

Expenditure of private households on nutrition

An analysis based on data from the 2013 German household budget survey

Heide Preuße

Abstract

Societal changes in eating behaviour are often described by trends. But the household situations behind these are still complex and can be represented precisely by expenditure on nutrition. A secondary analysis of data from the German household budget survey of 2013 conducted by the German Federal Statistical Office shows the level and composition of the average outgoings on nutrition in various private household constellations. Both socio-demographic and economic factors have an impact on the monetary aspects of everyday eating habits and the other social functions of food. In a time comparison of the last 15 years the significance of eating outside the home has increased, particularly in family households. The calculations presented provide data on nutrition expenditure which has not been examined in statistical analyses up to now and for which, consequently, there are few possibilities for comparison.

Keywords: eating outside the home, nutrition expenditure, eating habits, consumer spending, lifestyle, private household

Research interest

Expenditure on nutrition represents part of the costs of food and providing meals¹ in private households. Its level directly affects how households manage on their income. Although the proportion of private consumer spending on nutrition (including catering services) has been steadily reducing since the 1960s, nevertheless at almost 18% (in 2013) it is still the second largest outgoing for household budgets after rent, energy and home maintenance [1, 2]. So, within the framework of educational and advisory work on the subject of household budgeting, (statistical) comparisons for food spending are particularly important in order to illustrate case examples or evaluate data relating to individual cases [3].

These reference figures must be prepared so as to ensure the comparability of individual and statistical data for as many different household situations as possible. For this, socio-demographic and economic characteristics for differentiation are of central importance. In addition, it is desirable that the data represents the nutritional preferences of the various household members and the basic values that inform eating habits in everyday life and on special occasions, such as religious festivals and celebrations (lifestyles). The amount of money needed to provide nutrition is also still dependent upon whether food preparation is done predominantly in the household or whether this is supplemented or substituted to a greater or lesser extent by catering services [4, 5]. Reference values are also needed in educational and advisory work to take account of the financial effects

Citation

Preusse H (2019) Expenditure of private households on nutrition. An analysis based on data from the 2013 German household budget survey. *Ernahrungs Umschau* 66(11): 212–220
This article is available online:
DOI: 10.4455/eu.2019.035

Peer-reviewed

Manuscript (original contribution) received: August 22, 2018
Revision accepted: May 13, 2019

¹ This also includes the costs of energy and water, kitchen equipment and other items such as proportional rental or wage costs for auxiliary staff.

of changes in prevailing living circumstances which occur as a result of new life stages and family developments (e.g. the birth of a child, retirement).

However, recent research does not provide any suitable data for these practically relevant issues. Eating habits are examined either mainly scientifically through analysis of food consumption and nutrient intake [6–8] or sociologically through socially relevant relations such as sustainability or nutritional and consumer education [9, 10]. Neither approach considers economic aspects specifically. Whilst there are various more recent studies on time investment in providing nutrition, based on time management studies [11, 12], expenditure on nutrition has hardly been considered at all for decades. Recent relevant studies have been contributed by Werner et al. 1983 [13], Karg and Gedrich 1995 [14], and by Binder 2001 [7] which focuses specifically on eating outside the home. Other studies, based on household accounting data from the German Federal Statistical Office, explore food expenditure in terms of structural aspects as a sub-set of private consumption for particular target groups, such as job seekers receiving benefits under the German Social Code, Book II [15], and/or over time, according to income class, household type, life stage or age group [16–19]. The situation in international research is similar, as a detailed literature search showed.

In view of the issue described at the outset, it is therefore the goal of this paper to prepare a differentiated representation of expenditure on nutrition in various household constellations on the basis of representative data from the household budget survey by the German Federal Statistical Office. One central issue here is the significance and development of eating outside the home.

Data basis and methodology

The German household budget surveys provide the best available information as regards private household finances and these have been carried out regularly every five years as a representative sample in (West) Germany since 1962/63. The latest available data is from 2013. With 60,000 households a large number of participants are involved in order to ensure a representative sample as regards region (State), household type (household size, family type, employment rate), social standing of the main breadwinner and level of net household income, and to enable correspondingly differentiated analyses [20].

The data collected for the household budget survey includes information on household members, living situation and the availability of durable consumer goods, assets and liabilities, and income and expenditure. This enables a comprehensive representation of the economic circumstances of the private households. A large proportion of the data is collected in a written survey at the beginning of the year. To record income and expenditure the participating households each keep a household diary for three months spread over the year. Some of them also record in detailed entries for one month their expenditure on food and drink by quantity and price [20].

