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"Data to Die For"? [1]
Finnish Historical Household Budgets

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Abstract

This essay charts the history, nature and uses of Finnish historical household budget data. Three perspectives are discussed: that of the changing interests of the state in producing knowledge on households; that of the multiple interests of various societal actors in shaping household behaviour through budgeting, including the households themselves; and that of reanalysis for modern economic history. In this last instance, the main focus is on behavioural, microeconometric perspectives. In the process, an overview of the sources available – "data to die for" – will be presented. To conclude, historically generated bias and future research potential of the sources are discussed.

Keywords: household budgets; economic history; Finland; methodology.
JEL classification: N01, N34.

[1] I am indebted to Professor Jane Humphries for this characterization of the primary material of the Finnish 1928 Cost-of-Living Study.

1 Introduction

At economic history conferences, the audience occasionally gets through the long day knowing that the very last paper will be on Finland. At times, the paper will, more specifically, discuss historical household budgets (HHBs) in Finland. This essay aims to provide context, and hopefully reasons to stay, by charting the history, nature and uses of Finnish HHB data. The data can, in fact, be seen as "frontier" data in more ways than one, and provide an example of global opportunities in historical household budget research extending beyond standard of living comparisons.

Household budget studies are a complex, historical form of knowledge. Beneath the standard technology of modern statistics normally used to decode them lie idiosyncratic realities of forgotten intentions, unintentional impacts and imaginative layers of re-analysis. As a small, peripheral part of Europe, Finland presents a manageable case for mapping the relationship between the historical formation and the contemporary research potential of household budgets. The idea is to chart this "data generating process" from the concrete political and social history of source formation to its reappropriation by contemporary cliometrics. Three perspectives are discussed: that of the changing interests of the state in producing knowledge on households; that of the multiple interests of various societal actors, including the households themselves, in shaping behaviour through budgeting; and that of reanalysis for modern economic history. In this last instance, the main focus is on behavioural, microeconometric perspectives. In the process, an overview of the sources available – "data to die for" – will be presented. To conclude, historically generated bias and future research potential of the sources are discussed.

The essay covers the era from the emergence of the household budget in Finland at the turn of the 20th century to the early 1950s, the period preceding the statistically representative standardized consumption surveys starting in the 1960s. In terms of historical sources, this is the period for which the original data is not available in digital form, and must be extracted from the archives.

Over this time period, Finland went from an autonomous Grand Duchy of Russia to an independent parliamentary republic, but only after a bitter and divisive Civil War between the Reds and the Whites in 1918 and a markedly unstable period in 1917-1919.

Resting on a fundamentally Scandinavian social structure of free peasants and well-organised labour, the democracy sealed by German defeat in World War I and Wilsonian pressure survived the fascist unrest of the years of the Great Depression, and into the post-World War II years as a Soviet occupation was avoided (e.g. Kähönen, forthcoming).

While the policy making elite was well educated, cosmopolitan and internationally connected already in the late 19th century, the national economy was agrarian and poor, with GDP estimated at around 57 % of Western European average in 1870, and no more than two thirds of Sweden or half of Britain around 1930. While the population climbed from 1,7 million in 1870 to c. 2,7 million around 1900 and to slightly over 4 million by 1950, the share of formally urban population slowly crept from about 7 % in 1870 to approximately a quarter by the end of WWII. The share of non-agrarian occupations reached 40 % of the workforce by 1940, but agriculture was still the largest source of employment until the 1950s (Suomen Tilastollinen Vuosikirja 1950, p. 6, table 7; Kaukiainen 1981, p. 40). Born out of the will to understand and control the "worker question", household budget studies had their focus firmly on the emerging wage earners in cities and rural industrial communities. Thus most of the historical household budget data concern the growing minority of the population living under most modern conditions, and the history of household budgets is, as usual, indistinguishable from the history of modernisation.

2 The household budget as research: In service of society

Household budget studies started to be conducted in Finland in the last decades of autonomy under Russian rule, at the turn of the 20th century. The instrument was introduced in the context of nation-building, with decisive initiative and involvement by the state and the early, elite-directed, reformist labour movement. Social statistics as a whole were seen as an indispensable tool for perceiving social problems correctly at the level of the nation and making them targets of rational intervention. They were "a form of State consciousness" (*Valtiollinen tietoisuusmuoto*. Kettunen 1994, pp. 56-59, quote 56). At the same time, they were transformative in themselves: constructing knowledge that defined problems, articulated and shaped social reality, and created awareness of the need for social change. Studying the conditions of workers objectively with statistics in order to plan social policy to fix problems linked with the goals of the late autonomy elite of Finland: the ultimate aim was to identify and pre-empt problems of class and labour relations that had become inflamed elsewhere in the more developed countries of Europe, and to repel socialism (Stenvall and Holmalahti 1987, pp. 30-32, 36; Kettunen 2006, pp. 35-40.).

The state's presence as an instigator, conductor and audience for household budget studies was paramount. Compilation of statistics by the early elite-directed, non-socialist, "Wrightian" Workers' Association of Helsinki was first inspired by a query circulated by the Bureau of Industry (*Teollisuushallitus*) among the successors of the old trade guilds in 1885 to learn of the effects of the legislation on the freedom of occupation passed in 1879. The wage statistics compiled were some years later followed by the first limited household survey among workers based on interviews, published by Oskar Groundstroem in 1897 under the auspices of a national association for economics. The data had been collected by another prominent statistician-member of the Workers' Association, who was also conducting studies for the state in a committee on labour insurance. The aim was to provide material for reforms that could solve the "labour question", perceived by the author as critical for the success of society as a whole (Stenvall and Holmalahti 1987, p. 33).

The following household budget surveys were carried out for a government publication series called Labour Statistics (*Työtilasto*) launched in 1901. It followed in its method of implementation the request of the said Workers' Association to the Senate in 1886 to set a committee with representation from scholars, employers and workers to investigate the status of labour relations in the country, in order to prevent discontent among the working people. The first actual household budget study in the series was carried out by Vera Hjelt and published in 1912. It targeted skilled worker families in various cities, and was based on the diary method, keeping a book of expenditures and income on a weekly basis for a period of one year. The selection of families was carried out with the assistance of intermediaries, such as schoolteachers – the largest group of intermediaries in Helsinki – workers "who had taken a course in accounting", and organisations like the Helsinki Workers' Association (Hjelt 1912, 9-11). The described selection process and criteria of this pioneer study reflect the global state of the field at the time, being a mixture of choices dictated by exigency, conventional biases related to family type, convenience, constraints posed by the instrument and gestures towards vaguely defined purposes of sampling by occupation.

