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Ian Gazeley
University of Sussex

Rose Holmes
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Andrew T. Newell
University of Sussex and IZA

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IZA – Institute of Labor Economics

Schaumburg-Lippe-Straße 5–9
53113 Bonn, Germany

Phone: +49-228-3894-0
Email: publications@iza.org

www.iza.org

ABSTRACT

The Household Budget Survey in Western Europe, 1795-1965*

We trace the development of the household expenditure survey from its conception during the Napoleonic Wars until the 1960s. We have compiled the first historical bibliography of household budget surveys in Western Europe and, using the surveys themselves as source material, have traced the development of their practice and methodology. First developed by private and academic researchers, and subsequently co-opted by governments, the surveys used the domestic consumption of working households to draw conclusions about the condition of labour. Their methodology evolved through international co-operation by researchers, and with informing the labour requirements of international trade as a priority. We argue that international networks and trans-national political structures exerted a strong influence on the development of surveys over time.

JEL Classification: N33, N34, O15

Keywords: budget studies, household expenditure surveys, living standards, cost of living inequality, working households, Europe, 20th century

Corresponding author:
Andrew T. Newell
Department of Economics
University of Sussex
Brighton, BN1 9SL
United Kingdom

E-mail: a.t.newell@sussex.ac.uk

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Introduction

Historians of industrialisation in Western Europe are often interested in how individual households interacted with the market economy, yet evidence pertaining to the material well being of households over time or space can be elusive.[1] The data in historic household budget surveys offers historians the opportunity to examine the lived reality of nuclear families. This opportunity is not without attendant problems, however, as data within surveys is often unstandardized.[2] In this article we present the case that, while the data from household budget surveys is useful, the textual and methodological evolution of the budget surveys themselves has also much to tell historians and economists about historical living standards.

We can learn a great deal from how survey-takers have chosen to view the consumption choices of others, although somewhat less about how those surveyed viewed their own conditions. As Shammas pointed out, measures of wellbeing are generally based on a family's privately owned material goods, rather than on communal goods such as public schools, sanitation or transportation networks. [3] The assumption of household budget surveys was, and remains, that ownership of certain material goods was a prerequisite for a sufficient standard of living. In contrast, Thompson (1963) argued forcefully that individuals' *perceptions* of their living standards are as important as increased consumption of material goods.[4] Very occasionally, household surveys collect details of both

[1] See, for example, the influential work by Jan de Vries on the Industrial Revolution in which he used national-level data to make arguments about household consumption. Jan de Vries, *The Industrious Revolution: Consumer Behaviour and the Household Economy, 1650 to the Present* (Cambridge: Cambridge University Press, 2008). Especially 'The Household and the Market' pp. 9-20.

[2] To compile the dataset for their influential 1992 article that used household budget data of 1, 350 families to move away from the masculine real-wage approach and argue for a more nuanced view of living standards during industrialisation, Sara Horrell and Jane Humphries used 59 different data sources. Sara Horrell and Jane Humphries, Old Questions, New Data, and Alternative Perspectives: Families' Living Standards in the Industrial Revolution, *The Journal of Economic History*, Vol. 52, No. 4 (Dec. 1992) pp. 849-880.

[3] Carole Shammas, 'Standard of Living, Consumption, and Political Economy over the past 500 years', Frank Trentmann (ed.) *The Oxford Handbook of the History of Consumption* (Oxford: Oxford University Press, 2012).

[4] For example, E.P Thomson, in *The Making of the English Working Class*, argued this case in relation to the introduction of the potato in working class diets, which represent a material gain in terms of nutrition, but was seen at the time as diminishing the diet (1980, Pelican Edition, p.348).

material consumption and qualitative commentary from households [5] but, in general, the voices of those being surveyed are lost to us.

In a seminal contribution relating to the analysis of modern household survey data, Deaton (1997) stressed that

> ….they provide information at the level of the individual household about many variables that are either set or influenced by policy, such as prices, transfers, or the provision of schools and clinics. They also collect data on outcomes that we care about and that are affected by the policy variables, such as levels of nutrition, expenditure patterns, educational attainment, earnings and health.[6]

And the evaluation of the efficacy of policy has become has become the *raison d'être* of household survey data. For example, since the early 1990s, the harmonisation of methodology and comparison of data from household budget surveys has been seen as a statistical priority for the European Union. [7] All member states carry out such surveys regularly, and acceding states are expected to establish a programme of household budget research. The data from these surveys has, according to the EU's statistics bureau (EuroStat) a range of applications from informing domestic Consumer Price Indices, to providing information on marginalised groups, to comparing health outcomes in different countries. [8] The comparative domestic consumption of citizens, then, is now regarded as a key statistical practice for modern member states of an economic community.

[5] For example, the original returns of the 1904 UK Board of Trade survey include a space for comments by the head of household. About 100 of the 1,000 original returns recovered have comments by the head of household, of which around thirty are reflexive appraisals of their own living standards. *Not to live but linger,* Gazeley, I., Newell, A., and Shave, S. mimeo University of Sussex.

[6] Deaton, A *The Analysis of Household Surveys*, 1997, p.2

[7] European Commission, 'Family Budget Surveys in the EC: Methodology and Recommendations for Harmonisation - 1993' (Luxembourg: Office for Official Publications of the European Communities, 1993); European Commission, 'Household Budget Surveys in the EC: Methodology and Recommendations for Harmonisation- 1997' (Luxembourg: Office for Official Publications of the European Communities, 1997); European Commission, 'Household Budget Surveys in the EU: Methodology and Recommendations for Harmonisation, 2003' (Luxembourg: Office for Official Publications of the European Communities, 2003).

[8] European Commission, 'Household Budget Surveys in the EU: Methodology and Recommendations for Harmonisation, 2003' (Luxembourg: Office for Official Publications of the European Communities, 2003). Pp. 10-15.

It has not always been the case, however, that the collection of household survey data has been driven by the desire to evaluate policy outcomes. They emerged in England in the 1790s as a way of describing the living standards of the poor and/or to enumerate the extent of poverty as industrialisation gathered pace. The transition from description to policy evaluation was a process that evolved during the nineteenth century and did so in different ways and at varying speeds across European states as the century progressed. This process was itself influenced by, and in some cases served as a platform for the evaluation of, developments in statistical methodology as random sampling became the conventional methodology for the collection of household level data during the twentieth century.

Household budget surveys are a distinctively Western European innovation, although they have been exported and developed globally, and their evolution is implicitly involved with the emergence of particular conceptions of urban, industrialised Western European nation-statehood and citizenship.[9] Although the primary focus of this article is on the historical development of household surveys in Western Europe, we will also consider at various points, the influence of innovations made in the USA. Western European nations involved in colonial expansion developed separate techniques for analyzing the domestic structure of the family lives of citizens of overseas territories, which we do not consider here.

While Stigler (1954) examined the link between the evolution of household surveys across nineteenth century Europe and the USA in the context of understanding developments in consumer behaviour,[10] more recent research on the history of household budget surveys has tended to emphasise the influence of individual researchers operating within their own national context.[11] The

[9] The Western European nations involved in colonial expansion developed separate techniques for analyzing the domestic structure of the family lives of citizens of overseas territories. While it is not the subject under discussion here, the requirements of managing consumption and the politics of consumption in a global Empire of trade was innately connected with the development of surveys.

[10] Stigler, George J.,(1954) 'The Early History of Empirical Studies of Consumer Behaviour', *The Journal of Political Economy*, Vol.62:2 pp.95-113

[11] Jean-Michel Collette, 'Empirical Inquiries and the Assessment of Social Progress in Western Europe: A Historical Perspective', *Social Policy and Development Programme Paper,* No. 3 (United Nations Research Institute for Social Development, June 2000); Christopher Deeming, 'The Historical Development of Family Budget Standards in Britain, from the 17th century to the present.' *Social*

influence of figures such as Le Play, Engel, Ducpétiaux, Wright, and Bowley has indeed been significant within the development of the household budget survey. But, in looking at the development of the surveys across Western Europe and the USA, we have found that the profound influence of international research networks and knowledge sharing has been understated. Organisations such as the International Statistical Institute, the International Labour Organisation and the United Nations, as well as informal networks of academic and government statisticians guided and shaped the development of statistical methodology.

We have compiled a bibliography of Western European household budget surveys from the 1790s to the 1960s (see Appendix 1). The first known systematic household budget survey was published in England in 1795, and by the time of the publication in 1965 of the 1963/1964 Statistical Office of the European Communities comparative survey on European household budgets, most Western European countries had instituted a continuous nationally representative survey, the results of which were published and compared internationally. Twelve countries are covered in this summary: Austria, Belgium, Denmark, Finland, France, Germany, Ireland, the Netherlands, Norway, Sweden, Switzerland, and the United Kingdom. We have not included diaries or journals that contain private accounts for personal reference, or small-scale social investigations unless significant in the development of the household survey generally. Household budget surveys of course hold value as sources of historic data on household welfare and interaction with the marketplace, but they are also historical documents in their own right. In tracking their development over time, we establish the evolution of a discourse around consumption and need between households, investigators and the state.

This article is set out chronologically. We see, between the 1790s and 1960s, a broadly four-stage shift in the evolution of the methodology and focus of domestic household budget surveys. In Section 1, we consider the eighteenth and early nineteenth century origins. Household budget surveys began in England in the

1790s as an attempt to trace 'the progress of society' (whether workers received better recompense for their labour than their forefathers) and specifically to gauge the impact of changes in poor relief on labourers' living standards.[12] As the effects of industrialisation caused changes in labour and living conditions across Europe, their use to social reformers spread. Domestic methodologies evolved and international co-operation - guided from 1853 by the International Statistical Congress - began to shape domestic research practice into international consensus. By the end of the nineteenth century, independent and some state-employed researchers had established guidelines for international best practice. This period also saw the first large scale household survey by Dr Edward Smith in 1863 specifically concerned with household diet, which would flourish into a parallel strand of specialised surveys of nutrition that evolved alongside budget studies from the late nineteenth century onwards.[13]

In Section 2, we address three separate developments. First, we describe the growing internationalism of household survey research, primarily through the auspices of the International Statistical Congress. From the 1890s the ISC was sharing best practice, even though it did not distribute methodological guidelines to member states until after the Second World War. Secondly, we examine how the state became involved in the design and implementation of household surveys in the late nineteenth century, stimulated by a desire to understand comparative industrialisation and the impact of trade. In the 1890s, witnessing the usefulness of household budget surveys to shape policy, and the successful use of international comparative budget research by the United States government to inform trade, European governments began to draw from the expertise of private investigators and conduct household budget surveys themselves, sometimes aided or advised by established investigators. In the period between 1890 and 1914, most of the Western European governments began their own programme of systematic household budget research, in some cases motivated by the need to

[12] Frederic Eden *The State of the Poor*, (Abridged Rogers Edition 1928, p.2)

[13] Medical Officer's Report to the Committee of the Privy Council. 5th Report (1862): The Cotton Famine 3. Economics of Diet by Dr E. Smith Parliamentary Papers, 1863, XXV and Medical Officer's Report to the Committee of the Privy Council. 6th Report (1863) Appendix No 6, 7. Conditions of Nourishment. No 6 Food of the Lowest Fed Classes by Dr E. Smith. Parliamentary Papers, 1864, XXVIII.

ascertain expenditure weights in the construction of official cost of living indices.[14] In this section, we finally consider an important parallel comprehensive survey approach, based on the enumeration of whole towns or groups, which can be seen as an attempt to consider diversity before developments in statistical sampling made the investigation of typicality and diversity simultaneously attainable at relatively low cost.

In Section 3, we trace the increasing internationalisation of household survey methods and their shift in focus towards measuring the impact of war and their use by the state as a source of data for the construction of official cost of living indices. After 1914, the utility of household consumption information to inform government food policy in times of potential shortage was made apparent. Governments responded rapidly to the threat of wartime food shortage with crisis household consumption surveys - institutionalising the fledgling methodology of household budget surveys into the administrative mechanics of the state. In 1919, the newly created International Labour Organization (ILO) became involved in shaping methodology and comparing results internationally. This crisis/cost-of-living model of household budget survey research informed by the ILO continued through the Great Depression of the 1930s and through the Second World War.