The standard evaluations of the household budget survey are publicly available from the German Federal Statistical Office. For secondary analytical evaluations researchers can work with a scientific use file. This was the type of file used by the author to analyse nutrition expenditure on the basis of data from approx. 43,000 cases. The analysis focuses mainly on differences in household types and the use of catering services and not on the significance of individual food groups. Data from detailed entries was therefore not considered. The calculations were made using an evaluation concept developed for the establishment of reference data as comparative and reference figures for budgeting advice and which is explained briefly below [3].

In the scientific use file nutrition expenditure is categorised into the following six cost groups: food, non-alcoholic drinks, alcoholic drinks, tobacco products and drugs, food and drink in restaurants, cafés, ice cream parlours, from fast food kiosks and delivery services (excluding meals on wheels) and food and drink in canteens and dining halls (including kindergarten and school catering). In standard evaluations by the German Federal Statistical Office [21] the stated cost categories are generally amalgamated into the three superordinate expenditure categories: “food and non-alcoholic drinks”, “alcoholic drinks and tobacco products” and “catering services” (eating outside the home). Because under Council Regulation (EC) No. 178/2002 Art. 2 tobacco products and narcotic drugs are not considered food [22], these were initially excluded from our calculations, but due to minimal structural changes in the results they were listed in the categories stated above.

These three cost groups enable the core issue to be tackled, the level and structure of nutrition expenditure to be examined descriptively depending on available household income, household type and life stage, whilst at the same time presenting a differentiated examination of the significance of eating outside the home. Multivariate analyses were consciously avoided because in educational and advisory work absolute sums of money or their proportions of an overall expenditure figure are used. Five superordinate household types are distinguished: women living alone, men living alone, couples without children, couples with child(ren) and single parents with child(ren). The last two types together form the family households. These can be further broken down according to number of children and

age of the children. The allocation of a family household to one of four age groups (0–5/6–11/12–17/18–26 years) was done according to the age of the youngest child.

The levels of expenditure are shown mainly as median values with only some arithmetic mean values. In the case of distributions skewed to the left, as are characteristic of most household expenditure categories, this procedure has the advantage of reducing the influence of very high values and showing a mid-level which is generally common and thus more representative of the typical household [23].

This approach is also important for the differentiation of various income levels. The total of all cases of a household type can each be divided into four equally sized income groups, known as income quartiles. Income quartile I represents the low income range, into which 25% of the households with the lowest net household income are allocated. Income quartiles II and III respectively contain the quarter of households whose net household income is below and above the average income of the relevant household type. The 25% of households with the highest net income form income quartile IV. This approach means that the income boundaries of the quartiles are at different levels for the individual household types (cf. in detail [24]).

Results

Level and structure of expenditure on nutrition

The following influence factors for nutrition expenditure are investigated below: income level, household type, age of children and lifestyle-related eating habits. Since it is difficult to compare absolute household expenditure on nutrition between households of various sizes, absolute sums of money are also represented using the reference value of €/day and person. Some results, as is widespread in socio-scientific analyses (hermeneutics), are not only stated but also supplemented by a suggested method of interpretation which can help better understand the special features of each household constellation.

Level of income

Applied to all the households included in the evaluation, this produces a median value for nutrition expenditure of 429 € per month, which equates to 7.34 € per day and person. A comparison of the results for the four income quartiles confirms that households with higher incomes spend more money on food in absolute terms. Both expenditure in €/month and the amount in €/day and person increase significantly from the first to the fourth income quartile. This also relates to the fact that the structure of the expenditure differs in the four income quartiles. In the average of all households 70% of expenditure on nutrition falls into the category of food and non-alcoholic drinks, 9% into the category of alcoholic drinks and tobacco products and 21% into catering services. In comparison to this, the proportion of spending on the first-mentioned category is above average in the two lower income quartiles I and II and the proportion of spending on catering services is below average. This situation is reversed for

the income quartiles III and IV. Eating outside the home therefore plays a larger role in the higher income groups than in the lower ones. The percentages for alcoholic drinks and tobacco products represent the smallest proportion in all income quartiles and differ very little. However, the proportion spent on alcoholic drinks and tobacco products in the lower income bracket is slightly above average (♦ Table 1, upper section).

A comparison of the monthly median values with the arithmetic means reveals significant differences, which indicate a particularly wide distribution of nutrition expenditure values overall and within the relevant income quartiles and which are caused by very high expenditure of a large number of outliers.