There was a maximum income not to be exceeded by the head of household. Additionally, the families were to be "workers", not white collar, and most of the selectees were employed in factories. A central requirement for selection was the sort of "decency and reliability" that recording one's expenses for a whole year would necessitate. Even though a reward was promised, a considerable number of families dropped out, partly because of political agitation and resistance against such research from various directions, one aspect of the local discourses and interests surrounding household budget studies discussed below. For Helsinki, only 51 account books out of 225 were returned. The study was only interested in families, whose conditions were stated to be far more important than those of individuals living alone. Households formed by two parents and children or a childless couple with no other co-resident individuals were designated "normal families", and formed the overwhelming majority of the sample. Permanence of residence and composition were obviously desirable properties as well. While it was stated that it was impossible to decide beforehand how many households should be included from any specific industry, the attempt was made to include as many as possible, and the meagre presence of some industries was lamented. Hjelt herself and the intermediaries supervised the progress of recording in the households, and personal supervision, advice and additional querying for clarifications were described as having made the process close and interactive one. (Hjelt 1912, 1-25).

The stated interest of the study was reformist, and various possible policies to improve the position of workers were discussed in it, but it also came to be used for determining the weights of the official cost of living index until 1937 (Hannikainen 2004, p. 124). A mélange of interests also surrounded the later household budget studies. After the civil war, the Labour Statistics series carried on under the title "Special Social Investigations" (*Sosialisia erikoistutkimuksia*) at the section for social statistics of the government Statistical Head Office until it was relocated into the Research Office of the Ministry for Social Affairs in the 1930s. The people involved in conducting these studies remained largely the same. The stated purpose was again to study social problems with an eye for intervention, implemented through studies on particular occupational and social groups like dock workers, working-class youth or university students (Stenvall & Holmalahti 1987, 41-44). However, in the two large-scale household budget studies implemented in the 1920s, there was a direct connection to specific state interests and policy needs beyond social reformism and studying workers. This reflected the increased demands of the expanding and developing policy apparatus of the independent republic, as well as the diminished interest in the workers as a social class after the 'preventive' paradigm of social policy adopted from Germany had ended in wholesale disaster and settlement of the issue of political order through violence in 1918. The cost-of-living studies carried out in 1920-21 and 1928 came to include officials and white-collar employees as well as "workers". They were linked to particular policy operations as well as international statistical cooperation.

For the 1920-21 study, the first initiative came from a trade union of government officials. The report stated that information was needed in order to determine appropriate salary and benefit levels for government employees, a hot topic in the political debate of the day, as the wartime inflation had eroded the traditionally high purchasing power and lavish life style of civil servants, while the taxpayers of the newly independent republic were now represented in an empowered parliament unwilling to pay them more. The Ministry for Social Affairs, entrusted with the task, pointed out the general importance of such data for determining the cost-of-living index to be used as a reference in wage determination, as well as for contemplating fiscal matters in general and taxes on consumption in particular. The task of conducting the survey was delegated to local representatives of the central government, who used "advisors" to select the families and carry out the work. "Representativity" was ostensibly achieved by including different social groups while maintaining a particular concern for having a sufficient number of "workers" in the data, and through covering localities of different sizes (Suomen Virallinen Tilasto XXXII, Sosialisia Erikoistutkimuksia 5, 1925, pp. 1-6).

In the 1928 study, references were made to the promptings of a government committee designing tariff policy – a common reason for such studies in many countries – as well as the recommendations of the Second International Conference of Labour Statisticians organized by the ILO in Geneva in 1925. The timing of the study of 1920-21 was also considered unfortunate, because the dramatic price changes and rationing still present in the postwar environment had eroded its usability. At the time it had been carried out, though, it had been justified with the need to update the 1912 data after the turmoil of the war. Of course, in 1928, the Great Depression was just around the corner as well – the national economy was just peaking and starting to falter. "Normal years" were in short supply in early 20th century Finland. No more ambitious national studies would be carried out before the early 1950s after the end of World War II. The methods of all these studies in terms of sample selection, family bias and measurement through diary remained essentially similar.

3 The household budget as education: The Hawthorne effect

As an instrument of household management, research and policy, the household budget became situated in a political debate between the bourgeoisie and the labour movement, and was gradually embedded in an overriding intellectual trend referred to as "the era of household ideology" in the 1920s. Already in the late 19th century, some local charities adopted the idea of providing education on housekeeping to the lower classes, including accounting. The underlying idea was that poverty was in fact an expression of bad housekeeping skills and the ensuing waste of resources rather than income poverty (Markkola 1994, 173-174). The onus rested heavily on women, particularly working-class women.[2] Women were depicted as "the rulers of the home", who had the power to make their realm prosper or perish. The original role of bookkeeping – recording the household budget – was to educate the nascent proletarians to watch where their money was going, control their expenses and live within their means (Ollila 1993, 56; Markkola 1994, 174).

The idea of bookkeeping as education preceded that of bookkeeping as research, and when household budget surveys started to be conducted in Finland, they maintained a close connection with this tradition of household instruction. The household budget came to lead a dual existence as an instrument of elite-directed education and popular self-management as well as a tool for empirical study.

[2]Worker families were more often low income and lived in crowded, low-quality housing, making it more difficult and effortful to maintain an appearance of cleanliness and order. Hence visible 'housekeeping problems' were easy to point out. Vattula 1989, pp. 29-31; Cf. above, p. 175.

In the early years of the 20th century, household budget research became simultaneously more professional and more embroiled in politics. The explicit aim of the bourgeois investigators was often to find out whether the wage demands of workers were justified and what the true costs of living were. By studying the budgets, it was possible to identify unsound consumption patterns – for instance, expenditure on foodstuffs which could be replaced by cheaper but equally nutritious ones, or spending on prepared food like sausages instead of producing more within the household – and to see what sort of education could remedy the problem. This approach was presented as addressing the root cause of poverty instead of providing futile wage increases, which might only be wasted through incompetent consumption. Such education would act as "preventive poor relief" as well, reducing claims for assistance (Teräs 2001, p. 225; Harmaja 1920, pp. 31-32; Harmaja 1922a, p. 3; on similar debate in the USA, Jauho 2003, pp. 151-152).