In Section 4 we describe how European surveys were no longer preoccupied with the effects of industrialisation or crisis on the workforce, but began to become part of the social apparatus of functioning peacetime nation-statehood. After 1945, international comparison of consumption data became incorporated into the philosophy of reconstruction, as part of the post-war aspiration for a peaceful and prosperous Europe. The United Nations encouraged developed and developing nations to carry out household budget research from 1949, and produced a series of methodological guides to encourage international standardisation of the research.[15] In the 1950s some European countries began to formally work

[14] For example, the UK Board of Trade 1904 survey

[15] G. Darmois, W.E. Deming, P.C. Mahalanbois, F. Yates, R.A. Fisher, 'The Preparation of Sampling Survey Reports' *Statistical Office of the United Nations Statistical Papers* Series C., No. 1 (Lake Success, New York: Statistical Office of the United Nations, 1949).

together to carry out comparative industry-based household budget research.[16] After World War Two, European household surveys are still used for the purposes they were devised for in the nineteenth century, but they are better designed to provide data to adequately address these objectives. In addition, and possibly more importantly, it is recognised by governments that household survey data could help formulate a much broader range of state policies, relating to: agriculture, financial planning, trade, energy, as well as welfare. This repurposing of household survey data is also a function of the development of survey methods; sampling that allows for the investigation of attributes of the population and the growing internationalisation of design that allows for comparative analysis.

By the mid-1960s, the Western European countries were all conducting a continuous and systematic programme of household budget research, organised in accordance with internationally agreed methodological standards, although some regional variations in reporting remained (for example in the sampling technique or in the food types recorded). The data from the surveys was often shared between countries and was additionally recorded centrally by the World Bank. The evolution of the statistical understanding of domestic consumption had moved from the local to the global with remarkable speed – demonstrating the relevance to governments of data on the personal consumption habits of citizens.

Thus we also find parallel developments in statistical methodology shaping the design and implementation of household surveys. Before 1945 the majority of Western European household budget surveys were of urban, skilled working class, nuclear family households and headed by a male breadwinner, though in some countries there was also an empirically rich tradition of surveys of the living standards of rural households.[17] Using this type of family as a unit of measurement had been informal practice among researchers who felt their research should be

[16] European Community for Coal and Steel, 'Wirtschaftsrechnungen der Arbeiterfamilien der E G K S 1956/57' Serie Sozialstatistik, 1960.

[17] Gazeley, I and Horrell, S, "Nutrition in the English agricultural labourer's household over the course of the long nineteenth century." ***Economic History Review***, (2013) Vol 66, No .3 pp.757-784

representative of the needs of the urban industrial class, and was formalised by a resolution of the Third International Conference of Labour Statisticians in 1926 to only carry out budget research among working class employed or lower middle class clerical workers. [18] As such, the government-run surveys were internationally comparable with each other, but (with some exceptions) were only representative of a particular skilled working class nuclear family cohort of society. Sampling depended on voluntary participation by workers (or for payment of a small stipend) among urban trade union cohorts.

It was not until the interwar period that household surveys began to utilise sampling techniques to capture the characteristics of the underlying population, and not until the 1930s that stratified random sampling was first used and, generally, most post-war household surveys employ this technique. Prior to the utilisation of random sampling, household surveys in Western Europe employed a variety of techniques, and the choice of these was in part motivated by whether or not investigators were primarily concerned with typical households or enumerating the extent of diversity. In the former case, often the survey was motivated by considerations of the impact of trade or for the purposes of constructing weights for cost of living indices. Here the search for typical households usually confined the sample to nuclear families in employment identified through trade union lists and 'snow-ball' sampling techniques or from contact information provided by (generally) larger employers. Equally, where the objective was a consideration of non-working households, including for example surveys examining the living standards of households on welfare programs, similar selection techniques were employed, with welfare administrators identifying typical households. In contrast, at various points during the late nineteenth and early twentieth centuries, attempts to enumerate the extent of diversity co-existed with the desire to understand what was typical, and at the extreme, the method employed was holistic with the population of an entire town surveyed. The costliness of this approach limited its use and motivated investigators to explore the feasibility of sampling.

[18] International Labour Office, *The Third International Conference of Labour Statisticians.* Studies and Reports. Series N. No. 12. (Geneva, 1926).

Throughout this article we emphasise the spirit of international co-operation, competition and comparison that was the driving force behind methodological innovations in household budget surveys. As a valuable source of data on the living conditions of working households – and on how those households interact with the marketplace - household budget surveys have consistently informed national and international policies on welfare, consumer price indices, trade, and industrial conditions. The evolving internationalisation of the design and implementation of household expenditure surveys facilitates trans-national comparisons of living standards. As a general conclusion, comparisons between countries at any given point in time are less problematic than analysis over time, even if this historical analysis is confined to one country.

Section 1: Eighteenth and early Nineteenth Century Origins

In England during the period of the French Revolution, it became apparent to industrialists and reformers alike that it would be wise to assess exactly what *were* the living conditions of the nascent working class. A wide variety of surveys were carried out, on a national and local level, including the first national census in 1801, wage statistics for different industries, and reports on diet, health, sanitation and living conditions, mostly of the urban poor.[19] Household budget surveys thus developed as part of a new statistical toolkit for understanding a changing society.

Their development and deployment was closely linked with industrialisation and population growth. The two earliest surveys in Britain, David Davies' *The Case of Labourers in Husbandry* (1795) and Frederic Morton Eden's *The State of the Poor* (1797), were a response to rural poverty caused by high prices for grain and other basic commodities, and a change in the structure of rural labour. Landowning

[19] See classic works of Victorian reformist surveying such as Henry Mayhew, *London Labour and the London poor: a cyclopaedia of the condition and earnings of those that will work, those and cannot work, and those that will not work* (London: Griffin, Bohn and Company, 1861).

farmers were required to pay wages for day-labourers and additionally poor-rates towards subsistence for the poor of the parish. Landless day-labourers, who could no longer rely on access to communal lands for grazing and forage, were increasingly dependant on wages rather than goods in kind for subsistence. At a time of public debate about the scope and cost of poor relief, and a re-evaluation of the impact of land enclosure on the countryside, Davies and Eden's research proved relevant.[20]

The Rector David Davies' *The Case of Labourers in Husbandry,* published in 1795, detailed the living conditions of agricultural labourers across Great Britain.[21] He had begun his investigations in his own parish in 1787 where he found considerable distress among labouring families who attributed their poverty to the high cost of basic goods. In an effort to ascertain the truth of this, Davies noted accounts of the earnings and expenses of the families. On finding the hardship to be a result of poor wages and high expenses rather than improvidence, Davies expanded his enquiries to survey 137 households in 29 parishes across the nation, with the local surveys being carried out by ministers or members of parliament known to Davies. Davies felt that land enclosure was turning 'neglected, and almost useless' land into potentially profitable arable land, but felt that more needed to be done to provide useful employment for all.[22] Lack of employment for men and boys in fallow times, or as a result of sickness or injury, was a main cause of the distress of families. After scrutinising the budgets of agricultural households, which are presented in full in the volume as evidence to support his case, Davies concluded that the two realistic measures that would improve the conditions of the poor would be the raising of wages for men, allowing some savings to be put by for hard times, and the provision of employment for women and girls. If those measures were taken, Davies predicted the poor-rates paid by

[20] For a detailed examination of the two surveys, see Ian Gazeley and Nicola Verdon, 'The first poverty line? Davies' and Eden's investigation of rural poverty in late 18th century England', *Explorations in Economic History* 51 (2014) pp. 94-108.
[21] David Davies, *The Case of Labourers in Husbandry Stated and Considered. With an Appendix Containing A Collection of Accounts Shewing [sic] the earnings and expenses of laboring families in different parts of the Kingdom* (Fairfield: Augustus M. Kelley, 1977 [1795]).
[22] David Davies, *The Case of Labourers in Husbandry Stated and Considered. With an Appendix Containing A Collection of Accounts Shewing [sic] the earnings and expenses of laboring families in different parts of the Kingdom* (Fairfield: Augustus M. Kelley, 1977 [1795]). P. 78.

wealthier landowners would be able to be reduced, and the poverty of labourers ameliorated.[23]

Sir Frederic Morton Eden attributed his inspiration for his three-volume book *The State of the Poor* (1797) to the difficulties faced by labourers in 1794 and 1795 as a result of the high cost of basic goods. His motivation, he said, was a combination of benevolence and curiosity.[24] He felt the system of poor rates, which had 'doubled their former amount within the last twenty years', was beneficial to neither the landowners who had to pay them, nor the poor who were in receipt of them.[25] An agent sent by Eden collected household budgets of 55 families of agricultural labourers from 14 parishes across the country in January and February 1796.[26]

While Eden and Davies were notable early practitioners of budget research, it was the later work of Le Play and Ducpétiaux and the statistical formulations applied to their data by Engel that can be said to be the origins of the modern household budget survey. Frédéric Le Play was the most influential pioneer in early family budget research, whose work has been seen by researchers as a sociological response to the politics of industrialisation.[27] A French mining engineer by profession, in his spare time he pioneered the use of data collected through systematic field research to inform social science. *Les Ouvriers Européenes* – a six-volume compendium of individual case studies of working families across Europe begun in 1829 – was first published in 1855 and subsequently reissued as a set of six volumes in 1877-79. The concept of the family as a unit of social measurement, in which labour can be expressed in monetary terms, was Le Play's great

[23] David Davies, *The Case of Labourers in Husbandry Stated and Considered. With an Appendix Containing A Collection of Accounts Shewing [sic] the earnings and expenses of laboring families in different parts of the Kingdom* (Fairfield: Augustus M. Kelley, 1977 [1795]). P. 124-126.
[24] Frederic Morton Eden *The State of the Poor: Or, An History of the Labouring Classes in England from the Conquest to the Present Period* (London: Frank Cass and Co. Ltd., 1966 [1797]).
[25] Frederic Morton Eden *The State of the Poor: Or, An History of the Labouring Classes in England from the Conquest to the Present Period* (London: Frank Cass and Co. Ltd., 1966 [1797]). Preface p. XXV.
[26] Frederic Morton Eden *The State of the Poor: Or, An History of the Labouring Classes in England from the Conquest to the Present Period* (London: Frank Cass and Co. Ltd., 1966 [1797]). Volume Three. Appendix No. XII pp. cccxxxix-cccl.
[27] See Catherine Bodard Silver (ed.) *Frédéric Le Play on Family, Work, and Social Change* (Chicago and London: The University of Chicago Press, 1982).

innovation, albeit one he acknowledged was imperfect.[28] As a moral and social conservative, Le Play felt that while industrial innovation had improved material conditions for most workers, it had corrupted the moral aspects of family life.[29] By observing and documenting in close detail folk family practices, he sought to inform a more judicious reform of the socio-economic order. His detailed and individual case studies influenced many researchers in Europe and beyond.