Household type

Like level of income, household size and household constitution have a considerable influence on nutrition expenditure. But this is shown in different ways in the expenditure per month and per household and the figures per day and person. Whilst on the one hand expenditure per month and per household rises with increasing household size, on the other hand person-related expenditure reduces. There are two reasons for this: firstly, larger households can benefit from saving effects in the purchase and processing of food (larger, more economic packs, less leftovers which spoil or are discarded due to lack of opportunity to use them). Secondly it is clear from the structure of the nutrition expenditure that larger households tend to use catering services somewhat less frequently. The reasons for this could be that costs of about the same amount are incurred for every additional person when eating out and, unlike preparation at home, there are hardly any quantity advantages as the number of persons increases. But there are only minimal differences in this respect between the individual household types in the distribution of nutrition expenditure.

However, what is striking is the above average proportions for alcoholic drinks/tobacco products and eating out in households of men living alone (♦ Table 1, lower section).

A comparison of household types without children to those with children shows that nutrition expenditure in childless households is particularly high. For the reasons stated above, this is also a result of the mathematical effect for small households, and this must be taken into account in the

	Nutrition expenditure		€ / day and person	Proportion of expenditure on ... of nutrition expenditure overall		
	€/month			food, non-alcoholic drinks	alcoholic drinks, tobacco products	catering services
	median	arithmetic mean		%	%	%
households in total	429	475	7.34	70	9	21
income quartile						
income quartile I	331	362	5.76	77	10	13
income quartile II	414	445	7.07	71	9	19
income quartile III	463	500	7.94	68	8	24
income quartile IV	536	592	9.22	64	8	28
household type						
woman living alone	235	257	7.84	72	8	20
man living alone	268	299	8.92	62	12	26
couple without children	494	535	8.23	68	10	22
couple with 1 child	578	618	6.43	72	8	20
couple with 2 children	670	710	5.58	74	7	20
couple with 3 or more children	735	777	4.68	77	5	18
single parent with 1 child	358	384	5.97	75	8	17
single parent with 2 or more children	452	486	4.77	78	6	17
other households	530	571	6.18	73	10	17

Tab. 1: Level and structure of nutrition expenditure according to level of income and household type [25]

interpretation. The reference value for nutrition expenditure per day and person is established independently of the different age-specific nutritional quantities and requirements, i.e. per head. There is no mathematical consideration of the fact that these are lower for children. In addition, it must be borne in mind that nutritional behaviour can vary considerably between households with the same number of persons due to major financial differences. The household income of couples without children is often based on two sources of income, that of single parents frequently relies on benefits or the part-time work of one single adult in the household. The direct comparison of men and women living alone shows significant differences in eating patterns. At 8.92 €/day and 7.84 €/day respectively, the nutrition expenditure of men living alone is more than 1 € higher than that of women living alone. Moreover, the structure of the expenditure makes clear that this is due not only to higher overall quantity requirements and consumption of more expensive products

and alcoholic drinks, but also to the considerably higher proportion spent on eating outside the home compared to women. The results for this latter are probably decisively affected by a large number of older women for whom cooking each day at home is still a matter of course [26]. However, above average expenditure proportions on alcoholic drinks/tobacco products and catering services are to be found not only in men living alone, but also in households of couples without children.

Age of children

Child-related effects can be established more clearly when family household types are distinguished according to the age of the children. Allocation is done according to the age of the youngest child in the household. Due to the small number of cases in the data for household type “couple with three or more children”, the two types with the youngest child < 6 years and 6 to < 12 years were combined. So, in this study the age groups < 12 years, 12 to < 18 years and 18 to < 27 years are considered.

Despite this methodological limitation, ♦ Figure 1 clearly shows that in each of the three household types, nutrition expenditure increases as the children become older. But in each case the increase commences from a different starting level, which is dictated by household size and the consequent possible saving effects.