The idea reflected the definition of an underlying core concept of the household ideology of the early 20th century, that of *thrift*.[3] It did not primarily refer to saving in terms of putting money aside, but to saving by making the most of the available scarce resources of a household – in neoclassical terms, in achieving the greatest possible efficiency in utility maximization under given constraints within the household.[4] To begin with, the right purchases would have to be made. Then, the acquired inputs would have to be transformed into the needed objects of consumption – food, clothing, etc. – using maximal skill and economy. Preparation at home was advocated over market purchases of finished goods, and where possible, 'self-sufficiency' was to be increased through petty home production like gardening even in urban conditions (Harmaja 1922b; Harmaja 1925, p. 23; Harmaja 1931, pp. 79-80; Ollila 1993, pp. 124, 131-132, 272-276; Markkola 1994, pp. 171, 177-183; Jauho 2003, pp. 151, 153, 155). This way, a

[3] *Säästäväisyys, säästeliäisyys.* In the Finnish language, the word is a derivative of the general expression for saving or sparing, *säästäminen.*

[4] Charles Gide (1919, 827-834) discussed the difference between these two concepts of saving at length in a textbook on economics published in Finnish at the time. As an aside, he commented a counterargument to the virtues of such thrift that would later have been denoted Keynesian as follows: "The wasteful consumption of the Americans, even the workers living there, is a commonly known fact. It is said, that the busy production of America is partly caused by this; it is well possible, but the same reason also causes that the workers there have not achieved as great a level of well-being as one might guess on the basis of their extraordinarily high wages and large incomes. And on the contrary, precisely because of his wise excercise of thrift can the family of a French workingman live comfortably on an income that the Americans would consider as one leading to destitution." (p. 828, translation SS.)

higher standard of living could be achieved with the same income level. Wage demands would be moderated and the need for public assistance diminished.

Constantly present in the writings and activities of scholars and reformers in the field, this concept of thrift had foreign forebears in continental European economics at the time.[5] While precautionary saving as putting money into the bank was also discussed and advocated in the writings, most attention was dedicated to the sort of housekeeping thrift described above.[6] It resonated with the German-inspired, anti-liberal conception of freedom adopted by the conservative part of the early women's movement, and the ways in which the discourses on households linked to those on building the nation. Freedom was achieved by subjecting immediate desires to higher, moral aspirations, not by being able to follow individual preferences. Women were to become emancipated by becoming aware of the importance of their duties at home for the nation (Ollila 1993, p. 61). Equally, the goods that were to be acquired by households were not legitimately defined by the individual preferences of the consumers, but rather prescribed as those that would contribute to the good health, capacity to work and education of the people.[7] The work done by women in households was important because successful, well organised consumption was a necessary complement to successful production in industry and agriculture, and supported the production of healthy, able members of the nation (Teräs 2001, p. 227).

The labour movement rejected the bourgeoisie's rationale of thrift and account of the origins of poverty, and came up with its own formulations in the matter. Alternative visions of householding based on collective, cooperative organisations relegating tasks like child-rearing and food preparation to specialised bodies outside the home gradually faded after independence, and the ideal of female homemaking was accepted (Lähteenmäki 1995, pp. 201-213; Sulkunen 1989, pp. 79-88). However, it was maintained that poverty was the impediment to proper homemaking, and not vice versa. The task of household budget research was to prove this (Teräs 2001, pp. 226-227; Markkola 1994, pp. 183-189).

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[5]E.g., Gide 1919, whose original version of the work first translated into Finnish in 1904 and sold out; see Ollila 1993, 107 on the German influence on Finnish home economics via Laura Harmaja.

[6]E.g., Harmaja 1925, 18. The link between saving and investment was also largely absent from the contemporary discussion.

[7]The tone in which consumer choices were discussed was frequently moralistic and contained references to the damage to society and the nation caused by wrong sort of choices. E.g., Harmaja 1922b, 60.

Nevertheless, the labour movement too advocated running an orderly household, and recommended the use of account books to keep track of expenses. An orderly household economy was conducive to rational, organised participation in the movement, a domestic complement to the discipline of the collective organisations in the public sphere. Trade unions saw it as a prerequisite for paying union dues, and particular campaigns targeted worker families, specifically women, over the matter. While women, often considered to be in charge of the purse strings at home, were suspected of having concerns over the expense the dues represented and the risks they brought in the form of industrial conflict, the unions advocated membership as an investment rather than an expense – indeed, the "best stock certificate" of a family, as it paid off multiple times its cost in higher and more regular wages and welfare benefits (Teräs 2001, p. 227; Teräs 2003, pp. 144-146).

Various factors contributed to the rise to prominence of the household ideology after WWI. In the postwar years, shortages, poverty and the scourges of war directed attention to questions of subsistence. Importantly, the middle class was permanently affected as well: inflation had eroded the purchasing power of public officials, and it was no longer possible to 'outsource' household work by hiring servants, something that had started to become problematic already at the turn of the century with the rise of trade unions in domestic service. The consequence was heightened interest in efficient homemaking among more educated and wealthier women as well. Conditions would justify focussing on household management again during the crisis of the 1930s (Ollila 1993, p. 68; Harmaja 1931, p. 75). In the labour movement, the Social Democratic women's organisations adopted household instruction – and along with it, traditional gender roles and the nuclear family – as a central theme of their activities. In large part, this reflected demand from the field and the fear that bourgeois womens' organisations would otherwise harvest those working-class women alienated by impractical socialist rhetoric into their ranks (Lähteenmäki 1995, 201-213; Sulkunen 1989, 79-88).