The Belgian statistician Adolphe Quételet and other European statisticians were, from the 1850s, increasingly turning their attention to the use of statistics to measure human growth and development.[30] In this, they shared the emerging sociological philosophy of Durkheim and others that sought to examine the functioning of individual autonomy and social solidarity in an industrialised society.[31] Quételet's creation of *l'homme moyen* (the average man) as a conceptual and practical way of assessing social conditions had direct methodological impact on household budget surveys under the direction of his associate, Ducpétiaux, who carried out a pioneering 1853 investigation on behalf of the Belgian government into the households of working families. The purpose was partly to differentiate between the living standards of urban and rural workers, and was partly, 'designed to embrace all economic facts relating to the existence of the worker, his needs, his habits.' [32] The data was taken by provincial statistical commissions in nine regions under the instruction of the Central Statistics Commission.[33] The regional commissions were told to take both urban and rural samples and to try to represent the main labour groups. There had been earlier

[28] J. M. Mogey, 'The Contribution of Frédéric Le Play to Family Research', *Marriage and Family Living*, Vol. 17, No. 4 (Nov., 1955), pp. 310-315.
[29] 'Sans doute, les innovations contemporaines ont souvent amélioré la vie matérielle ; mais, presque toujours, elles ont désorganisé la vie morale'. Frédéric Le Play, 'Livre Premier: Les Origines de la Methode' in *les Ouvriers Europeenes* (Tours, 1879) p. 3.
[30]Quételet, for example, developed the Body Mass Index, originally named the Quételet Index. The calculation is the weight of a person in kilograms divided by the square of their height in metres. Ancel Keyes, whose research confirmed Quételet's original formulation, renamed it in 1972. See Garabed Eknoyan (2007) 'Adolphe Quételet (1796-1874)-the average man and indices of obesity'. Nephrology Dialysis Transplantation. Volume 23, Issue 1. Pp. 47-51. [Accessed online 16.09.2014. http://ndt.oxfordjournals.org/content/23/1/47.full]
[31] See Emile Durkheim, *The Division of Labor in Society* (New York: The Free Press, 1997 [1893]).
[32] Édouard Ducpétiaux, *Budgets economiques des classes ouvrieres en Belgique* (Bruxelles, 1855) p. 9.
[33] The regions being; Brabant, Flandre Orientale, Flandre Occidentale, Anvers, Limborg, Hainaut, Namur, Luxembourg.

surveys, but this was the first one to employ statistical methods.[34] This survey is notable for being the first to apply Quételet's classification of household expenditures into three groups by income level.[35]

Ducpétiaux's concluding comments in his report of the survey foreshadowed Engel's Law, which was formulated in 1857 using the data from this survey.

> The right or wrong of the working class status depends on three essential elements that combine reacting on each other. These elements are: The percentage of compensation tied to work or wages; the price of basic commodities; the nature and quantity of food compared to the number of members composing the families.[36]

Le Play's main and enduring intervention had been to conceptualise the family as a unit of study. But it took some time to establish a consensus of what a family actually was. In early surveys by Ducpétiaux and others researchers went to great lengths, usually using trade unions as agents, to find examples of what was deemed the 'typical' family (usually an urban working-class bread-winning husband, his wife and three or four children under the age of 16). In the influential 1853 Belgian survey, for example, each family unless stated otherwise was composed of a father, a mother and four children aged approximately 16, 12, 6 and 2 years old.[37] This was deemed by the survey takers to be an average family. The older children would often be working so their wages would contribute to the household.

If Quételet pioneered the application of statistics to analysis of the human body, Ernst Engel can be said to have taken that concept to the next stage by applying statistical formulations to analysis of human social behaviour. Significantly, he did this using data gathered in early household budget research. Engel, who had

[34] Most notable in Ministère de l'Intériure, *Enquête sur la condition des classes ouvrières et sure la travail des enfants* (1843).
[35] For further discussion, see Jean-Michel Collette, 'Empirical Inquiries and the Assessment of Social Progress in Western Europe: A Historical Perspective'. United Nations Research Institute for Social Development. Social Policy and Development Programme Paper Number 3 (June 2000).
[36] Édouard Ducpétiaux, *Budgets economiques des classes ouvrieres en Belgique* (Bruxelles, 1855) p. 136.
[37] Édouard Ducpétiaux, *Budgets economiques des classes ouvrieres en Belgique* (Bruxelles, 1855)

started his career assessing questions of labour and industry, was subsequently a Prussian government statistician and the first head of the state statistics bureau. His influence, therefore, was widespread in the small world of contemporary European statisticians.

Engel used data collected by Le Play and Ducpétiaux to develop his theories on food consumption. Engel's work using budgets of poor households collected by Le Play showed that 90% of the income of a poor family tended to be spent on meeting basic needs, leaving little for any luxuries, savings or activities to better their condition.[38] He then used Ducpétiaux's data from the 1853 Belgian survey to develop the understanding quoted at the start of this section that analysis of the consumption of food was consequently a particularly reliable measure of welfare.[39] He later refined this statement into his famous 'Law':

> The poorer an individual, a family, or a people, the greater must be the percentage of the income necessary for physical sustenance, and again of this a greater portion must be allowed for food.[40]

As Carle Zimmerman wrote in 1936, none of Engel's close contemporaries were able to disprove his conclusions on consumption.[41]

An important parallel strand of household survey investigation also commenced during this period, as the science of nutrition developed during the nineteenth century. In 1863 Dr Edward Smith published the results of his investigations into the diets, along with a rudimentary nutritional analysis of labourers' households following the Lancashire cotton famine. Smith included about 1300 individual households in two reports, with a fairly wide geographic coverage of Great Britain

[38] Ernst Engel, Die Lebenskosten Belgischer Arbeiter-Familien Früher und Jezst [The living standards of Belgian working families: Then and Now] (Dresden: C. Heinrich, 1895 [1857]). pp. 34-39.
[39] Ernst Engel, Die Lebenskosten Belgischer Arbeiter-Familien Früher und Jezst [The living standards of Belgian working families: Then and Now] (Dresden: C. Heinrich, 1895 [1857]).
[40] Ernst Engel, Die Lebenskosten Belgischer Arbeiter-Familien Früher und Jezst [The living standards of Belgian working families: Then and Now] (Dresden: C. Heinrich, 1895 [1857]).
[41] Carle C. Zimmerman, *Consumption and Standards of Living* (London: Williams and Norgate Ltd., 1936) pp. 39-43.

and Ireland. [42] His *Reports* also include details of household structure, income and occupation, along with a qualitative, and often fairly pejorative, assessment of the health, character and living conditions of the household, and are in most respects – other than the analytical focus on diet – indistinguishable from contemporaneous surveys. Prior to Smith's investigation, Nield had collected details of 19 households' diets in 1841,[43] but Smith's household survey was the largest scale survey conducted until the 1890s.

Section 2: Late nineteenth and early twentieth century developments

2(i) The International Statistical Congress

International collaborative endeavour between researchers began to shape the methodology of household budget surveys in a series of nine International Statistical Congresses first convened by Adolphe Quételet and held between 1853 and 1879.[44] From the outset, the focus was on the ability of statistics to record and improve the business of national organisation and international co-operation.[45] Those who attended the Congress meetings tended to be academic or government-employed statisticians who would use the contacts made through membership of the network to exchange ideas and methodologies. Ernst Engel, for example, as the Director of the Prussian Statistical Office, was a prominent member. While the ISC meetings helped formulate international statistical knowledge sharing, Randeraand (2011) argues their main function was to contribute towards the acceptance of statistics as a fundamental guide in the political decision-making of nation-states.[46]

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[42] Medical Officer's Report to the Committee of the Privy Council. 5th Report (1862): The Cotton Famine 3. Economics of Diet by Dr E. Smith Parliamentary Papers, 1863, XXV and Medical Officer's Report to the Committee of the Privy Council. 6th Report (1863) Appendix No 6, 7. Conditions of Nourishment. No 6 Food of the Lowest Fed Classes by Dr E. Smith. Parliamentary Papers, 1864, XXVIII.

[43] McKenzie, J.C., 'The Composition and Nutritional Value of Diets in Manchester and Dukinfield in 1941', *Transactions of the Lancashire and Cheshire Antiquarian Society*, Vol 72 for 1962 (1965).

[44] Nico Randeraad, 'The International Statistical Congress (1853-1876): Knowledge Transfers and their Limits' *European History Quarterly* 41(1) (2011), pp. 50–65.

[45] J.W. Nixon, *A History of the International Statistical Institute, 1885-1960* (ISI: Geneva, 1960) pp. 5-10.

[46] Adolphe Quételet developed the idea of an international statistical meeting during the 1851 Worlds Fair in London, having already helped found the Statistical Society in 1834.

In 1885, the informal congress meetings were formalised into the establishment of the International Statistical Institute (ISI), with the stated aim of encouraging governments to be officially involved in the development of statistical practices.[47] To this end, membership was restricted to principal government statisticians from any country that had a statistical organisation. Biennial meetings were held in changing locations until the outbreak of war in 1914.

The ISI led the development of government-run household budget surveys in 1891 at the Vienna Congress when they formally recognised the significance of the research of Le Play and Ducpétiaux and recommended that members should carry out detailed family budget studies that built on the work of Swiss statistician Carl Landolt.[48] Landolt had, under the auspices of the federal statistical office, between April 1889 and March 1890 carried out the first Swiss governmental household budget survey of ten working class households in Basel.[49] Landolt presented individual-level data for each of the ten households, including information on household composition and food consumption. This study was to be held up as a model to ISI member statisticians for the next twenty years. Although best practice and results were shared, no formal guidance on methodology existed in these early years.

The International Statistical Institute, while it did not yet provide formal guidance on methodology, nonetheless provided a forum for the development of sampling techniques in surveys. From 1897, the Norwegian statistician Kiaer was arguing for the use of representative sampling at ISI sessions.[50] A resolution was passed in 1903 affirming the ISI's support for the representative method, which was then enthusiastically taken up by his fellow ISI member, A.L. Bowley, who subsequently pioneered sampling used in his research on poverty in English towns. Bowley was

[47] J.W. Nixon, *A History of the International Statistical Institute, 1885-1960* (ISI: Geneva, 1960) pp. 5-10.
[48] Friedrich Zahn, *50 Années de l'Institut International de Statistique* (ISI: Geneva. 1934) pp. 137-139.
[49] Carl Landolt, 'Zehn Basler Arbeiterhaushaltungen' *Zeitschrift fur schweiz Statistik* 1891 pp. 281-371.
[50] See Morris H. Hansen, Tore Dalenious and Benjamin J. Tepping, 'The Development of Sample Surveys of Finite Populations' in Anthony C. Atkinson and Stephen E. Fienberg (eds.) *A Celebration of Statistics: The ISI Centenary Volume* (Springer-Verlag: New York, 1985) pp. 327-354.

appointed to a Chair in Statistics at the London School of Economics in 1919, the first of its kind. Bowley sampled one in twenty households in the northern industrial towns he surveyed. The first Bowley and Burnett-Hurst survey was carried out in 609 households in Reading in 1912, then the same methodology was used in autumn 1913 in the industrial towns of Northampton (891 households), Warrington (640 households) and Stanley (242 households). A 1914 survey of Bolton was added to subsequent editions.[51] The second methodological innovation by Bowley and Burnett-Hurst related to household composition. They rejected seeking out the 'typical family' in favour of examining households as they found them, 'It is very common to speak of a family of man, wife and three dependent children as normal, and minimum wage proposals generally have this in view; and it is often erroneously argued that the proportion of men whose wages fall below the amount necessary for this is also the proportion of families in poverty. We have actually found an enormous variety of households, and our enquiry proves that this particular grouping, though it is in some respects the average, is itself quite rare.'[52]

Halbwachs, Lorenz, Engel and the other researchers around the turn of the century (mostly members of the ISI) who formulated statistical and sociological theories based on data from household budget surveys had profound influence.[53] They not only shaped the development of the surveys among the small group of European and North American researchers and reformers who were interested in the living conditions of workers, but additionally drew the attention of governments, who were quick to see the potential of this kind of research to both domestic and international trade and welfare policy making.

[51] There was a 1997 reissue of the text by Routledge.

[52] A.L. Bowley, *Livelihood and Poverty: A Study in the Economic Conditions of Working-Class Households in Northampton, Warrington Stanley and Reading* (London: G. Bell and Sons Ltd., 1915). p. 26.

[53] Sociologist Maurice Halbwachs instigated two of the earliest surveys in France – of workers in 1907 and 1914. Halbwachs was internationally influential in household budget research. His two monographs using, among other sources, the German surveys of 1907-8 and 1927-28 to conceptualise consumer desire among workers were influential in the Le Play sociological tradition of using data to make broader conclusions about human behaviour.Maurice Halbwachs, 'Budgets de familles ouvrières et paysannes en France en 1907' B*ulletin de la statistique générale de la France*, V. IV, No. 1 (1914) 47-83 and Maurice Halbwachs, 'Revenues et depenses des menages des travailleurs; une enquete officielle d'avant-guerre', *Revue d'economie politique*, 35 (1921) 50-59.

2(ii) A National Account: the developing relationship between individual and government surveys.

Before the turn of the twentieth century, Western European governments saw household budget research as part of international trade and labour research. From the 1890s, departments of international labour began to undertake the research, employing methodologies adapted from those used by academic sociologists and private investigators. While the United States is not the focus of this article, innovations made in America had an impact on the development of the household budget survey in Europe.