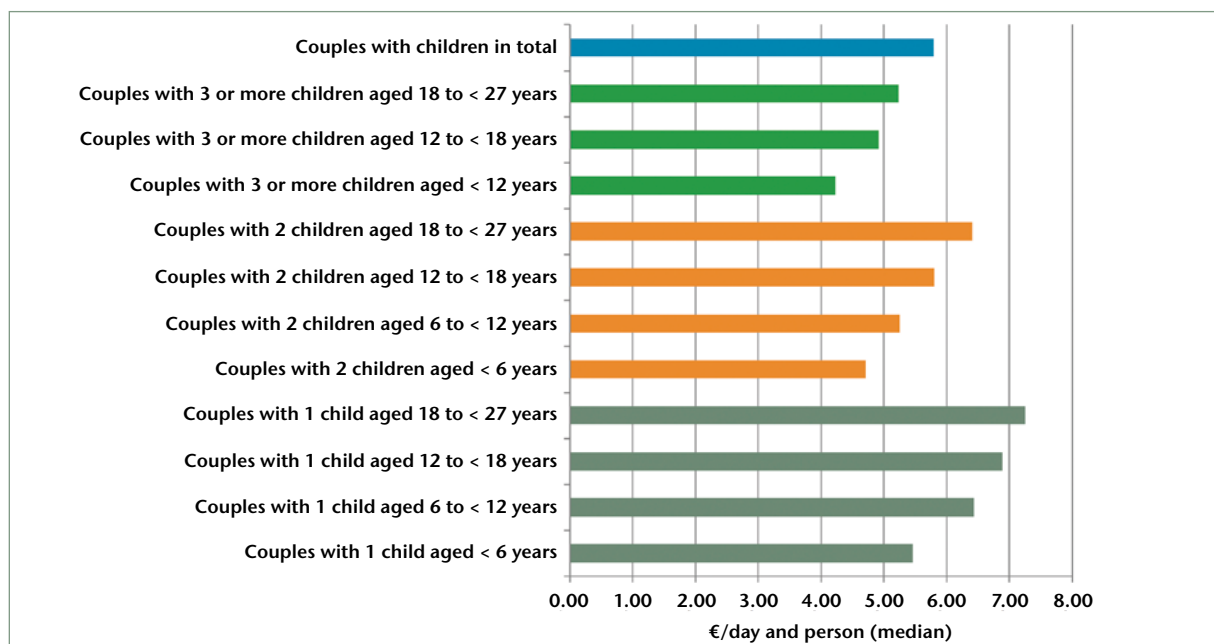


Fig. 1: Nutrition expenditure per day and person in couple households with children [25]

Lifestyle-related eating patterns and how they change

Differences in the way nutritional needs are met in private households can be seen by the distribution of the statistical data, which is presented as a frequency distribution (♦ Figure 2) and box plots (♦ Figure 3).

The frequency distribution shows that a large majority of the households (almost 80%) spend between 3 and 11 €/day and person on food. For a small number of households very low expenditure of less than 3 €/day and person is shown. This only appears realistic under special circumstances, such as low-priced dietary forms (vegetarian, no alcoholic drinks or tobacco products), self-supply from a private garden and/or if household persons are regularly fed free of charge by members of their private network. Low values could also be the result of buying patterns with bulk purchases which could not be accurately accounted for within the three-month designated period. Whilst high person-related nutrition expenditure of over 11 €/day can be explained up to a point by high nutrition standards or specific dietary forms (e.g. gluten-free diet), values of approx. 20 € and above require specific explanation. It may be that the household budget survey records in specific cases include the costs of invited guests in restaurants, e.g. for family celebrations, which demonstrates the social functions of nutrition.

However, the box plots for nutrition expenditure/day and person show that, particularly in household types with children, there is a relatively narrow range of expenditure shown in the box, into which 50% of the households fall (♦ Figure 3).

It can also be established that across all the households the level of nutrition expenditure per day and person is influenced by the proportion within the nutrition expenditure which is spent on catering services. Where the proportion of catering services expenditure is over 25% of total nutrition expenditure, the median

value of the nutrition expenditure is 8.85 €/day and person, as opposed to 6.33 €/day and person where this proportion is less than 15%. It is interesting to note in this connection that the proportion of total nutrition expenditure spent on catering services has developed differently for the household types within a period of 15 years. Between 2003 and 2013 on average all household types showed an increase from 18.7% to 20.3%, which occurred mainly in the second half of the period from 2008. This development was driven above all by households with children, presumably due to the increased uptake of meals in kindergartens and schools. On the other hand, in the case of men living alone a reduction in eating outside the home can be established. There was little or no change to be seen in the proportion of spending on catering services among women living alone and couples without children [2] (♦ Figure 4).

Our own calculations have also shown that differences in technical equipment have hardly any effect on food expenditure. Many households can afford a “readiness” for self-supply, even though they tend to make use of this rarely or irregularly.