In terms of the effectiveness of the discourse on the household and the social and professional interests gathering around it, a crucial development was the rise of home economics as a discipline. Through transnational transmission and inspiration, home economics as a science was established in Finland by a handful of protagonists, most notably Laura Harmaja, who would advocate it as an academic and professional field of paramount importance to the national economy (Heinonen 1998, pp. 89-107). The 1920s in particular saw the drive to turn housework into a professional activity based on science. The shift of locus from enlightenment and moralism to scientific objectivity made the message more authoritative and easy to disseminate (Ollila 1993, pp. 107-108). While struggles took place over the role of government and civic organisations in the activity, educational initiatives directed at the population through various channels – civic and political organisations, educational institutions, public services – increased markedly.

A key actor was the *Martta* association, civic organisation that had established itself with almost a monopoly position in the subject in Finland. It focussed on three main themes: the rationalisation of work; transforming dietary habits into healthier ones and simplifying cooking; and finally, the evaluation of housework from the perspective of the national economy. This is where accounting entered the picture. Recording the household budget promoted thrift, and various kinds of account books were being printed, sold and marketed to households (Heinonen 1998, pp. 88-168; Jauho 2003, pp. 167-169). However, it had another important function as well. Household budget studies would help transform the value of the work done in households into the monetary language of the national economy, and therefore aid in justifying the importance of home economics and education.[8] Particularly the last aspect reflected an essential feature of the 1920s: the constitution of home economics as a field of interest representation and advocacy.

Firstly, home economics was essentially a gendered legitimation strategy rooted in the historical period. The "professionalization" of housework on the basis of "scientific" principles emulated trends like Taylorism in industry (Jauho 2003, p. 169) and made use of the *modus operandi* of 1920s modernism to advocate recognition of the equal position of women working at home and lobby for policy on their behalf. Homeworkers were to be seen as serious professionals with advanced formal training carrying out rationalized tasks crucial for the national economy, and entitled to corresponding symbolic and material rewards.

[8]E.g., the estimates presented in Harmaja 1931 (68, 77) on the monetary value of all housework, the savings achieved through baking bread at home instead of buying it, and the small (22-40 %) share of all consumption satisfied through market purchases in households.

Secondly, another, less directly obvious interest was present and growing in the discussion: the professional interest of those working in the home economics and education apparatus themselves. While largely overlapping with the gender interest, this professional viewpoint was able to display considerable flexibility and independence towards the political passions surrounding the household economy at the beginning of the century. For instance, while Laura Harmaja was explicitly questioning the legitimacy of the pay demands of workers in an article published in 1920, in 1931 she praised the trade unions for having been able to raise wages and improve the lot of workers on several occasions (Harmaja 1920, p. 32; Harmaja 1931, p. 71). What was consistent throughout, though, was the call for more public funding, more political attention and influence, and more appreciation for the field itself: "On the basis of everything that has been previously presented, one should be able to claim, that in order to enhance the work of social reform, especially the administration of social affairs should dedicate particular attention to the various activities uplifting the household, and to aim to develop out of them a united system covering all different aspects of this broad field of work".[9]

Despite class conflict and particular professional or gender interests, then, everybody came to agree that rational management, budgeting and far-sightedness were needed by worker households, but in order to serve causes larger than immediate individual needs. The kinds of competing rationalities advocated by those recommending account books to Finnish workers in the early 20th century – the elite reformists, the socialists, the home economists – were historically specific, and different from the one analysed later by the Chicago school economists. In the government commissioned household budget surveys, this was reflected in features like the minute detail required in recording the different types and amounts of foodstuffs consumed, making it easy to discover wasteful dietary habits. If budgeting made the household economy visible in a quantitative form – like the balance sheet of a business enterprise– for the workers themselves for the first time (Cf. Halbwachs 1913), it also made it visible to the observing investigator. She in turn represented the establishment and its particular, well-publicized conceptions of thrift and proper consumption, and the workers were aware of

[9]Harmaja 1931, 80. See also e.g. the suggestions for establishing new public organs, even a Ministry of Households, in Harmaja 1922a and Harmaja 1927, as well as the frequent complaints on the stingy, ill-informed and unappreciative attitude of the government towards such activities in all her writings cited here.

it. The potential Hawthorne effect that followed – the effect of measurement itself on that what was being measured –was likely to be something other than mere increased "neutral" rationality in the modern (or Chicago) sense.

In any case, household budget research did seem to have an effect of some sort on its subjects. In reporting on the progress of fieldwork for her path breaking 1912 study, Vera Hjelt noted various types of reactions to the bookkeeping task in different localities around the country. As mentioned, particularly in Helsinki most families declined to complete the task in the end, which was suggested to be the consequence of political agitation against such study by the labour movement. Many others, however, complied with considerable enthusiasm. Some copied all accounts for themselves as well, in order to learn more of their own household economy in this way. Some vowed to keep up with accounting after the study concluded. In some cases, even those who never finished made notes in the margins indicating they had made new and alarming discoveries of their own, excessive expenditures. Others displayed hints of reverence towards the book, binding it in cloth at their own expense. Generally, there was great interest in the eventual results of the study, which were asked to be reported at least in newspapers, if not elsewhere. With satisfaction, Hjelt reasoned that account books appeared to be "...the most effective means of national economic education in developing the exercise of thrift" (Hjelt 1912, pp. 11-12).

4 The household budget as sources: Back to the future

In the period following WWII, the household survey generally came to exhibit the features for which it is now recognisable: random sampling out of national populations, embeddedness in government statistical agencies and academia, routine exploitation for policy purposes like constructing the consumer price index (Bulmer 2001, p. 14472). Since the 1970s, two expansions of interest took place.

Firstly, while the application of household surveys in non-Western contexts had been common since the colonial period, there was renewed interest in producing internationally comparable, survey-based data on poverty, welfare and household behaviour by Western dominated global development organisations, particularly the World Bank. A key reason was the realization that the existing data actually did not provide an adequate basis for making *any* statements about the extent, depth or trends of poverty, which were the subject of extensive debate at the time (Deaton 2000, pp. 7-8, 32-33). As in 19th century Europe and America, household surveys were introduced by scholars and bureaucrats working in the field of development policy in order to find answers to questions about the nature of poverty and the right ways of addressing it, this time in the global South.