In 1888-90, Carrol D. Wright instigated the first trans-national survey and demonstrated the benefits of collecting international data on the consumption habits and living conditions of workers for the analysis of the impact of tariffs on international trade. According to Williamson, Wright had developed and perfected advanced census techniques in a number of enquiries before this.[54] Wright's survey was also on a larger scale than any previous enquiry. It was based upon the analysis of 8,544 household budgets collected in twenty-four states in America, Great Britain, Germany, France, Belgium and Switzerland. Published in 1890 and 1891 as the *Sixth and Seventh Reports* of the United States Commissioner of Labor.[55]

The USCL survey was implemented during Wright's tenure at the Massachusetts Bureau of Statistics of Labor and motivated by the McKinley Tariff. This led the Commissioners to focus exclusively on export industries in the countries studied. To this end, Wright was interested in data relating to the cost of production and the cost of living in nine industries in Europe and America (Pig Iron, Bar Iron, Steel, Coal, Coke, Iron Ore, Cotton, Wool, Glass), which were all already protected

54 Williamson, J.G. Consumer Behavior in the Ninetieth Century: Carroll D. Wright's Massachusetts Workers in 1875' p.102-3

[55] Sixth Annual Report of the Commissioner of Labor, *Cost of Production: Iron, Steel, Coal etc.* (Washington: Government Printing Office, 1891)

industries in America.[56] The potential benefits of assessing the labour conditions of economic competitors subsequently became apparent to European governmental departments of labour and/or trade, none of which had carried out international comparative research before the USCL survey, but many of which did so afterwards, notably the UK Board of Trade, who, as we will see, undertook large scale household surveys in Germany, France, Belgium and America before World War One.

Atwater's research on diet and nutrition, published from 1895, was also of profound influence in Europe.[57] Having spent time in Germany as a post-graduate, Atwater was appointed as Professor of Chemistry at Wesleyan University, and was also director of the first agricultural experimental station in America, 1875-77. When this was transferred to Yale, Atwater's interest became focussed on human nutrition.[58] In 1884 Atwater was invited to comment on food data collected by the Massachusetts Bureau of Labor in the 1870s and he concluded that US skilled workers had more protein and energy available in their diets than German workers. In 1886 Atwater began publishing a series of articles on *The Chemistry of Food and Nutrition* that included complete food composition tables.[59] Using the Atwater tables, European researchers began to adapt household budget surveys to study diet and nutrition, particularly of the working classes.[60] A separate strand of household consumption surveys focused solely on nutrition emerged, while household budget surveys were also sometime adapted to provide supplemental nutritional information by asking householders about quantities of food consumed, from which information researchers could subsequently extrapolate nutritional data.

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56 Haines, Michael, 'Industrial Work and the Family Life Cycle, 1889-1890', *Research in Economic Hist*ory, Vol 4 pp.289-356. (1979) p.293

[57] W.O. Atwater and A.P. Bryant, 'Dietary Studies in Chicago in 1895 and 1896', *U.S. Department of Agriculture Official Expedition Statistical Bulletin*, Vol. 55 (1898); W.O. Atwater and Charles D. Woods, 'Dietary Studies in New York City in 1895 and 1896', *U.S. Department of Agriculture Official Expedition Statistical Bulletin*, Vol. 46 (1898).

[58] Carpenter, Kenneth, J., "The Life and Times of W.O. Atwater (1844-1907), *The American Institute of Nutrition*, Supplement (1994) p.1707s

[59] Carpenter, *Ibid* p.1710s

[60]Rowntree, for example, used Atwater's research to devise the food component of his primary poverty line. Rowntree, B.S. *Poverty: A Study of Town Life* (1901, p.?)

In the period between 1890 and 1914, most of the European governments created statistical offices and the responsibility for undertaking domestic household budget surveys became formally associated with state-employed statisticians.[61] Most of the governments in Western Europe carried out a first (and in some cases second and third) official domestic household budget survey in this period, as summarised in Table 1.

Table 1: First significant government-run household budget surveys in chronological order.

Country	Year	No. of House-holds	Government department responsible	Reference
Switzerland	1890-91	10	Bureau federale de Statistique [Federal Bureau of Statistics]	'Zehn Basler Arbeiterhaushaltungen' , *Zeitschrift fur schweiz Statistik* (1891) pp. 281-372.
Belgium	1891	188	Ministère de l'Agriculture, de l'industrie, et des Travaux publics [Ministry of Agriculture, Industry and Public Works].	*Salaires et budgets ouvriers en Belgique au mois d'avril 1891*. (Bruxelles, 1891).
Denmark	1896	251	Danmarks Statistisk [Danish Bureau of Statistics]	'Danske Arbejderfamiliers Forbrug 1: Afdeling: Byarbejdere', *Statistiske Meddeleser* 4:6, 1900; 'Danske Arbejderfamiliers Forbrug : 2. Afdeling: Landarbejdere' *Statistiske Meddeleser* 4:11, 1901.

[61] Ernst Engel, Die Lebenskosten Belgischer Arbeiter-Familien Früher und Jezst [The living standards of Belgian working families: Then and Now] (Dresden: C.Heinrich, 1895 [1857]).or example, in Germany, Statistisches Reichsamt. Abteilung fur Arbeiterstatistik, 'Die Erhebungen des kreigsausschusses fur konsumenteninteressen. Beitrage zur Kenntnis der Lebenshaltung im Vierten kriegsjahre', Reichs-Arbeitsblatt, Sonderheft Vol. 21 (1919); Norway, Norges Statistisk Sentralbyrå, Husholdningsregnskap 1918, Norges officielle statistik (1921);

United Kingdom	1904	1,944	United Kingdom, Board of Trade, British and Foreign Trade and Industry	I. Consumption and Cost of Food in Workmen's Families in Urban Districts in the United Kingdom. II. Changes in the cost of living of the working classes in large towns (1904).
Norway	1906 - 1907	12	Norges Statistisk Sentralbyrå [Norwegian Office of Statistics]	'Skatternes fordeling efter indtægt og forsørgelsesbyrde' Socialstatistik. 8 (Kristiania, 1909).
Germany	1907	852	Statistisches Reichsamt [Statistical Office of the Reich]	'Erhebung von Wirtschaftsrechnungen Minderbemittelter Familien in Deutschen Reiche, Sonderheft zum Reichs Arbeitsblatt' (Berlin, 1909).
Sweden	1907 - 1908	150	Statistika Kontoret [Stockholm Bureau of Statistics]	'Statistisk Undersökning Angaende Levnadskostnaderna i Stockholm Aren 1907-8' (Stockholm, 1910), 143pp.
Finland	1908 - 1909	308	Teolisuus Hallituksen ylivalvonalla Toimitannut [Statistical department of the Bureau of Industry]	Vera Hjelt, *Tutkimus ammattityöläisten toimeentulo ehdoista Suomessa 1908-1909* (Helsinki, 1912).
Austria	1912 - 1914	119	Handelsministeriu m [Department of Commerce]	Wirtschaftsrechnungen und Lebensverhältnisse von Wiener Arbeiterfamilien, 1912-1914 (Wien, 1916).
France	1913 - 1914	1, 253	Statistique Générale de la France [French General Statistical Department]	L. Dugé de Bernonville, 'Enquete sur les conditions de la vie ouvriere et rurale en France en 1913-1914', Bulletin de la Statistique

				générale de la France, Vol. VI, No.1 (Oct. 1916).
Netherlands	1917 - 1922	114	Bureau van Statistiek [Office of Statistics]	'De uitgaven van 114 ambtenaars- en arbeiders gezinnen' (Amsterdam, J.M. Meulenhoff, 1924).
Ireland	1922	308	Ministry of Economic Affairs	'Report on the Cost of Living in Ireland' (Dublin, 1922).

The Belgian Ministry of Agriculture, Labour and Public Works was one of the first government departments to produce a comprehensive survey in-house.[62] It detailed the household composition and monthly income and expenditure of 188 households in 8 regions of Belgium in 1891. Households selected were working families in blue-collar jobs. It includes the job of the head of household, salaries of father, mother and children, and expenditures on all food groups; rent, heat and light; clothes; washing; health and medicine; leisure. The section on food also gives quantities consumed (in Kg/litre per household), reflecting the growth of interest in nutritional research. Engel used this survey as a point of comparison from his 1857 statistical formulation of Engel's Law that had been based on the 1853 Belgian survey.[63] He felt the 1891 research backed up his earlier conclusions. He now, however, linked poor living conditions to the labour unrest that had been prevalent in Belgium, and proposed in his conclusion that industrial peace might be reached when workers could have 20% of their income as free income to spend on leisure, after all physical needs had been met.[64]

In Switzerland Carl Landolt carried out the first small government survey in 1889/1890, with an extremely detailed observation of ten working class households in Basel.[65] Larger surveys followed in 1912 and 1919, influenced by the failed Frankfurt survey of workers that had been carried out in 1906 on the

[62] Ministère de l'Agriculture, de l'industrie, et des Travaux publics. *Salaires et budgets ouvriers en Belgique au mois d'avril 1891*. (Bruxelles, 1891).
[63] Ernst Engel, *Die Lebenskosten Belgischer Arbeiter-Familien Früher und Jezst* [The living standards of Belgian working families: Then and Now] (Dresden: C. Heinrich, 1895 [1857]).
[64] Engel, *Die Lebenskosten* p. 124.
[65] Carl Landolt, 'Zehn Basler Arbeiterhaushaltungen', *Zeitschrift fur schweiz Statistik* (1891) pp. 281-372.

households of 100 workers.[66] Each of the Swiss surveys was designed centrally by the national statistical organisation but was carried out in three parts and administered by the statistical offices of Zurich, Basel and Bern respectively.

The Danish government soon followed with an 1896 survey of 251 households, both rural and urban.[67] The 50 urban households in the survey were selected as working-class households in either Copenhagen (27 budgets) or a large provincial town (23 budgets). The 201 rural households were from all over Denmark. The households were chosen after Marcus Rubin (director of the government's new statistical office) wrote to head teachers in rural areas and co-operative associations in urban areas, asking whether they could help recruit volunteers to keep detailed household record books. Analysing the budgets of the urban households was relatively straightforward, but the rural households, with more self-produced food and less reliance on money, presented more of a challenge. Rubin found considerable difference between rural and urban patterns of income and expenditure.

Due to the particular influence of Le Play in his native France, family budget surveys there tended to be detailed monographs until the early twentieth century.[68] The French Labour Department carried out its first significant survey in 1901, with a collaborative detailed examination of budgets of 1, 915 schoolteachers in Paris, undertaken using the Primary Education Institute as agents.[69] It was felt that the schoolteachers had incomes that were generally representative of manual workers in the city, so the Labour Department processed the results of the survey, which were broken down according to three income groups, and additionally to the size of the household. Due also to Le Play's

[66] J. Heiden, 'Frankfurter Haushaltungsrechnungen', *Jahresbericht fur 1906 nebst Jahrebericht des Gewerkschaftskartells.* Appendix to Vol. 8 (Frankfurt, 1907).
[67] Danmarks Statistik, 'Danske Arbejderfamiliers Forbrug 1: Afdeling: Byarbejdere' *Statistiske Meddeleser* 4:6 (1900); Danmarks Statistik, 'Danske Arbejderfamiliers Forbrug : 2. Afdeling: Landarbejdere' *Statistiske Meddeleser* 4:11 (1901); Marcus Rubin, 'Consommation de Familles D'ouvriers Danois', Bull. Inst. Internatl. Statis., Vol. 13, No. 3. (Budapest, 1903) pp. 21-80.
[68] For a useful summary of the Le Play-inspired monographs in France, see Carle C. Zimmerman, *Consumption and Standards of Living* (London: Williams and Norgate Ltd., 1936) pp. 390-392.
[69] *Enquete faite par le Manuel Général de l'Instruction Primaire sur les conditions de vie des Instituteurs* (Libraire, Hachette et Cie, 79, Boulevard Saint Germain, Paris).