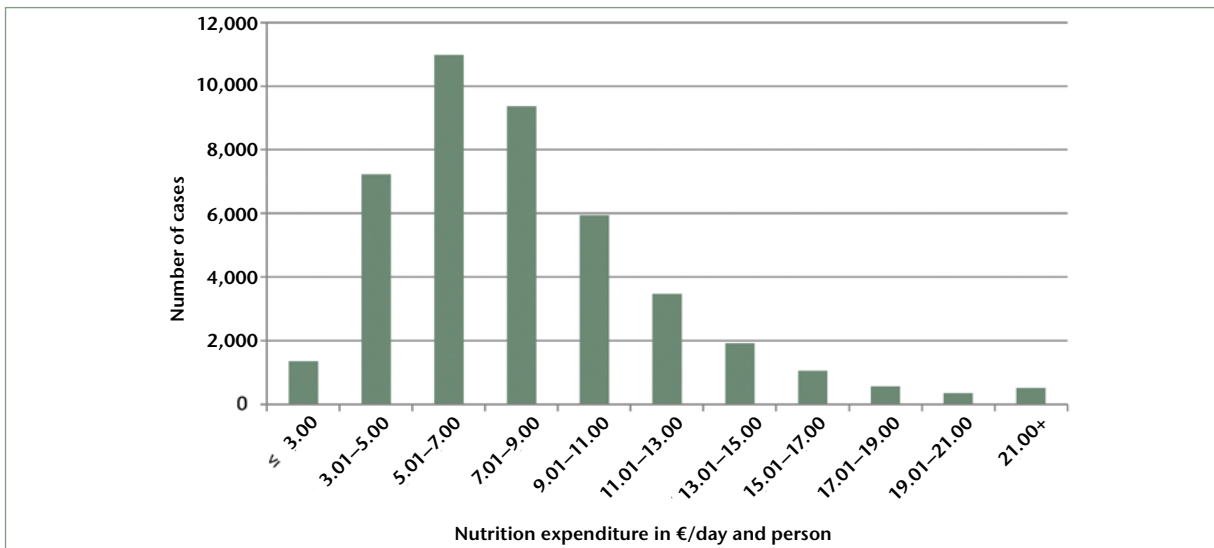


Fig. 2: Frequency distribution of expenditure on nutrition per day and person [25]

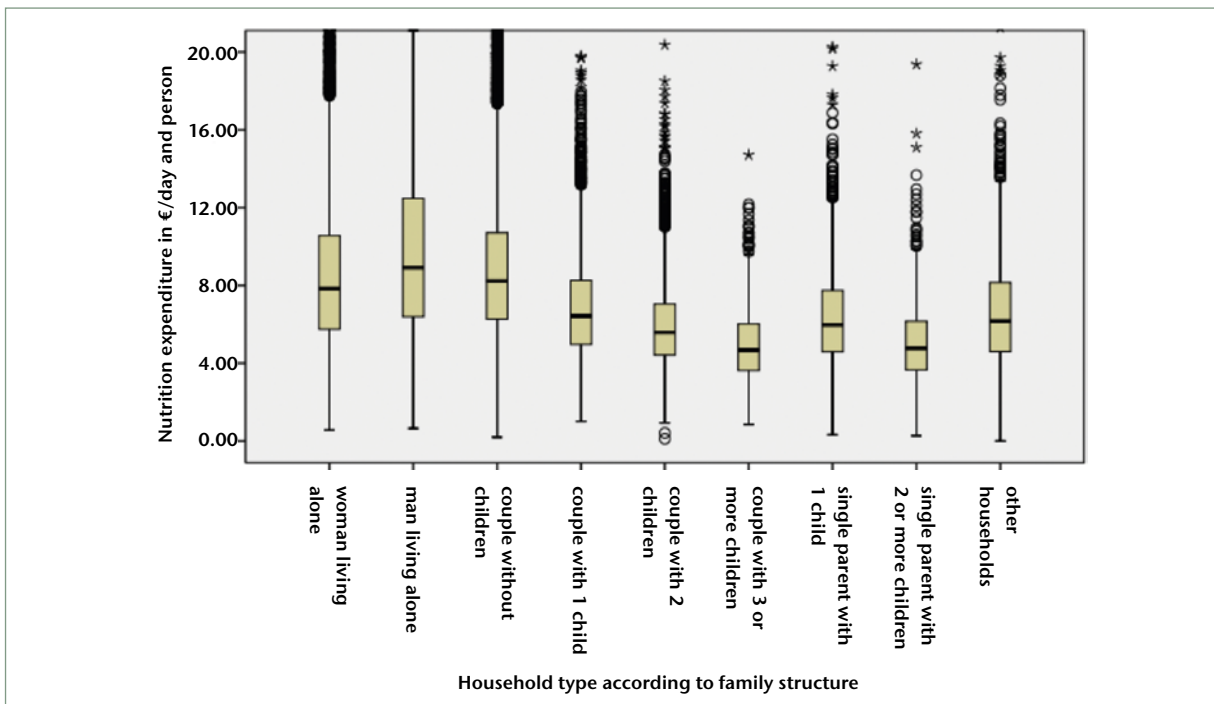


Fig. 3: Frequency distribution of expenditure on nutrition by household type [25]
 Outliers shown as circles, extreme values shown as stars

Discussion

This analysis aims to examine nutrition expenditure depending on various influence factors. It considers both expenses for the purchase of goods (food, drink, tobacco products) and those for catering services (eating outside the home). In contrast to this, studies available up to now have focused on the itemisation of the expenditure categories as this is generally used by the German Federal Statistical Office

and have examined the field of nutrition primarily within the context of the overall consumption structure. Expenditure on what are known as hospitality services is combined with spending on accommodation services and shown separately from expenditure on food, etc.