Secondly, the application of econometric methods to historical household-level material started to take place in economic history, particularly in the USA. The themes addressed included household income generation strategies, patterns of consumption among ethnic and religious groups, and changing ways of dealing with social risks (e.g., Modell 1978; Modell 1979; Williamson 1967; Haines 1981; Goldin 1981). While some of the sophisticated early work utilised census and wage data to impute earnings, actual budget data were also being drawn into the research. This trend has accelerated since the 1990s, with a set of digitalised historical household budget data becoming targets for constant revisits.[10]

The increased interest in the compilation and statistical processing of large household budget datasets rested on a triad of new and better sources, the development of econometric methods, and new computing technology making it possible to analyse the data at diminishing cost. Common intellectual roots for both household survey based development econometrics and the "cliometrics" done on historical household data can be identified in theorizing on the rational nature and constitutive importance of household behaviour by Chicago school economists like Friedman or Becker. There is, in fact, a paper trail from Chicago to both of these research trends (See e.g., Haines 1981, p. 21; Deaton 2000, pp. 32-34). While this may seem somewhat surprising, both literatures emphasize the importance of analysing the complex, hypothetically rational behaviour of private agents for understanding poverty and the possible role of public policy, historical or currently planned, in affecting it.

Recently, a new link has formed between these strands of household budget research through a rising interest in topics and approaches inspired by development economics

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[10] These include a survey conducted by the U.S. Bureau of Labour in various countries in 1889-1890 (Horrell & Oxley 2000, 38-39; Horrell & Oxley 1999, 497-498), a cost of living survey by the US Bureau of Labor Statistics 1917-1919 (Moehling 2001, 932-933; Emery 2010, 76) and the New Survey of London Life and Labour conducted in 1929-1930 (Baines & Johnson 1999a, 950-952; Baines & Johnson 1999b, 696-697).

among economic historians. Increasing numbers of researchers working on historical household budget and census data have been turning to development for relevant questions and models, analysing phenomena like child labour or gender discrimination in household resource allocation during Western industrialization (e.g., Moehling 2005; Cunningham 2000; Horrell and Oxley 1999; Horrell and Humphries 1995.).

Finnish historical household budget surveys too have gradually become source material for economic and social history. This has most prominently concerned Hjelt's study, which has been partly digitized by various scholars and used for analytical and descriptive purposes over the years. For instance, Sakari Heikkinen (1997) has used Hjelt's consumption data in a benchmark study on wages, labour markets and standards of living in industrializing Finland for estimating the rural-urban wage gap. Raimo Parikka has used Hjelt to construct a historical poverty line – "Hjelt's minimum" – based on the cost of living of a single household that Hjelt, in a regrettably *ad hoc* manner, highlighted as an example of a barebones budget (Parikka 1994a; Parikka 1994b; for criticism, Saaritsa 2010). Pirjo Markkola (1994), among others, has looked at the composition of household income to make the by now rather commonplace observation that male breadwinners did not provide sole sustenance to so-called male breadwinner families, but that income generated by women was important. The published reports of the 1920s studies have been used to e.g,. track the fall of food shares (Engel's coefficient) over the decade (Ahlqvist and Raijas 2005). A handful of the 1950-51 survey material has also been used to illustrate the lack of savings capability of households at the time by Ilja Kavonius (2011), who provides an overview of the consumption studies done in Finland around this time. A more Foucauldian analysis of the genealogy of consumption statistics over their entire history in Finland has been presented by Kirsti Ahlqvist (2010).

But is this "data to die for"? And what about the microeconometric turn? In 2005, an e-mail query led to the revelation that contrary to the beliefs of the academic community, household-level primary material of early 20th century surveys existed in the archives of Statistics Finland. This included the 1920-21 survey, the very important 1928 surveys – both Part A on urban/industrial localities and Part B on agricultural labourers – which included quarterly panel data, as well as the 1950-51 survey.[11] Efforts have since been made by the author and associates to digitize and utilize the material. [12] The supplementary tables below provide an overview of these and other available data over the period covered.

All the data share a broadly common structure, with sections on household composition, income, expenditure, savings and credit, and a heavy focus on disaggregated consumption of food items, listing amounts as well as prices. The records exist by household. The usability of the different surveys for microeconometric analysis, however, varies drastically. The 1920-21 study is preserved as an annual cross section only, with no time dimension on the household cards. Regrettably, household composition was not recorded– only total number of members and a continuous adult equivalency scale from which it is impossible to accurately infer the age and sex of household members. Occupations are expressed as codes, but the key to these has not been recovered, ultimately leaving only the information on whether a family was classified as “workers” or “civil servants” – the only two social categories applied. Finally, 1920-21 saw dramatic price variation due to post-war economic instability, potentially affecting analysis based on the aggregate sums cumulated over the period.[13]

As mentioned, the 1928 data are worth more (if perhaps not human lives). Quarterly entries, apparently intended originally merely as an intermediate product for getting to the annual aggregates, open the way for panel regressions with time and household fixed effects, as well as analysis of seasonality. Household members are listed meticulously by age and sex, with varying relationships to the household and even physical presence over the year carefully recorded. There are good sections on savings and credit, naturally more interesting as panels than as annual balances like in 1920-21. The accounting frame including income and consumption “in kind” makes it possible to estimate usage of unpaid employer fringe benefits and public services like company or municipal doctors, albeit only on an annual basis. The urban data include a category of

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[11] Tilastokeskus [Statistics Finland], Tilastokirjasto/Tilastoarkisto [Library of Statistics/Statistical archives], K09e kulutustutkimukset [Consumption studies], Sosiaaliministeriö [Ministry for Social Affairs], Sosiaalinen tutkimustoimisto [Office of statistical investigations], Elinkustannukset tilinpitokaudella 1920-21 [The cost of living during the accounting period 1920-21], Elinkustannustutkimus 1928 [Cost-of-living study 1928].

[12] Research assistants who have participated in collecting and using the data include Antti Kaihovaara (2011) and (to a more limited extent) Sinikka Selin.

[13] If, for instance, sums related to each other in an analysis were based on income or consumption recorded during different times over the period, with significant inflation taking place in between.

white collar and lower middle class employees in addition to elite/high ranking officialdom and workers. Part B, which covers agricultural labourers, has a separate section detailing domestic subsistence production. Even transactions like informal transfers between households can be teased out from the data and analysed.