conceptualisation of the family as a unit of economic measurement, French surveys from this period until after the Second World War placed particular emphasis on household composition. The expenditure figures of the 1901 survey were given in weekly terms and covered the six basic categories of Food, Rent, Fuel & Light, Clothing, Various forms of Thrift, and Sundries. The first national French survey that provided detailed income, expenditure and nutritional information was carried out in 1913, focusing on 1, 101 households of rural or semi-rural workers.[70]

The establishment of the Labour Department of the UK Board of Trade in 1893, with Llewellyn Smith as labour commissioner (and ultimately from 1907, permanent secretary to the Board of Trade)[71], ushered in a rich period of official empirical investigation of the labour market and living conditions in Britain – reflecting, in part, the progressive Liberalism of Llewellyn Smith – alongside the traditional concern of the Board with United Kingdom's position in the international economy. These two aspects of the Board's domain intersect in a series of investigation of European and United States' towns and cities. The Board of Trade published an enquiry into the cost of living of the working classes in the United Kingdom in 1908 (hereafter UK towns 1908).[72] This was followed by studies of the cost of living in European towns between 1908 and 1910. The first of these was for Germany 1908, [73] followed by France 1909, [74] and Belgium

[70] L. Duge de Bernonville,'Enquete sur les conditions de la vie ouvriere et rurale en France en 1913-1914', *Bulletin de la Statistique generale de la France* vol. V1, 1917.
[71] Davidson, Roger, *Oxford Dictionary of National Biography*, Oxford University Press, 2004; online edn, Jan 2008 [http://www.oxforddnb.com/view/article/36147, accessed 12 Nov 2014]
[72] 1908 [Cd. 3864] *Cost of living of the working classes. Report of an enquiry by the Board of Trade into working class rents, housing and retail prices, together with the standard rates of wages prevailing in certain occupations in the principal industrial towns of the United Kingdom. With an introductory memorandum.*
[73] 1908 (Cd.4032) *Cost of living in German Towns. Report of an enquiry by the Board of Trade into working class rents, housing and retail prices, together with the rates of wages in certain occupations in the principal industrial towns of the German Empire. With an introductory memorandum and a comparison of conditions in Germany and the United Kingdom*.
[74] 1909 (Cd.4512) *Cost of living in French Towns. Report of an enquiry by the Board of Trade into working class rents, housing and retail prices, together with the rates of wages in certain occupations in the principal industrial towns of France. With an introductory memorandum and a comparison of conditions in France and the United Kingdom*.

1910. [75] These enquiries were part of a comparative investigation of working class conditions in what the Board of Trade referred to as 'principal commercial countries'.[76] In 1911 the Board of Trade extended its analysis to the United States of America.[77] No further studies were carried out by the Board of Trade overseas before the First World War, though in 1912, the enquiry of United Kingdom industrial towns first carried out in 1908 was repeated.[78]

The 1909 French survey of 5, 605 households headed by industrial workers across 30 towns was much larger and more comprehensive, in fact, than anything the French government, which was still not very active in household budget research, had carried out.[79] In Germany 1908, the Board of Trade provided a distribution into 5 income groups of 5, 046 working class households across 33 German towns. Food and drink was broken down into 15 sub-categorised items and quantities given for 9 food items. Besides household budget information, considerable information was provided on town life, wages, housing and food prices.[80] The domestic survey was principally concerned with the cost of living for workers, as a separate report had been prepared on wages and prices. Workers in 94 towns in England, Wales, Scotland and Ireland were surveyed in October 1905. [81] The 1910 Belgian survey covered 1, 859 households in 15 industrial towns.[82] The data was

[75] 1910 (Cd.5065) *Cost of living in Belgian Towns. Report of an enquiry by the Board of Trade into working class rents, housing and retail prices, together with the rates of wages in certain occupations in the principal industrial towns of Belgium. With an introductory memorandum and a comparison of conditions in Belgium and the United Kingdom*.

[76] H. Llwellyn Smith to President of the Board of Trade . Cd3064, p.i

[77] 1911 [Cd. 5609] *Cost of living in American towns. Report of an enquiry by the Board of Trade into working class rents, housing and retail prices, together with the rates of wages in certain occupations in the principal industrial towns of the United States of America. With an introductory memorandum and a comparison of conditions in the United States and the United Kingdom*.

[78] 1913 [Cd. 6955] *Cost of living of the working classes. Report of an enquiry by the Board of Trade into working-class rents and retail prices, together with the rates of wages in certain occupations in industrial towns of the United Kingdom in1912.*

[79] Great Britain Board of Trade, *Cost of Living in French Towns. Report of an enquiry into working class rents, housing and retail prices, together with the rates of wages in certain occupations in the principle industrial towns of France* (London: His Majesty's Stationery Office, 1909).

[80] Great Britain Board of Trade, *Report of an Enquiry into Working Class rents, housing and retail prices, together with the rates of wages in certain occupations in the principal industrial towns in the German Empire* (London: His Majesty's Stationery Office, 1908).

[81] Great Britain Board of Trade, *Cost of living of the working classes. Report of an enquiry by the Board of trade into working class rents, housing and retail prices, together with the standard rates of wages prevailing in certain occupations in the principal industrial towns of the United Kingdom. With an introductory memorandum* (London: His Majesty's Stationery Office, 1908).

[82] Great Britain Board of Trade, *Cost of Living in Belgian Towns* (London, 1910).

gathered by distributing forms through local trade unions. The Board of Trade concluded that the cost of living for a working family was approximately 9% cheaper in Belgium than in England, principally because rents were much cheaper. The Board of Trade concluded that many of the differences in the standard of living of industrial workers between the four countries were, 'due largely to differences in national tastes and models of life' with, for example, rents being lower in France but housing correspondingly poorer. In general, there was as much difference between towns within a country as there was internationally.[83]

Prior to these enquiries, the Board of Trade had undertaken a number of investigations of working class living conditions in the United Kingdom. The most important of these was the collection and analysis of working household budgets published in 1889 [84], 1903,[85] and 1905.[86] The returns of expenditure by working men published in 1889, provided 34 budgets distributed through co-operative societies in November in 1887, and was an attempt to understand,

> How money wages are or can be spent, is a question which must be investigated in order to give meaning to the ups and downs of money wages themselves.[87]

The Board was influenced by Le Play's mid-nineteenth century investigation of working-class living conditions in Europe, and the more recent investigations of Belgian household budgets by Ducpetiaux and German budgets by Gruber.[88] From the very onset, therefore, government instigated household expenditure enquiries in the UK were motivated by two objectives: the desire to calculate a cost of living

[83] Great Britain Board of Trade, *Cost of Living in French Towns. Report of an enquiry into working class rents, housing and retail prices, together with the rates of wages in certain occupations in the principle industrial towns of France* (London: His Majesty's Stationery Office, 1909). Iv.
[84] 1889 [C.5861] *Labour statistics. Returns of expenditure by working men*.
[85] 1903 [Cd. 1761] *British and foreign trade and industry. Memoranda, statistical tables, and charts prepared in the Board of Trade with reference to various matters bearing on British and foreign trade and industrial conditions*.
[86] 1905 [Cd. 2337] *British and foreign trade and industry (second series). Second series of memoranda, statistical tables, and charts prepared in the Board of Trade with reference to various matters bearing on British and foreign trade and*
industrial conditions.
[87] 1889 [C.5861], p.i
[88] 1889 [C.5861], p.i

index and the comparative analysis of living conditions among industrial competitors.

The 1903 Board of Trade report continued these two themes with the analysis of 114 agricultural labourer's budgets collected by Wilson Fox in 1902 and 286 urban budgets for Great Britain in 1903. Comparative international data was derived from United States Commissioner of Labor enquires of 1889-90, for the UK, USA, France, Germany and Switzerland.[89] The collection and analysis of relatively small numbers of urban worker's budgets in 1887 and 1903 were important precursors to the first large-scale household expenditure enquiry in the United Kingdom. In 1905 the Board of Trade published the results of an analysis of household budgets collected in the summer of 1904. Details of income, rent and items of food expenditure were collected from workmen and their families for one week during August-September 1904. Questionnaires were sent to workmen's organisations, co-operative societies and selected individuals, producing a total of 1, 944 UK returns (136 from London in 1903 and another 1, 808 in August and September of 1904 from all parts of the UK). [90]

The first Swedish survey, carried out by the Stockholm Bureau of Statistics on behalf of the Swedish Social Board (Kungl Socialstyrelsen) was the most comprehensive by far of all the early European surveys.[91] It took place for one year, between 1 October 1907 and 30 September 1908. 150 households, each containing at least four people, kept detailed budget books. The households selected to participate were those of limited incomes who were living in rented accommodation. Individual-level data for each household on income (including that of women and children) and expenditure on all items, including a breakdown of food quantities consumed, was published by researchers. This Swedish methodological intervention set the new gold standard for household budget research, and subsequent surveys often tried to emulate this level of detail where possible.

[89] 1903 [Cd. 1761], pp.235-240
[90] 1905 [Cd. 2337], pp. 1-58
[91] Statistika Kontoret, *Statistisk Undersökning Angaende Levnadskostnaderna I Stockholm Aren 1907-8* [Statistical Investigation of household budgets in Stockholm in 1907-8] (Stockholm, 1910).

The first German government survey also took place in 1907. It was undertaken by the central German Statistical Office and administered by the municipal authorities in most of the industrial districts.[92] The survey was mainly of households headed by employed working class industrial workers, but some teachers and clerical staff were also included. Of 4, 134 budget books distributed, only 852 households returned useable data for 12 months, prompting discussion on how to improve the return rate. It was considered that perhaps not providing expenditure categories had been a mistake.

Explicitly influenced by the earlier Danish, Swedish and German surveys, the first Finnish survey in 1908 provided detailed individual household budgets for 308 households of industrial workers across Finland. The national coverage in this survey was innovative, as other early surveys had tended, for reasons of expediency, to focus on urban workers, often in one city. Carried out by the department of Industry, the survey-takers were particularly concerned with the adequate nutrition of workers, and whether urban industrial workers were able to afford sufficient quality produce.

As part of the Austrian Department of Commerce's attempt to assess the living conditions among the skilled urban working class, they initiated a detailed consumption survey for one calendar year between 1912 and 1914.[93] 119 families kept detailed household budget books for one year, and by 70 of these families for a second year. Investigators also made frequent visits to the households. All the households selected to be surveyed were male-headed households of employed families in working class occupations with children living at home, as it was felt this was representative. Data was subsequently presented both in summary group format (for 117 or 119 of the 119 households) and in extremely detailed individual level format that included information on the employment, housing condition and wellbeing of each household.

[92] Erhebung von Wirtschaftsrechnungen Minderbemittelter Familien in Deutschen Reiche, Sonderheft zum Reichs Arbeitsblatt' (Berlin, 1909).
[93] Arbeitstatistisches Amt., *Wirtschaftrechnungen und Lebensverhaltnisse von Wiener Arbeiterfamilien, 1912-1914 (Wien, 1916).*

The first official Dutch survey, which began in 1917, was concerned primarily with whether the cost of living for working households had changed significantly as a result of the war.[94] It was felt that price inflation had potentially pushed households into poverty. In consequence Van Zanten, the Director of the Bureau van Statistiek, commissioned this survey. The survey took place between 1 September 1918 and 31 August 1919, and comprised 82 households of 'officials' families and 32 of working families (although the working families were only surveyed from March 1919). In the published text of the survey, it is clear how well-versed the Dutch survey-takers were with the details of other surveys. Perhaps unsurprisingly, the Belgian, Nordic and German surveys are referenced, but also the Japanese, American and Egyptian surveys.[95] The dependence of the Dutch survey-takers on the previous best Dutch survey, which had been carried out on the households of 70 workers by the Social Democratic Study-Club in 1910-11 is also clear.[96] The official cost of living index had, in fact, previous to the 1917 survey, been based on the results of the 1910-11 survey.[97]

The first government run survey in Ireland was carried out in May and June 1922, shortly before Home Rule came in in December of that year and Ireland became a self-governing free state.[98] Prior to this, Ireland was included in the 1904 UK survey. The Ministry of Economic Affairs carried out the survey and gathering and processing the data was, in fact, held up by the 1916 rebellion in Dublin. The intention of the survey was to establish a Cost of Living and retail price index. In an attempt to gain representative national coverage, surveys were distributed using schoolteachers as agents, an innovative strategy not used by any other survey-takers during this period. It was not especially successful in terms of

[94] Bureau van Statistiek, *De uitgaven van 114 ambtenaars- en arbeiders gezinnen* (Amsterdam: J.M. Meulenhoff, 1924).
[95] Bureau van Statistiek, *De uitgaven van 114 ambtenaars- en arbeiders gezinnen* (Amsterdam: J.M. Meulenhoff, 1924). Pp. 16-17.
[96] Sociaal Democratische Arbeiders Partei, *Arbeidersbudgets : jaarbudgets van zeventig arbeidersgezinnen in Nederland* (Amsterdam: Brochurenhandel der S.D.A.P, 1912).
[97] René Claeys, 'L'Indice du Cout de la Vie de Bureau de Statistique de La Ville d' Amsterdam', *Revue d'Economie Politique* Vol. 35, no. 2 (1921) pp. 165-182.
[98] Ministry of Economic Affairs, *Report on the Cost of Living in Ireland* (Dublin, 1922).

return rate, as only 308 useable forms from 112 towns (of 5, 000 distributed) were returned.