Another particular focus of this study is a cross-sectional comparison of the so defined nutrition expenditure in various household types, which represent various phases of life or family development and can thus indicate changes in consumption structure due to life events and household decisions. This is based on an interest in case-specific comparative and reference values for edu-

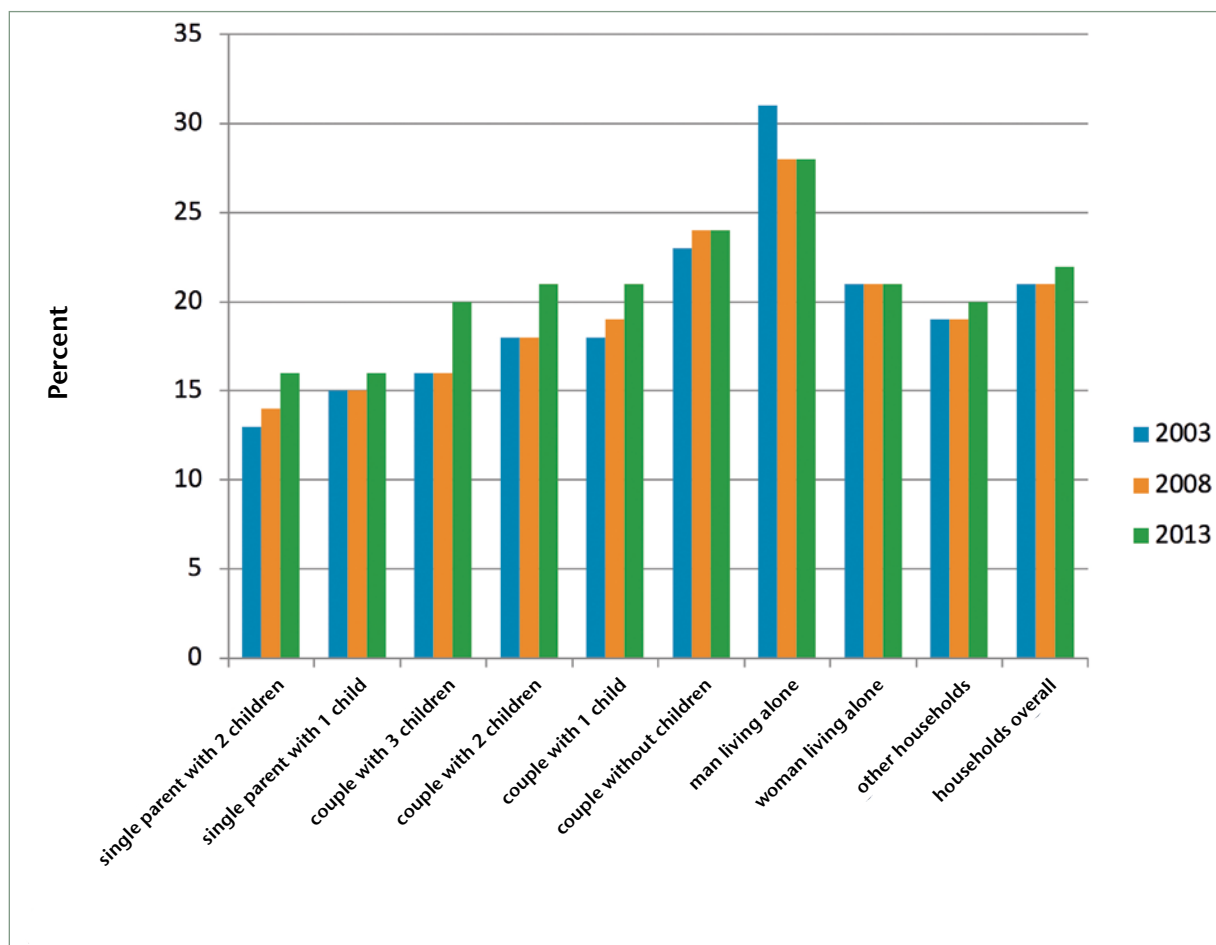


Fig. 4: Proportion of nutrition expenditure overall spent on catering services in households with children under the age of 18 in the years 2003, 2008 and 2013 [2]

cational and advisory work on the subject of household finances in general or specifically in relation to nutrition expenditure. Differentiations in everyday nutritional patterns should be considered and appropriate data shown as nominal values and not in the form of statistical correlations.