The 1950-51 survey, by contrast, currently exists as lucrative raw material awaiting development: only weekly account books on the 538 urban households seem to have been preserved at Statistics Finland, with no intermediate summaries at quarterly or annual level, making digitization daunting, albeit potentially rewarding. Weekly data have not been preserved for the 1920s, and this would of course be of high interest considering themes like managing income variation and dealing with short-term shocks. The last of the "old school" surveys, that of 1950-51 still bore the hallmarks of purposive sampling by trusted local aides and a special interest in workers as a social group. From the mid-1950s onwards, the consumption surveys entered the realm of modern sampling frames (Kavonius 2011, pp. 59-67).

Finally, Hjelt's study itself, with its full records in print, could be analysed with more advanced methods in the future. The printed report includes annual budgets for the entire sample citing precise household composition, head's occupation, grouped expenditures and income by locality (Hjelt 1912, supplementary table 8). In addition to this cross sectional data and ten Leplaysian qualitative "monographs", the work includes monthly consumption and expenditure data on 50 of the households.

It is not likely that Finnish sources are unique in terms of detail and dimensions among worldwide historical household budget data, but a lot can be done with a combination of interesting variables and a time dimension. The partly digitized (excluding details on food consumption) 1928 survey has been used for a series of micro/development oriented papers. Following up on the author's PhD project on informal transfers (Saaritsa 2008a), linkage with municipal poor relief records and other inference has made it possible to discern informal assistance received by households – from neighbours, relatives, coworkers, etc. – with a reasonable degree of accuracy. The subset of households from Helsinki has served as data for analyses of the statistical determinants of different kinds of transfers as well as their effectiveness in countering income variation within the year. Findings on the former topic indicate gendered differences between the logic of transfers in kind and those in cash. In particular, it appears that transfers received in cash responded to variables related to the labour market position and social capital of men, such as trade union membership. Transfers in kind, by contrast, were more closely linked with the position of women, particularly lack of personal earned income. In terms of estimated value, transfers in cash received were clearly larger (over fourfold in size on average). As some previous literature had tended to downplay the role of cash in informal transactions and to emphasize the matrilateral character of the related social networks, this quantitative assessment based on household budgets carries revisionist potential (Saaritsa 2008b).

An analysis of the extent and structure of income smoothing by households within the year, looking at net credit, savings and transfers with panel regressions on income, however, suggested that informal assistance did matter for the poorest households, but was much weaker as a smoother than the informal credit or savings available only to wealthier workers. Informal assistance compensated roughly 18 % of income variation for the poorest fifth of the Helsinki worker households in the data (Saaritsa 2011). In a sense, both papers thus indicate a pattern of "weakness recurring", where the strength, or lack of strength, of informal support commanded by households and individuals reproduced their weak position in the overall gendered social structure. This finding based on household budget data can be seen as a significant departure from traditional romanticizing notions of an effective and empowering "moral economy" in social history. (Cf. Saaritsa 2008a.)

Another important area of work has been intrahousehold allocation. Unequal allocation of resources to household members by age and gender – in particular, the discriminatory treatment of boys and girls – has been the focus of growing attention in development economics as well as economic history (e.g., Horrell and Oxley 2013; Moehling 2005; Klasen 1998; Qian 2008; Burgess and Zhuang 2000). In addition to blatant equity issues of the "missing girls" variety (Coale 1991), intrahousehold allocation of goods like health and education is also a potential determinant of human capital accumulation, income generation potential and patterns of development. The analysis of intrahousehold allocation with "Deatonesque" methods like the Working-Leser Engel model regressing the consumption shares of critical goods on household demographics (Deaton 2000, pp. 223-241) requires, at minimum, details of household composition by age and sex as well as data on the consumption of goods analyzed.

An analysis of educational expenditure by gender using the data from the Finnish 1928 (A) survey partly corroborates previous descriptive evidence of a favourable attitude towards schooling girls among the emergent working class in Finland. The clear pro-girl bias in secondary schooling among workers can be formally explained in a Beckerian fashion in terms of opportunity costs and expected returns – most importantly by the penalty on males, who could generate significant income for the family early on. By the same token, the vastly inferior long-term alternatives available to uneducated girls from worker families may have motivated households to maximize joint utility by prioritizing their education over that of boys' also for altruistic reasons, regardless of expected pecuniary returns (Saaritsa and Kaihovaara 2016). Similar patterns have, in fact, been identified in cases from the otherwise notorious South Asia, as well as in the historical US (Himaz 2010; Kingdon and Theopold 2008; Goldin 1998, pp. 362–363). The model provides a consistent explanation for the behaviour of enrolment rates over the period, and fits the discovery that boys tended to drop out of secondary school more commonly than girls. The results qualify previous social historical narratives of the presumed uniqueness and precariousness of the early Finnish female majority in secondary schooling, as well as the general privileging of purely cultural and ideological explanations for the historical female advantage in Nordic societies.

Another paper on intrahousehold allocations to health, also applying the Working-Leser Engel and panel regressions, incorporates indicators on "objective" health risks into the analysis, connecting variation in predicted need with variation in expenditure. These relate to the age and gender of individuals, as well as variation in the prevalence of different types of disease by province. In light of the results, it seems possible that health expenditure simply followed age- and sex-specific health risks, rather than gender or positions of power as implied by bargaining models. When looking at the responses of poorer and richer worker households to regional epidemics divided into diseases affecting children only and those affecting adults as well, those at the bottom of the income distribution very clearly gave precedence to children rather than working adults.[14] These findings, again based on quarterly panel regressions, are significantly different from the emphasis on male earner bias in e.g., literature on Britain during industrialization (For an overview see Harris 2008). They also relate to the theme of

[14] Clearest estimates were on the varying effect of measles as opposed to influenza epidemics. Saaritsa 2016.

possible systematic microinstitutional differences between populations affecting gendered material practices (e.g., De Moor and Van Zanden 2009; Alesina, Giuliano and Nunn 2013).

Thus, one of the benefits of using household budget data in combination with the tools of modern development economics is to be able to analyze gender and gendered dynamics of household behavior quantitatively in historical research. This opens up a field of important questions for long-run scrutiny, providing an entry point for economic historians into the debate on gender and development. Furthermore, it allows us to review previous interpretations based on qualitative sources in labour and social history, complementing and sometimes changing the picture.

