per cent	12	13	14	14	15	16	16	17	17	17	18	18	18	18
Single people in per cent	18	18	18	19	19	19	20	20	20	20	20	20	20	20
Total in per cent	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Åland														
Total	..	..	..	..	..	..	3	3	..	..	..	..	..	..
Married couples in per cent	..	..	..	..	..	..	55	54	..	..	..	..	..	..
Cohabiting couples in per cent	..	..	..	..	..	..	26	27	..	..	..	..	..	..
Single people in per cent	..	..	..	..	..	..	19	19	..	..	..	..	..	..
Total in per cent	..	..	..	..	..	..	100	100	..	..	..	..	..	..
Iceland														
Total	39	39	39	40	41	43	44	44	44	45	45	45	46	..
Married couples in per cent	57	56	55	55	55	55	54	54	54	53	53	53	53	..
Cohabiting couples in per cent	23	23	22	22	21	20	20	20	20	20	20	20	20	..
Single people in per cent	20	21	22	23	24	25	26	26	27	27	27	27	27	..
Total in per cent	100	100	100	100	100	100	100	100	100	100	100	100	100	..
Norway														
Total	565	570	570	573	..	..	581	581	581	..	604	604	609	613
Married couples in per cent	66	64	64	63	..	..	60	60	60	..	57	57	56	56
Cohabiting couples in per cent	13	14	14	15	..	..	20	20	20	..	22	22	22	23
Single people in per cent	22	22	22	22	..	..	20	20	20	..	21	21	21	21
Total in per cent	100	100	100	100	..	..	100	100	100	..	100	100	100	100
Sweden														
Total	1 016	1 143	1 137	1 141	1 140	1 142	1 142	1 036	1 070	1 093	1 088	1 111	1 108	1 097
Married couples in per cent	67	81	81	80	80	79	79	76	76	77	79	76	78	77
Cohabiting couples in per cent	15	..	..	..	..	..	..	..	..	..	..	..	..	..
Single people in per cent	18	19	19	20	20	21	20	24	24	23	21	24	22	23
Total in per cent	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Footnote:														
Reporting country Denmark.														
From 2007: Number of families with children in the age of 0-24 years old.														

In recent years, extensive household consumption surveys have improved data availability on household behavior, helping researchers to focus more on individual household member's actions. Researchers have also sought to explain the strategic interaction between couples. Intra-household allocation, the processes by which resources, tasks, and leisure are allocated between the two individuals and the outcomes of these processes, is a relatively new field of study. This has made it possible for researchers (Browning, Chiappori, & Lechene, 2006) to focus more on interaction between individual household members in a collective model setting, rather than using inter-household analysis in a unitary model setting, assuming identical preferences of household members.

The configuration of this paper is in the following manner: First we will take a look at the literature in the field, then data, and continue with model setup and finally end with summary and conclusions.

Literature

Recent developments have made better data available which provide an opportunity to come up with more thorough data analysis on the family, allowing for further development of the theory.

Becker (1974) provides an important framework for the study of intra-household allocation. His pioneering economic approach to the family – maximizing behavior and equilibrium – forms our basic framework for understanding the behavior of households.

Thomas (1990) and Schultz (1990) offer empirical analysis of the degree to which couples pool their incomes. Both Thomas and Schultz use non-labor income in their research, since non-labor income can be treated as an exogenous variable. Thomas (1990) uses Brazilian data and finds that if the mother controls a larger part of family resources, non-labor income in this case, then children within the family are subject to lower rates of mortality and morbidity. Schultz (1990) uses data from Thailand and shows that men and women's non-labor incomes have different effects on female labor supply.

The results by Thomas (1990) and Schultz (1990) are somewhat similar in that they both reject the neoclassical model that models the behavior of a family by letting it maximize a joint family utility function subject to a family resource constraint. In practical terms this implies that it matters which household member is the recipient of non-labor income and how non-labor income is delivered.

Moreover, Bourguignon, Browning, Chiappori and Lechene (1994) modeled intra-household allocation.