Representative details on nutrition expenditure are collected nationally and internationally only as primary statistical data through official statistics on household accounting. Due to the selection of this particular approach on a representative basis, there are no other studies available on nutrition expenditure which enable a comparative interpretation or discussion. Even the primary data of official statistics has in recent years no longer been analysed differentially. The previously standard specific analysis of nutritional data by the German Federal Statistical Office was last performed in 2006 [27]. Equally, secondary analytical studies [15–19] consider nutrition expenditure only

within the context of consumer spending or in combination with quantity-related food consumption [14]. The dependence of food consumption on the level of household income and household composition, known since Engel [28], is a constant result confirmed by the studies mentioned and also in this analysis.

The effect of the age of household members on cost structures has up to now been studied predominantly to establish the costs of children. There are specific evaluations on this by the German Federal Statistical Office based on the 2013 household budget survey [29]. The results, like those of our own calculations, show that nutrition expenditure increases as children grow older and that their level is influenced by both household type and available income. They also correspond with findings from older studies on the costs of children [16]. Unlike the two sources stated above, our calculations establish a person-related reference figure for nutrition expenditure per day and person which, in the absence of a generally accepted age-specific distribution formula, is based on a simple per head calculation for the field of nutrition. This limits the validity and comparability of data with and without children, particularly in the case that younger children are included. The effect that nutrition expenditure increases with increasing household size, but reduces per person, is thus intensified.

Basically, qualitative differences in nutrition cannot be derived from monetary sums spent, or only to a very limited extent. In a time comparison however, certain changes in lifestyle do become clear. The recognisable increase in expenditure on catering services, particularly in family households, corresponds to a significant reduction in the time spent on food preparation [12]. This makes clear that the increased involvement of mothers in wage earning and the expansion of childcare facilities in the last two decades have also changed nutritional patterns in families from mainly self-catering for midday meals to a pattern of eating outside the home (assignment). In contrast to this in the case of single men a reduction in eating outside the home can be seen, which begs the question as to whether this is due to more self preparation of meals in the course of changing attitudes to housework and/or better everyday skills in food preparation. One answer to this could perhaps be found by examining the everyday eating habits of this group of persons using data from time use surveys and comparing this with the time spent on food preparation in the data collected in the survey years 2001/02 and 2011/12.

Besides the limited validity of data on money spent, there are other limitations in the data from the household budget survey which restrict the quality and usability of the analysis results for educational and advisory purposes, although the household budget survey is the best available representative primary statistical information with a high quality of data and a high number of context variables. The evaluation of nutrition expenditure is more difficult on the one hand for household types with a small number of cases, such as couple households with three or more children or single parent households with two or more children. Moreover, across all household types in individual cases there are some implausibly high or low values in the expenditure categories examined. Adjusting for these extremely high and low values in advance of the evaluation is however hardly possible because in a complex field like food provision there are hardly any clear boundaries between realistic and unrealistic figures.

The reason for this is that nutrition expenditure reflects the fulfilment of various functions of nutrition, which must be considered specifically to the households particularly in an advisory context. It is not only individual standards and preferences in relation to certain

foods and drinks that play a role, but also social aspects in eating habits in everyday life and on special occasions, such as religious festivals and celebrations. Moreover, nutrition expenditure is also influenced by conditions within the household, such as the availability of technical equipment and the time that members of the household can or want to invest in shopping and food preparation. In view of this complexity, the analysis possibilities of the available data material on official statistics are limited.

Conclusion

Determination of expenditure on nutrition is a quantitative approach to generate statements on monetary investment in food provision in private households. The significance of socio-demographic and economic influence factors can be shown descriptively. This enables provision of some comparative and reference data suitable for educational and advisory work, but does not enable the extent of the individual correlations to be determined. More detailed scientific analyses using multivariate procedures could generate additional data here. On the other hand, in order to analyse the costs of various types of nutrition, qualitative research approaches are preferable because they can represent the overall correlations of the various socio-cultural influence factors on the extent of mealtime patterns in eating habits in everyday life and on special occasions.

Conflict of Interest

The author declares no conflict of interest.