Examining the earliest government-run surveys in Western Europe shows how the state interest in domestic consumption was infused with both textured localism – the Swiss administration by region, or the British focus on trade, for example – and international co-operation. The early government surveys sensibly used the best practice that had been established by decades of research by academic statisticians and social reformers, but adapted this to meet specific national requirements.

2(iii) Comprehensive surveys.

When it became apparent that surveying only the 'typical family' was not necessarily instructive of the extent of diversity among a population, various comprehensive survey techniques were tested. Beginning in 1886 Charles Booth, assisted by a team of research investigators and School Board visitors (who did the house-to-house enquiries), attempted a new form of holistic social sampling – creating a poverty map of the whole of London, sub-divided by district and occupation. Published as colour-coded maps and a set of four volumes of data and analysis, the data gathered gave a textured indication of life in late Victorian London.[99] Booth's was not the first such survey, as this was probably *The Norwich Census of the Poor of 1570*, which records the occupations and household structures of 822 poor households in the town,[100] but Booth's was the first comprehensive survey of all classes.

[99] Charles Booth, *Life and Labour of the People in London,* First Series: Poverty, 1. East, Central and South London (London: Macmillan and Co, 1902 [1889]); Charles Booth, *Life and Labour of the People in London,* First Series: Poverty, 2. Streets and Population Classified (London: Macmillan and Co, 1902 [1891]); Charles Booth, *Life and Labour of the People in London,* First Series: Poverty, 3. Blocks of Buildings, Schools and Immigration (London: Macmillan and Co, 1902 [1889]); Charles Booth, *Life and Labour of the People in London,* First Series: Poverty, 4. The Trades of East London Connected with Poverty (London: Macmillan and Co, 1902 [1889]); Charles Booth, *Life and Labour of the People in London,* First Series: Poverty, 5. Maps of London Poverty: Districts and Streets (London: Macmillan and Co, 1902 [1889]).

[100] *The Norwich Census of the Poor, 1570* at http://welbank.net/norwich/1570/ accessed 4/3/18

In his effort at representativeness, erring on the side of caution, Booth managed to sample over half of the population, providing incontrovertible evidence of the extent of poverty. As he wrote in 1902, 'I undoubtedly expected that this investigation would expose exaggerations, and it did so; but the actual poverty disclosed was so great, both in mass and in degree, and so absolutely certain, that I have gradually become equally anxious not to overstate.'[101] The investigations were not without social judgement. For each street, the School Board surveyors made notes on the 'general character' of the street and its inhabitants. Marble Street South, for example, 'An awful place; the worst street in the district. The inhabitants are mostly of the lowest class, and seem to lack all idea of cleanliness or decency. Few of the families occupy more than one room. The children are rarely brought up to any kind of work, but loaf about, and no doubt form the nucleus for future generations of thieves and other bad characters.'[102]

In 1899, Quaker industrialist and philanthropist B.S. Rowntree's first social survey of York, inspired by the work of Charles Booth in London, was concerned with establishing the extent and nature of poverty among the working (or 'wage-earning', as he called them) classes in provincial England. He took York, where his family's chocolate business was a major employer, as a representative town. Rowntree's investigators surveyed every wage-earning household (a total of 11, 560) and found that, on the basis of his house-to-house investigations, 43.4 percent of the wage-earning class, and 27.84 percent of the entire population of York lived in what he termed total poverty.[103] As Williams has shown, this figure was arrived at through a variety of assessments of the households' circumstances, including moral judgements relating to character, sobriety and cleanliness.[104] Rowntree's analysis of the income and expenditure of wage-earning households revealed that 15.46 (9.91 percent of the population of York) were in what he termed primary poverty (that is without the income necessary to meet basic

[101] Charles Booth, *Life and Labour of the People in London,* First Series: Poverty, 1. East, Central and South London (London: Macmillan and Co, 1902 [1889]) 'Introductory' p. 5.
[102] Charles Booth, *Life and Labour of the People in London,* First Series: Poverty, 1. East, Central and South London (London: Macmillan and Co, 1902 [1889]) 'Introductory' p. 10.
[103] B. Seebohm Rowntree, *Poverty: A study of Town Life* (London: MacMillan and Co., 1901). Figures from section IV 'The Poverty Line', pp. 86-118.
[104] Williams, K (1981) From Pauperism to Poverty

needs). Rowntree's classification of households in secondary poverty (that is those with sufficient income, but wasteful expenditures) was the outcome of subtraction (total poverty minus primary poverty).[105]

Rowntree attempted to employ a similar methodology in other European countries to investigate whether or not the results found in York were also evident on the continent of Europe. The only one of these completed was an investigation of wages, family budgets and living conditions in Belgium 1910, which had taken Rowntree and his team four years, and was notable because it was carried out with assistance from the Belgian state. [106] The extent of co-operation Rowntree received was significant: one of Rowntree's special investigations into land-holding lasted nineteen months and employed 383 Belgian officials, along with 101 clerks funded by Rowntree.[107]

Rowntree had been unusual in attempting total coverage in his first two York surveys.[108] For reasons of cost and expediency, most surveys preferred to adopt some form of sampling. However, in a variant of Rowntree's town-based attempts to survey an entire population, several survey-takers were pragmatic in their approach. Given that the surveys were focussed on examining the living standards of the urban industrial workforce, it made sense to use factories as the basis of enquiries. One German survey of 1908 surveyed the households of 320 metalworkers from the same factory, with an average of 4.91 family members in each household.[109]. Another, much smaller enquiry, inspired by Rowntree and by the Edinburgh dietary survey of Paton, Dunlop and Inglis, [110] investigated in detail

[105] See Gazeley I, Poverty in Britain, 1900-65 (2003) p.24-29 for a fuller discussion
[106] Rowntree, B., Seebohm Land and Labour: Lessons from Belgium (Macmillan, 1910)
[107] Slater, Gilbert 'Mr Rowntree's Survey of Belgium', *The Sociological Review*, 1911 Vol A4:1, p.44
[108] Rowntree had tested his own assumption that total coverage was the most accurate method as he neared the end of his 1936 survey. He found the margin of error was very similar if he called at one in ten households, so in his 1950 survey chose to visit one in nine to allow for some discarded results. See his discussion of this in B. Seebohm Rowntree and G.S. Lavers, *Poverty and the Welfare State: A Third Social Survey of York dealing only with economic questions* (London: Longmans, Green and Co., 1951).
[109] Deutscher Metallarbeiterverband, *Haushaltungsrechnungen von Metallarbeiten* (Stuttgart: Schlike, 1909).
[110] Paton, N., Dunlop, J.C. and Inglis, E., *On the Dietaries of the Labouring Classes of the City of Edinburgh* (1901)

the diets of 17 families of workers at the Guinness Brewery in Dublin.[111] The obvious advantage of this approach was it gave the opportunity to assess real and comparative living conditions among workers in a particular factory, but it did not offer the chance to say much about the wider populace unless, of course, a significant number of such workplace surveys were carried out using a similar method. Rowntree inspired several other surveys, but none surveyed the entire population of a town.

Section 3: War and Depression 1914-40

From the early decades of the twentieth century, then, governments were beginning to formalise the state statistical apparatus around private domestic consumption – having been convinced of the usefulness of such information by the data produced by academic and reformist researchers and statisticians and the example set by the United States. The onset of the First World War in 1914 forced European governments to re-evaluate the use of such surveys in times of crisis and, subsequently, in peace. The demonstrable use of surveys in times of crisis, the collection and promotion of surveys by the International Labour Organisation and subsequent post-war internationalism prompted by the League of Nations, encouraged the emergence of a standardised internationalism in household budget research between 1914 and 1945.

Having only carried out its first significant survey of 174 households in 1912/13 the Norwegian government, concerned over potential food shortages caused by the war, carried out three large-scale surveys in 1916, 1917 and 1919, specifically designed to investigate comparative nutritional wellbeing across Norway.[112] The

[111] J. Lumsden, *An Investigation into the Income and Expenditure of Seventeen Brewery Families and a Study of Their Diets* (1905).

[112] The 1912/13 survey had been inspired by surveys carried out in Britain, France, Belgium, Germany, Denmark, Sweden, Finland and the US. The Norwegian Bureau of Statistics wanted to obtain similar data and developed a methodology inspired by these other surveys. Christiania, Municipal Bureau of Statistics, 'Husholdningsregnakaper fort au endel mindre bemidlede familier I Kristiania, Bergen, Trondhjem, Drammen, Kristianssand, Og Hamar I Aaret 1912-13', [Household accounts of less well-to-do families in Kristiania...and Hamar] (Kristiania, 1915); Norway, Statistiske Centralbyraa, 'Dyrtidens Virkninger Paa Levevilkaarene' [effects of the high cost of living on the standard of living], Norges officielle statistik., Vol. 6, No. 105 (Kristiania, 1917); Norway, Statistiske Centralbyraa, 'Dyrtidens Virkninger Paa Levevilkaarene' [effects of the high cost of living on the standard of living], Norges

1916 survey covered 651 families in 15 different locations including towns and rural districts. Significant efforts were made with municipal authorities towards obtaining a representative sample of each area. Food quantities consumed by each household allowed statisticians to calculate nutritional adequacy. The 1917 survey included 483 households, and continued to compare food prices and levels of nutrition. The 1919 survey was considerably smaller, only covering 82 households in Kristiania and Bergen. Initially, the families approached to take part were those who had taken part in the 1916 and 1917 surveys, although the survey-takers had to broaden the remit and ask some different families. Results were organised by class – working, lower middle-class and upper middle-class.

Similarly, the Swedish government responded to the threat of a wartime food crisis with efforts to monitor food consumption among low-income households. Surveys carried out in 1914 (601 households), 1916 (601 households), 1917 (615 households) and 1918 (390 households) sent investigators to monitor expenditure and food consumption for one month.[113]

The Danish government also undertook detailed investigation of food expenditure to assess the stability of food pricing and the availability of adequate nutrition, particularly among poorer sections of society. In October 1915 a survey focusing on food consumption and nutrition among 496 poorer households was carried out.[114] A second survey was carried out among 217 households in 1916.[115] This time, information was sought from families of men working in official capacities,

officielle statistik., Vol. 6, No. 124 (Kristiania, 1918); Norges Statistisk Sentralbyrå, Husholdningsregnskap 1918.

[113] K. Socialstyrelsen. Sveriges Officiella Statistik. Socialstatistik. Livsmedelsforbrukningen inom Mindre Bemedlade Hushall aren 1914 och 1916 [Changes in cost of living of people of small means from 1914 to 1916] (Stockholm, 1917), 77pp. [Also in US Dept. Labor Bur. Labor Statis. Monthly Labor Rev. 6: 1157-1160 (1918)]; K. Socialstyrelsen. 'Livsmedelsforbrukningens Omlaggning under Kristiden', [Living Standards in Crisis Time] Sociala Meddelanden, 1917: 1176-1192 (Stockholm, 1917). For summary data from all the surveys see K. Socialstyrelsen. Sveriges Officiella Statistik. Socialstatistik. Livsmedelsforbrukningen inom Mindre Bemedlade Hushall under Krisaren 1914-1918 [Changes in standard of living among people of small means during the years of crisis, 1914-1918] (Stockholm, 1922), 141pp.