A research by Browning and Gørtz (2006) analyzes how time and money are spent within the household. Browning and Gørtz use survey data from Denmark measuring simultaneously intra-household time and expenditure allocation. In their research Browning and Gørtz seek to determine the effects of power bargaining, productivity and preferences on balance between leisure and consumption.

Bonke, Deding, Lausten, and Stratton (2009) analyzed how household members specialize in housework within the household in the United States and Denmark.

This current research is also based on a paper by Bonke and Browning (2009a) who analyze the allocation of expenditures within the household, applying Danish expenditure survey for their analysis. To the conventional measures applied by the Danish Household Expenditure Survey DHES, they add a survey accounting for whether expenditures are contributed to either of the parents, children or someone outside the household. They incorporate household management, family background and autonomy in their examinations, as well as clothing expenditure relation to other goods distribution. They conclude that it is advantageous to gather information within the household on “who gets what” and sociological questions to provide important additional information. Also a paper by Bonke and Browning (2009b) on pooling of income and the sharing of consumption within households will be considered. Bonke and Browning (2009b) find consumption sharing to depend on the income recipient within non-pooling households.

Method and Data

The objective here is to analyze family consumption and time use simultaneously and, provide an international comparison by constructing an Icelandic database, provide testing of empirical hypotheses and theories, and compare it to a recent identical research in the field.

Method

The methodology applied in this research will correspond to the Danish Time Use and Consumption Survey DTUC-2008/9, by using a random sample of people aged 18-74 years. The sample selected for Iceland will consist of 1200 households, and we expect a response rate greater than 67%. The number of callbacks will be 4-5 times before giving in. At least two reminders will be sent to respondents via email during the data collection period. A letter will be sent out to respondents, asking them to choose between a 15-20 min telephone interview and filling in an Internet questionnaire, participants will receive an access code if choosing the internet option. Also, as in the Danish survey, we will ask survey participants to complete two forms for daily time use – one for a weekday and one for a weekend day – together with an account sheet. Moreover, the 18-74 aged sample group respondents having a spouse or cohabiting partner and - or children aged 12-17, will also be asked to fill in information on how they spend their time. The parents having children in the age range 7-11 year old will be asked to assist their children in completing a form accounting for information on time use. The information can be filled in over the internet if parents choose to do so, parents will be provided by access codes for that option, and they can also opt to do so through an interview over telephone. Both the internet and telephone components of the survey will be conducted by Capacent-Gallup in Iceland.

Data

The database established is based on Bonke (2007) and is intended to provide information on the following:

- Time use of children, from families with different parental backgrounds, in leisure, socializing, and in connection with school etc, and the potential connection between income and time use of parents and children.
- How the upbringing of children can potentially be affect their progress in the school system, and afterwards in life.
- Do highly educated parents tend to devote more time with their children than less educated parents, and do they differ in how they allocate their money to their children?
- The time fully employed family parents spend with their children - compared with families where one or both parents are unemployed – and also compared with single parent families.
- Does father participation in the daily housework significantly affect how well children do?
- What effects has the recession had on time spent at work, and the use of money?
- How does increased working time of mothers affect leisure and money spending, incorporating time and consumption devoted to children?

Data will be based on additions to an intensive Danish questionnaire, providing valuable answers to affects on the society following the severe economic recession of the Icelandic economy. This particular analysis will use survey data obtained for Icelandic families, giving an important opportunity of determine uniqueness of Iceland and its analogy to other countries, such as Denmark.

The research applies a tested and well-defined approach to Icelandic micro economic household data. Within Iceland the study is novel and unique in that it

covers consumption and income issues simultaneously, for the same family, and for both adults and children, and will thus provide valuable information to policy makers.

Summary

This project aims at making somewhat greater attempt than before to capture use of time and money within the household, with the hope of being able to model it in a richer way. The recent economic crisis may provide an interesting opportunity to capture priorities of the household heads with respect to consumption and time use. The objective is to identify and potentially apply additional measures to previous research in the field.

The paper makes use of several investigations in the field and relies considerably on recently developed empirical investigations applied in Denmark.

The research has potential implications for policy making in the future, aimed at improving the well-being of children and families.

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