Conclusions: A biased, precious inheritance

The journey of the Finnish household budget from its origins to the dataset of the modern economic historian has been lengthy, with much lost in translation. In specific historical contexts, the internationally inspired surveys became enmeshed in local choices and styles of work, as well as particular interests and discourses surrounding individual investigations. From a statistical perspective, the qualitative idiosyncrasies of the sources, reflecting the specific history of their creation, can be translated into quantitative properties of the sample and the variables at hand. They affect the ways in which the material, transformed into data for economic history, may be unrepresentative, biased, truncated or censored.

In the early decades of the 20th century, probabilistic reasoning based on random sampling had not yet been invented, and “representativity” meant a great many things. In the Finnish surveys, the approach to sampling was typically not rigorously defined or explained. Locations were selected first, normally from among major cities and rural industrial communities, as the aim was to cover industrial workers. Within localities, references to some sort of purposive sampling, particularly ensuring the presence of “typical” occupations in the area, were made. Delegation of the actual task of selection to locals was common. Hjelt used local experts like teachers and organized labour, and the 1928 surveyors trusted local authorities in bigger cities. This predictably led to further delegation and clustering, when a “snowball method” was apparently employed and informants were asked to identify more potential families. The 1928 data on Helsinki, for instance, clearly shows more families employed by the same employer and living on the same block than could reasonably be expected under randomness (Saaritsa 2011, p. 195, fn. 31). Poststratification, reweighting by a known distribution based on socioeconomic groups or occupations, is an option for correcting socioeconomic imbalance that has great potential (e.g. Vecchi et al. 2001), but even if such a balance were engineered, selection bias on any number of other dimensions would still remain.[15]

Another well-known norm for the definition of the unit of observation itself was familism, a bias favouring what were considered "normal" or "intact" families. Thus investigators were typically given direct instructions to restrict themselves to households with two parents and underage children. This can be related to the discursive shift during industrialization, where the dissolution of traditional vertical paternalistic ties between masters and servants caused moral and social concern among the elites, and the emerging working class nuclear family became the object of hopes and ambitions in terms of reconstituting stability and decency. (Markkola 1994) In the case of Hjelt, in addition to the 210 "normal families" (*normaaliperheet*), 140 other kinds of families were also included, along with 30 individuals living alone. These were discussed separately in the report. As for the 1920s surveys, a limited amount of incomplete material on couples was discovered in the 1928 files, but not treated in the published reports.

The consequences of familism included the sorting of various individuals involved in the organic continuums of resource- pooling and coresidence as strictly inside or outside the nuclear unit: they became, for example, tenants or guests, regardless of possible kinship ties to the "main" family. While their expenditures may have been recorded, techniques such as deploying different adult equivalency scales were used to exclude them from the measurement of certain parts of the consumption of the household. Furthermore, the entire population living clearly outside nuclear families at the time of investigation was simply excluded. This eclipsed both those who were not in a specific stage of their life course and those who never entered the kinds of familial relationships

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[15] Thus checking for balance on a set of observables, a standard procedure in work based on historical household budgets, does not solve the problem of representativity on all other observable and unobservable dimensions, as Gini and Galvani learned through trial and error in their famous exercise on the Italian *circondari* in the late 1920s. Desrosières 1991, appendix, 241-242; Kruskal & Mosteller 1980, 185-188.

defined as “normal” or otherwise paramount for society by the investigators. In cities like Helsinki, where the demographic structure was essentially shaped by an influx of young unmarried working age women, the resulting skew was blatant (Saaritsa 2008b). While little can be immediately done about this, apart from measuring the extent and reflecting on the nature of the bias, this problem is slightly less severe whenever the topic of research in itself requires the presence of children and parents.

Finally, the way income and expenditure were measured deviated from the modern craft of getting to aggregates through carefully planned recall-based queries, like those used in the World Bank Living Standards Measurement Surveys (Grosh and Muñoz 1996). The historical Finnish studies applied the diary method, advocated by classics like Halbwachs (1913) and internationally popular at the time. The method, which required the households themselves to keep books of their incomes and expenditures for a lengthy period, was often rhetorically presented as a compromise between the recall or interview method which was considered unreliable, and the third option available at the time, nowadays discussed only as a prehistorical entity: the family monograph introduced by Le Play, containing an intensive quantitative and qualitative study of a single family. The diary method led to another selection bias. The skill, time and trouble involved meant only a relatively stable elite of workers could be expected to participate. In the 1928 survey, it was obvious to the investigators that the study would “represent the cost of living of a certain kind of an elite”. [16] A supplementary study covering only two weeks and targeted “...particularly at such families who, living in a difficult economic situation, were not willing to account for a longer period” was ostensibly carried out.[17] However, neither the primary material nor the results of this exercise can be found anywhere. The stable worker family ultimately represented accountability in a double sense of the word.

But how elite was the “elite”? Turning again to the 146 Helsinki worker households of the 1928 data, one can come across several indications contradicting the “labour aristocracy” assumption. Many principal earners were actually employed irregularly by

[16]Bias for stability was present later in processing the material as well, when a number of accounts were excluded for reasons like overly dramatic changes in circumstances taking place during the period of investigation. Suomen Virallinen Tilasto XXXII, Sosialisia Erikoistutkimuksia 14. 1936, 3.

[17]Suomen Virallinen Tilasto XXXII, Sosialisia Erikoistutkimuksia 14. 1936, 3-4.

one or more small employers. Seasonal variation in earnings was high, and a number of households experienced severe income shocks during the year. Before the Great Depression, contact with the municipal poor relief system was a sign of fairly serious hardship, and yet several current or former beneficiaries were identified in the data through record linkage (Saaritsa 2011, pp. 105-107). Finally, an exercise enabling comparison with statistics on municipal taxes paid showed that the workers participating in the 1928 survey in Helsinki had approximately the same median income as the entire adult male population of the city (Saaritsa 2008a, pp. 230-250). Even diary-based budgets can therefore still be useful sources on livelihoods from the middle to the bottom of the income distribution.