[114] Statistiske Departement 'Mindre bemidlede Familiers Husholdingsudgifter I Oktober 1915' *Statistiske Efterretninger* 17:24 (1 December 1915).

[115] Statistiske Departement 'Husholdningsregnskaber for Tjenestemandsfamilier M. FL. For 1916' *Statistiske Meddelelser* 4:54 (1918).

to assess whether food shortages were affecting middle-class households. Households were recruited from rural and urban areas and from a range of income groups (with a minimum income of 2000 kroner per year and a maximum of over 10000). Occupations of the main wage earners varied from clerical staff, postal workers, doctors, civil servants and businesspeople.

During and after the First World War, household budget surveys began to be widely used by European governments to calculate cost of living indices,[116] and/or to investigate the impact of the War on consumption by particular groups. In the UK, for example, The Working Class Cost of Living Committee of 1918 (hereafter the Sumner Committee) the repeated the Board of Trade's 1904 household survey. The Sumner Committee carried out a survey of working-class household expenditure in the first week of June 1918. About 10,000 forms were distributed and about 1,400 were returned, the vast majority of which recorded household expenditure for the first week of June, with smaller numbers for later weeks in June and July. This survey used a modified version of the questionnaire used in the 1904 Board of Trade enquiry. The 1918 questionnaire included more detailed questions on non-food expenditure and the ages of the occupants of the household. The Committee concluded that in June 1918, "the working classes, as a whole, were in a position to purchase food of substantially the same nutritive value as in June 1914" and that "families of unskilled workmen were slightly better fed at the later date, in spite of the rise in the cost of food."[117]

The use of household expenditure surveys for official cost of living calculations continued throughout the twentieth century until it became seen as a major influence on the design and reason for the existence of such surveys. Indeed, the European Union today sees the cost of living deployment of the household budget surveys as their main historical function, 'Historically…The prime objective of conducting HBS in all the Member States was to collect information on household consumption expenditures for use in updating the 'weights' for the basket of goods

[116] International Labour Office, *Methods of Conducting Family Budget Enquiries*. Studies and Reports. Series N, No. 9, Geneva, 1925.
[117] For a fuller discussion, see Gazeley, I and Newell, A 'The First World War and Working Class Food Consumption in Britain', *European Review of Economic History* (2013) Vol 17:1

used in the Consumer Price Indices (CPI).'[118] While, as we have seen, this is not strictly true, it is relevant to their design and deployment that the use of household budget surveys to inform the CPI *was* a significant early use.

As with the development of the methodology of the household budget surveys, the development of national cost of living indices was a gradual and iterative process that began in around the 1890s and was expatiated in around 1914. As Stapleford and Searle have shown, for the US and UK respectively, establishing cost of living indices was initially the result of small, ad-hoc government investigations that focused on labour, industry and/or trade.[119] Stapleford draws attention to the way in which, between the early 1930s and the 1960s, the seeming statistical impartiality of the cost of living index was undermined by the manipulation of statistical data to shore up the appearance of successful democratic governance.[120] Searle echoes this point about politicisation of the cost of living in the UK context, and also argues that the data itself was infused with assumptions about the behaviour of working households.[121]

As a direct response to the political and social upheaval caused by the First World War, and in recognition that international co-operation would be needed for social change, the International Labour Organisation committee was established at the Paris Peace Conference in 1919. The League of Nations, created at the same time, was organised along complementary but more general principles. The specific focus of the ILO on the needs of labour was intended to ameliorate common standards around employment practices and streamline a new world economy.[122]

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[118] European Commission, 'Household Budget Surveys in the EU: Methodology and Recommendations for Harmonisation – 2003' (Luxembourg: Office for Official Publications of the European Communities, 2003). p. 10.

[119] Thomas Stapleford, *The Cost of Living in America: A Political History of Economic Statistics* (Cambridge: Cambridge University Press, 2009); Rebecca Searle (2014) *Is there anything real about real wages? A history of the official British cost of living index, 1914–62*. Economic History Review, 68 (1). pp. 145-166.

[120] Thomas Stapleford, *The Cost of Living in America: A Political History of Economic Statistics* (Cambridge: Cambridge University Press, 2009) pp. 384-386.

[121] Rebecca Searle (2014) *Is there anything real about real wages? A history of the official British cost of living index, 1914–62*. Economic History Review, 68 (1). Particularly see pp. 155-159.

[122] There have been many publications on the history of both the ILO and the League of Nations. The ILO's own 90 year anniversary publication offers a particularly useful insider perspective. Gerry Rodgers, Eddy Lee, Lee Swepston and Jasmien Van Daele, *The International Labour Organization and the Quest for Social Justice, 1919-2009* (International Labour Office: Geneva, 2009).

The ILO's guiding principles were concerned with preventing the commodification of labour – that is, in protecting worker rights, dignity and welfare.[123]

The committee of the ILO was formed of members representing Workers (usually from Trade Unions), Employers and Governments. With a substantial budget from international government contributions, the committee were able to collect data on workplace practices, commission investigations and reports, and issue guidance on workplace practices. Governments could then choose to ratify ILO recommendations. Given the nature of the ILO's mission, the relatively newly institutionalised household budget surveys quickly proved of great relevance. Providing data on the realities of life for working class households through the metric of consumption of material items, they offered an easily adaptable framework for international comparison.

European and non-European governments, guided by the ILO, thus became increasingly invested in developing shared methodologies of budgetary surveys. At the 1925 Second International Conference of Labour Statisticians, attended by the statistical representatives from almost every European nation and several non-European nations, delegates agreed that household budget surveys were the best way of assessing living standards, and adopted a shared methodological framework that member countries agreed to use in their investigations.[124] The report of the conference drew heavily on best practice examples from surveys that had already been completed, and encouraged autonomy in national design and implementation of surveys. However, some broad methodological recommendations were agreed: namely that the families selected should be representative in income and occupation of those not selected; that a period of at least one month of record-keeping was optimal, although 12 months were better to allow for seasonal fluctuations; that the judicious use of agents, guided budget-

[123] For a full listing and discussion of the founding principles, see Gerry Rodgers, Eddy Lee, Lee Swepston and Jasmien Van Daele, *The International Labour Organization and the Quest for Social Justice, 1919-2009* (International Labour Office: Geneva, 2009). pp. 23-27.
[124] International Labour Office, *Methods of Conducting Family Budget Enquiries*. Studies and Reports. Series N, No. 9, Geneva, 1925.

keeping and/or payments could improve the survey return rate; and that considerable detail on the nature of the household, income and expenditure was needed to reliably analyse the data.[125]

The 1925 conference allowed participant countries, for the first time, to agree on a timescale for household budget survey research. Countries that had not undertaken an enquiry since 1920/21 resolved to launch a major survey using the new methodology, ideally before 1928.[126] All the countries involved did so, and the results were published and compared in the International Labour Review.[127] By the late 1920s, international co-operation in the design of household budget surveys was accepted, although the ILO acknowledged that this presented some problems, with the need for recognition of local cultural and economic conditions to be balanced with the need for comparable uniformity. Nonetheless, as a report issued in 1931 re-iterated, 'The International Labour Office has always considered that satisfactory compilation of data can be secured only on the basis of close international co-operation'[128]

Following the 1929 crash and the resultant economic depression, a new wave of academic and social reformers sought to measure the impact of this economic downturn on the poor by using smaller and more specialised household budget surveys that gave a different kind of data from the government reports. Belgian professor Guillaume Jacquemyns carried out a significant investigation into the household budgets of 139 insured unemployed families, unionized strikers families, and 'workers at work' in five different regions of Belgium, with a

[125] International Labour Office, *Methods of Conducting Family Budget Enquiries*. Studies and Reports. Series N, No. 9, Geneva, 1925.
[126] International Labour Office, *The Third International Conference of Labour Statisticians.* Studies and Reports. Series N. No. 12. (Geneva, 1926).
[127] For more information on these surveys, see the ILO's informative summary article on all 20 government surveys carried out between 1920 and 1929 according to its policy recommendations. International Labour Organisation, 'Recent Family Budget Enquiries', *International Labour Review* 28 (1933) pp. 635-672.
[128] The International Labour Office, 'The Possibilities and Limitations of International Comparisons of Cost of Living and Family Budgets'. *Memorandum prepared by the International Labour Office, Geneva, for the Fourth Biennial Conference of the Institute of Pacific Relations to be held at Hangchow, October 2lst to November 4th, 1931* (The Institute of Pacific Relations: Honolulu, Hawaii, 1931).

particular focus on the impact of unemployment. Several similar studies were carried out in the UK in the 1930s.

In the interwar period some prominent researchers, notably Carle Zimmerman, felt something had been lost in the move towards standardised internationalism encouraged by the ILO. Zimmerman felt regular, local, small-scale representative studies taken very much in context were the best way to ensure accurate reporting.[129] As an adherent of the old style of immersive social surveys, his view was broadly that by observing the intricate details of family life one could see society in microcosm.[130] But, he felt, the ethics and manner of that observation were crucial. He expressed concern at the turn in sociology away from systematic observations in the Le Play style, and towards theoretical analysis. He was concerned that social surveys were becoming a plaything for researchers seeking to impose their understanding of the nature of society through crude application of a phoney 'statistical' tool.

Section 4: The post-Second World War period.

The Second World War did not see the same surge in crisis surveys as the First World War, with a few exceptions. The political motivation of statistical enquiry presented as fact is particularly contentious in wartime, and particularly in countries under occupation. Some were remarkably unaffected by the politics of occupation. In Denmark, for example, in order to assess the extent to which wartime conditions had changed living standards, the Danish government's statistics department, using the same methodology and staff as a previous 1939-40 survey, returned to 212 families to ask questions about income and expenditure during wartime. They found little difference, although some alteration in food choices.[131] In Norway, a large trade union survey (the only trade

[129] Carle C. Zimmerman, *Consumption and Standards of Living* (London: Williams and Norgate Ltd., 1936) pp. 378-415.
[130] For the fullest exploration of his sociological philosophy, please see Carle C. Zimmerman and Merle E. Frampton, *Family and Society* (London: Williams and Norgate Ltd., 1936).
[131] Statistiske department, 'Husholdningsregnskaber I Aaret 1/4 1939 - 29/3 1940, og I 4 Ugers Perioden 11/4 - 8/5 1942' *Statistiske Meddelelser* 4:122 (1944).

union survey of this kind in Norway) into 2,267 family budgets was carried out in November 1945 with political independence.[132] In Vichy France, on the other hand, the two wartime cost of living surveys, which used Gallup interview methods to question households in and around Paris, were designed to 'prove' the efficacy of the Vichy government.[133]

As Western Europe was being expensively reconstructed after the Second World War, statisticians sought to measure the impact of the new era on individual households. Knowing the realities of day-to-day domestic life for ordinary citizens had long been useful for governments seeking to plan for labour and trade requirements, and to mitigate the effects of industrialisation on the poor. International comparison of data on living standards had been a component of economic planning since the turn of the century. Now, though, international comparison of consumption data became incorporated into the philosophy of reconstruction, as part of the post-war dream of a peaceful and prosperous Europe. European surveys were no longer preoccupied with the effects of industrialisation or crisis on the workforce, but began to become part of the social apparatus of functioning peacetime nation-statehood. In the late 1940s and 1950s, surveys thus became more comprehensive, partly down to the continued international co-operation between the statistical branches of European governments, and partly down to the new intervention of the United Nations (UN), which emphasised household budget research on a global scale.[134]

The United Nations Statistical Commission was established in 1947. In 1949, its first guidance for member states on preparing internationally standardized household accounts was issued. The main aim of the guidance was to improve sampling techniques in surveys, and the authors hoped that exchange of surveys

[132] Arbeidernes faglige Landsörganisasjons, *Arbeidernes faglige Landsörganisasjons husholdningsregnskapsundersokelse (November 1945)* Oslo, 1946).
[133] For data from both surveys, see Jacques Dourdin, Comment Vivent vos salaires: Étude de la Situation Matérielle des Assureés Sociaux de la Région Parisienne (La Sociéte Privée d'Imprimerie, 1944).
[134] G. Darmois, W.E. Deming, P.C. Mahalanbois, F. Yates, R.A. Fisher, 'The Preparation of Sampling Survey Reports' *Statistical Office of the United Nations Statistical Papers* Series C., No. 1 (Lake Success, New York: Statistical Office of the United Nations, 1949).

and reports would 'foster international exchange of experience', thus resulting in more accurate and uniform reporting that could also be compared internationally[135] The report made detailed and very specific recommendations on how data should be collected and reported, listing twelve pieces of information that should be included in the methodology section; sixteen pieces of information on survey design and sampling; and seven pieces of information on accuracy. The hope was to standardize data and ensure sufficient information was provided to, 'enable subsequent workers to carry out critical statistical analyses which appear to them to be of interest.'[136] In short, surveys were no longer to be seen as local or even national documents. Rather, they were of international concern, and were expected to contain data that would have uses not necessarily framed solely by the designers of a given survey.