A further, largely overlooked issue is a variety of the so-called Hawthorne effect – the effect of measurement itself on that what is being measured – brought about by the diary method. Just as interaction with an interviewer in a given situation might affect recall in various random as well as systematic ways, the act of accounting for one's incomes and expenditures in writing to a social investigator could have its own influence, and not only on the reliability of recording, but on behaviour itself. As discussed, interest in household budgets and the practice of household budgeting involved normative as well as scientific aspects. Accounting was seen as a vehicle for rational household management and thrift. The Finnish material suggests the investigators actually *wanted* to change what they were measuring by the method of measurement they applied, and there are some indications of success as well. In this way, the new household economists were also actively constructing the world they were measuring through the cultivation of practices like bookkeeping.[18]

All in all, the rich inheritance of household budgets typically comes with bias, requiring an understanding of the political and social history of the source itself. Dealing with, or living with, these issues is mandatory for conducting actual research. Sometimes lines of research also turn out to be unfeasible. For instance, the initial results on the relationship between income and informal transfers received by households with the

[18]Cf. Timothy Mitchell (2005) on how economics has participated in creating the sociotechnical practices it measures and analyses. Notably though, the existence of the original Hawthorne effect, related to experimental manipulation of working conditions and worker productivity, has been called to question by subsequent rounds of reanalysis of the data from the 1920s (Levitt & List 2011; I am grateful to Stefan Rohrbacher for initially pointing this out to me).

1920-1921 data turned out to persistently tend towards null, but since there were valid reasons why this might have been caused by having to use aggregate sums generated intermittently over a period of rapid price change, the collected data was not used for this purpose in the original PhD project. And while it is possible to find references from tax, wage and population statistics for gauging the representativity of the survey households in terms of various averages, overcoming selection bias so as to enable research on income distributions, or to approximate independently and identically distributed data for soundly based econometric analysis, remains to be achieved.

The Finnish case suggests that cross-disciplinary effort is needed, but ultimately new kinds of comparative results may come within reach. In particular, with the success of the HHB project, work on microeconometric topics such as intrahousehold allocation spanning regions and populations could become feasible. This would mean that following the examples of development economics or the recent Eurasia Project on Population and Family History,[19] also the microdynamics of household consumption and investment behavior could be incorporated into a systematic comparative worldwide history of poverty, welfare and development.

[19] See https://mitpress.mit.edu/books/series/eurasian-population-and-family-history (extracted May 13th 2016).

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Appendix

Table A1. Finnish household budget datasets, 1908-1951

1. Hjelt, Vera: ***A study on the conditions of living of skilled workers in Finland, 1908-1909.***	
Period	1908-1909 (published 1912)
Target population	Skilled workers
N	380 (210 ”normal families” with two parents and children or couples, 140 other families, 30 singles)
Sampling	Purposive, clustered by locality; networking as factory inspector, factory schools, unions, workers' associations.
Measurement	Diary (weekly self-reporting)
Variables	c. 60. mostly details of food consumption. Household composition, types of lodgers, weekly earnings, fixed earnings in cash and in kind.
Highlights	A monthly panel on income and expenditure of 50 households; ten detailed family monographs.
Comments / issues	The pioneer; much-referenced, no rigorous postanalysis done.
Data situation	Full data printed in book; several partial digitalizations in the research community.

2. Cost-of-Living Study 1920-1921	
Period	1 March 1920 – 28 February 1921 (published 1925)
Target population	Urban and rural non-agricultural workers and "civil servants" (state, municipal, church, private)
N	554 (All "intact" families with two parents and children)
Sampling	Purposive (opaque), clustered by locality
Measurement	Diary (weekly self-reporting)
Variables	c. 200, majority details of food consumption. Earnings by head (main, side, cash, kind), children, spouse.
Highlights	Expenditure on e.g., health, schooling, insurance; credit & savings, subsistence production. Detailed, consistent accounting
Comments / issues	No proper breakdown of household composition by age and sex (only number + total adult equivalents); No intelligible occupations; drastic price variation occurred during the period.
Data situation	Annual household summary cards in archives of Statistics Finland (2010). Digitized excluding details of food consumption.

3. Cost-of-Living Study 1928 A	
Period	1928 (published 1936)
Target population	Urban and rural non-agricultural workers, “civil servants” (elite) and the middle class / white collars
N	954 (All “intact” families with two parents and children)
Sampling	Purposive, clustered by locality
Measurement	Diary (weekly self-reporting)
Variables	c. 20 + 350 x 4 quarters, majority details of food consumption. Detailed household composition by age and sex, presence/absence, lodgers by type. Earnings by head (main, side, cash, kind), children, spouse.
Highlights	Expenditure on e.g., health, schooling, insurance; credit & savings and subsistence production. Quarterly inscriptions enabling panel data, analysis of seasonality. “Consumption in kind” enabling estimating use of goods received as e.g., assistance or fringe benefits.
Comments / issues	Sampling delegated to local authorities in cities. Traces of snowballing, microclustering observable. See Saaritsa 2008a, Saaritsa 2011.
Data situation	Quarterly household summary cards in archives of Statistics Finland (2010). Digitized excluding food consumption.

4. Cost-of-Living Study 1928 B	
Period	1928 (published 1937)
Target population	Rural labourers
N	270 (All “intact” families with two parents and children)
Sampling	Opaque (through regional farmers’/agricultural associations)
Measurement	Diary (weekly self-reporting)
Variables	c. 20 + 350 x 4 quarters, Majority details of food consumption. Detailed household composition by age and sex, presence/absence, lodgers by type. Earnings by head (main, side, cash, kind), children, spouse.
Highlights	As 1928 A, but includes a detailed separate module on production / consumption in kind.
Comments / issues	Household identification by 19 mainly regional agricultural associations. Spatially scattered (e.g. two cases only from a single province, but from distant locations).
Data situation	Quarterly household summary cards in archives of Statistics Finland (2010). Digitized excluding food consumption / SS

5. Cost-of-Living Study 1950-51

Period	February 1950-January 1951 (published 1954)
Target population	Urban
N	538
Sampling	Purposive, through local intermediaries.
Measurement	Diary (weekly self-reporting)
Variables	(N/A)
Highlights	Weekly data
Comments / issues	Undigitized
Data situation	Weekly account books only preserved in archives of Statistics Finland, no summaries / intermediate tables found.