While the League of Nations was wound down after the Second World War, the ILO survived to be incorporated into the United Nations as a specialist agency with a global reach. In 1947, a resolution was passed to re-prioritize household budget surveys in order to provide updated cost of living indices as well as, more importantly, to 'provide for comparisons of consumption levels with given standards of accuracy.'[137] In the post-war period, the ILO consistently encouraged a wider scope and more international uniformity in methodology, as well as inclusion of food quantities consumed.[138] Countries in Latin America and Asia (apart from India and Japan, which had been included in previous reports) began to be included in data comparison. Overall, in the 1950s, regular, standardized and statistically significant cost of living surveys began to be a formal part of global economic planning.

[135] G. Darmois, W.E. Deming, P.C. Mahalanbois, F. Yates, R.A. Fisher, 'The Preparation of Sampling Survey Reports' *Statistical Office of the United Nations Statistical Papers* Series C., No. 1 (Lake Success, New York: Statistical Office of the United Nations, 1949). Foreword.
[136] G. Darmois, W.E. Deming, P.C. Mahalanbois, F. Yates, R.A. Fisher, 'The Preparation of Sampling Survey Reports' *Statistical Office of the United Nations Statistical Papers* Series C., No. 1 (Lake Success, New York: Statistical Office of the United Nations, 1949). p. 11
[137] International Labour Office, 'Methods of Family Living Studies: Report Prepared for the Seventh International Conference of Labour Statisticians' (Geneva, 1949). p. 2.
[138] International Labour Office, 'Post-War Studies of Family Expenditures [notes]' *International Labour Review* 74 (December 1956) pp. 576-599.

The escalation of scale and frequency of surveys was rapid in the post-war period. For example, having been unhurried in their approach to organising household budget surveys before the war - content to leave domestic consumption research mostly to sociologists – from 1946 the French government mobilised its considerable statistical apparatus to examine consumption in earnest. L'Institut National de la statistique et des études économiques (l'I.N.S.E.E.) embarked on a series of comprehensive household budget research projects. Using regional statistical offices, and with a focus that tended to be either geographic or occupational, at least two large-scale surveys were carried out each year between 1946 and 1956, when the first nationally representative survey was carried out.

In 1949, the ILO distributed new methodological guidelines to member states, emphasising the importance of random sampling, accurate record-keeping and international uniformity.[139] These guidelines were influenced by the United Nations' guidelines for its member states, also published in 1949.[140] Having previously chiefly focused on urban, working-class nuclear family households, national-level survey-takers only in the 1950s began to employ random sampling techniques to attempt representative population analysis.[141]

A significant precursor to pan-European statistical co-operation (and, indeed, to the formation of a formal European Union) was the work of the Statistical Office of the European Coal and Steel Community (C.E.C.A) (based in Luxemburg). The purpose was to survey living standards across Europe with the intention of developing 'statistical integration', or a levelling of wages and living standards across the European Community. The countries surveyed in 1957 and 1958 were the six new European Economic Community countries of Germany (BR) (excluding Saarland), Saarland, Belgium, France, Italy, Luxembourg and the

[139] International Labour Office, *Methods of Family Living Studies.* Studies and Reports, New Series, No., 17. (Geneva, 1949).
[140] International Labour Office, *Methods of Family Living Studies.* Studies and Reports, New Series, No., 17. (Geneva, 1949).
[141] This increased scope was reflected on by survey-takers, for example in the Norwegian Consumer Expenditure Survey of 1958 and the German national survey of 1962-63. Norges Statistisk Sentralbyrå, Forbruksundersøkelsen 1958, Norges officielle statistik (1960); Preise Löhne Wirtschaftsrechnungen: Reihe 18, Einkommens und Verbrauchsstichproben; Gesamtausgaben der privaten Haushalte 1962/63 (1966).

Netherlands.[142] Participants in the survey were paid to keep a housekeeping book for either a week, a fortnight or a month depending on the country. Some families were also interviewed. Central statistical offices in participating countries managed the survey, and each constituent survey can be considered a national survey in its own right.

In 1963/1964 the Statistical Office of the European Communities (also based in Luxembourg) carried out a follow-up survey to the 1957/1958 C.E.C.A survey. The 1963/64 survey incorporated surveys in six member states (Germany, France, the Netherlands, Italy, Belgium and Luxembourg) that encompassed 42, 000 households in total. [143] Results were compared to the 1957/58 C.E.C.A survey. The stated aim of the survey was in the broadest sense to compare wages between member countries. More specifically, comparative household budgets were considered to be useful in formulating policy on agriculture, social policy (specifically social welfare policy), financial planning, trade agreements and energy policy.[144] Overall, the report argued that the lack of homogeneity and the age and frailty of the existing household budget surveys were an obstacle to international co-operation and economic development, placing future household budget research as a central component of economic planning.[145]

In the 1950s and 1960s, EU member states were encouraged (although not mandated) to institute a continuous, systematic, representative system of surveying the expenditure on goods and services of private households. Results of the surveys would be compared between member states. Most did so (see Table 2) and the system of comparative surveys continues to the present day. The national statistical offices of member states administer the Household Budget Survey, and no formal EU regulation on methodology exists, although codes of

[142] European Community for Coal and Steel, 'Wirtschaftsrechnungen der Arbeiterfamilien der E G K S 1956/57' Serie Sozialstatistik, 1960.
[143] Statistisches Amt der Europäischen Gemeinschaften 'Wirtschaftsrechnungen 1963/64' Sozialstatistik Sonderreihe No. 1 (Luxembourg, 1965).
[144] Statistisches Amt der Europäischen Gemeinschaften 'Wirtschaftsrechnungen 1963/64' Sozialstatistik Sonderreihe No. 1 (Luxembourg, 1965). Pp. 11-17.
[145] Statistisches Amt der Europäischen Gemeinschaften 'Wirtschaftsrechnungen 1963/64' Sozialstatistik Sonderreihe No. 1 (Luxembourg, 1965). P 17.

practice are distributed by the European Statistical System for guidance, and are used by most member states.[146]

Table 2: First regular/continuous nationally representative survey in chronological order.

Country	Year	Number of Households	Department that carried it out	Name of the Survey
The Netherlands	1951	1, 938	Centraal Bureau Voor de Statistiek [Central Bureau for Statistics]	Budgetonderzoek
Ireland	1951 - 1952	3, 100	Central Statistics Office	Household Budget Inquiry
The United Kingdom	1953 - 1954	12, 911	Ministry of Labour	Household Expenditure Survey (1953-1954). Thereafter The Family Expenditure Survey 1960 onwards
Austria	1954 - 1955	7, 000	Österreichisches Institut Für Wirtschaftsforschung [Austrian Institute for Economic Research]. Private but commissioned by govt.	Konsumerhebung
Denmark	1955	3, 100	Danmarks Statistik [Statistics Denmark]	Forbrugsundersøgelsen
France	1956	22, 800	l'Institut National de la statistique et des études économiques (I.N.S.E.E) [National Institute of Statistics and Economic Studies]	Enquête Budgets des Familles

[146] European Commission, 'Household Budget Surveys in the EU: Methodology and Recommendations for Harmonisation – 2003' (Luxembourg: Office for Official Publications of the European Communities, 2003).

Norway	1958	3, 301	Norges Statistisk Sentralbyrå [Norway Statistics]	Forbruksundersøkelsen
Sweden	1958	4, 500	Kungl. Socialstyrelsen [Swedish Social Welfare Board].	Hushållens Konsumtion
Belgium	1961 - 1962	1, 579	Institut National de Statistique [National Institute of Statistics]	Enquête sur les budgets des Ménages
Germany	1962 - 1963	35, 563	Statistisches Bundesamt [Federal Office of Statistics]	Einkommens und Verbrauchsstichprobe
Finland	1966	3, 000	Tilastokeskus Finland [Statistics Finland]	Konsumtionsundersökning (1966 – 1990 in 5 year intervals. 1994-1998 annually. Thereafter every 4 years).
Switzerland	1975	980	Office fédéral de la statistique [Federal Statistical Office]	Budgets des ménages de salaries

Once the mechanisms of survey taking had been institutionalised in the European Union, much of the textured localism so valued by Zimmerman and other sociological researchers vanished. Standardised surveys became much more useable and accessible for researchers and statisticians. Government and intergovernmental statisticians used the data to compare living standards between countries, and to form policy recommendations that might ameliorate poverty.

Conclusion:

Between the 1790s and the 1960s, the institutionalisation of household budget surveys demonstrated a gradual evolution in the categorisation of need among the populace of Western Europe, and the progressive institutionalisation of that categorisation in the administrative structures of the national and international

community. Early practitioners of family surveys had sought to *measure*, rather than estimate, the living conditions of the poor - sometimes from a motivation of seeking to improve those conditions, and at other times to discover how best to mobilise their labour in service of industrialisation. Le Play's intervention conceptualised the study of the family as a unit of sociological observation and ensured that the household would be the principle unit of measurement in subsequent research. Successive researchers and theorists such as Quételet and Engel developed this principle into a method of applying mathematical formulae first to the human body, and then to human behaviour.

As surveys evolved from a wish to measure the nature of necessity, so they were honed in periods of crisis. After close to a century of informal development of methodologies by loosely associated researchers interested in welfare or statistics - and sometimes both – around the turn of the twentieth century governments began to take note of the usefulness of household budget surveys in matters of domestic and international policy. The two World Wars heralded, first, the formal international co-operation of governments in the International Labour Organisation and, subsequently, the global measurement of household consumption by the United Nations.

Continuous household budget surveys were introduced in the 1950s and 1960s, and countries in the European community were strongly encouraged to share household budget survey data for the purpose of international efforts to compare and reduce poverty. EuroStat produced regular reports on living conditions among the poorest, and highlighted the results of efforts to reduce poverty. These efforts continue to the present day and, so central is the categorisation and comparison of consumption data to the idea of a progressive nation state, that participation in a programme of authorised household budget research, with results to be shared, is a condition of membership in the European Union.[147]

[147] European Commission, 'Household Budget Surveys in the EU: Methodology and Recommendations for Harmonisation, 2003' (Luxembourg: Office for Official Publications of the European Communities, 2003).

As Western European governments and social researchers continue to monitor the consumption habits of others, discussion about living standards has shifted from concern about the urban working class poverty associated with industrialisation to anxiety about the inequality induced by technological globalisation.[148] Household budget surveys, however, have evolved, and remain a significant source of the data on private consumption used by national and international policy-makers to design public socio-economic systems.

We have traced the development of the household expenditure survey from its conception during the Napoleonic Wars to the 1960s. During the late nineteenth and first half of the twentieth centuries development was increasingly internationalised, which facilitates trans-national comparisons of living standards. Moving from surveys based upon snowball sampling of "typical" working households, to ones that employed stratified random samples of the entire population has a profound impact on long-run historical analysis utilising data derived from the surveys. And while differences in the design and implementation of surveys between countries remained, these are less significant at any point in time than variations resulting from the evolution of household expenditure survey methodology over time.

[148] See, most notably, the recent popular and policy influence of Thomas Piketty's arguments on historical inequality. Thomas Piketty (trans. Arthur Goldhammer), *Capital in the Twenty-First Century* (Cambridge, Massachusetts: The Belknap Press of Harvard University Press, 2014).

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