Dr. Heide Preuße

Institut für Wirtschaftslehre des Haushalts und
Verbrauchsforschung
Justus-Liebig-Universität Gießen
Senckenbergstr. 3
35390 Gießen
Heide.Preusse@haushalt.uni-giessen.de

References

1. Hertel J (1992) Einnahmen und Ausgaben privater Haushalte im Jahr 1988. *Wirtschaft und Statistik*: 653–667
2. Statistisches Bundesamt (Hg). *Aufwendungen privater Haushalte für den privaten Konsum. Einkommens- und Verbrauchsstichprobe 2013 (Fachserie 15: Wirtschaftsrechnungen, H. 5). (2015a), S. 17 ff. und frühere Jahrgänge*, URL: www.destatis.de/DE/Themen/Gesellschaft-Umwelt/Einkommen-Konsum-Lebensbedingungen/Konsumausgaben-Lebenshaltungskosten/Publikationen/Downloads-Konsumausgaben/evs-aufwendung-privater-haushalte-2152605139004.pdf?__blob=publicationFile&v=4 Zugriff 10.04.19
3. Preuße H, Bödeker S, Bürkin B, Dörr K. *Referenzdaten für Haushaltsbudgets. Vergleichs- und Orientierungsdaten für die Budgetberatung*. dgh e.V., Osnabrück (2013)

4. Preuße H. Handeln im Privathaushalt. In: Aid infodienst Ernährung, Landwirtschaft, Verbraucherschutz e.V. (Hg). *Lebensmittelverarbeitung im Haushalt*. Bonn (2016), S. 144–146
5. Preuße H (2018) Referenzbudgets in ihrer Bedeutung als sozial-kulturelle Existenzminima – dargestellt am Beispiel von Erfahrungen aus einem europäischen Pilotprojekt. *Hauswirtschaft und Wissenschaft*, DOI: 10.23782/HUW_01_2018
6. Gedrich K, Karg G. Ernährungsgewohnheiten der Bevölkerung. In: *Deutsche Gesellschaft für Ernährung (Hg). Ernährungsbericht 2000*. Frankfurt/M. (2000), S. 18–57
7. Binder I. *Ernährungsverhalten außer Haus in der Bundesrepublik Deutschland*. Herbert Utz Verlag, München (2001)
8. Max-Rubner-Institut (Hg). *Die nationale Verzehrstudie II / Längsschnittstudie NENOMIT*. URL: www.mri.bund.de/de/institute/ernaehrungsverhalten/forschungsprojekte/ Zugriff 10.04.19
9. Brunner K-M, Schönberger GU (Hg). *Nachhaltigkeit und Ernährung. Produktion – Handel – Konsum*. Campus Verlag, Frankfurt, New York (2005)
10. Schönberger G, Methfessel, B (Hg). *Mahlzeiten. Alte Last oder neue Lust?* Verlag für Sozialwissenschaften, Wiesbaden (2011)
11. Leonhäuser I-U, Meier-Gräwe U, Möser A et al. *Essalltag in Familien. Ernährungsversorgung zwischen privatem und öffentlichem Raum*. Verlag für Sozialwissenschaften, Wiesbaden (2009)
12. Klünder N, Meier-Gräwe U (2017) *Essalltag und Arbeitsteilung von Eltern in Paarbeziehungen – Eine quantitative Analyse auf Basis der repräsentativen Zeitverwendungsdaten 2012/13 und 2001/02*. *Zeitschrift für Familienforschung* 29: 179–201
13. Werner R, Piekarski J, Opletal L. *Rückwirkungen der Außer-Haus-Verpflegung auf das Ernährungsbudget und den Nahrungsmittelverbrauch in privaten Haushalten*. BFE Karlsruhe (1983)
14. Karg G, Gedrich K. *Ernährungsbudgets privater Haushalte – Einfluss von Haushaltseinkommen und Haushaltszusammensetzung*. In: *Barlösius E, Feichtinger E, Köhler BM (Hg). Ernährung in der Armut*. Edition Sigma, Berlin (1995), S. 106–127
15. Christoph B, Pauser J, Wiemers J. *Konsummuster und Konsumarmut von SGB-II-Leistungsempfängern. Eine Untersuchung auf Basis der Einkommens- und Verbrauchsstichprobe*. URL: <http://doku.iab.de/discussionpapers/2014/dp0914.pdf> Zugriff 10.04.19
16. Karg G (Hg). *Haushaltswissenschaftliche Erklärungsmodelle für die Verfügbarkeit und Verwendung von Ressourcen in Haushalten mit Kindern*. Verlag Peter Lang, Frankfurt/M. u. a. (1992)
17. Hesse K. *Privater Verbrauch und Vermögen privater Haushalte*. In: *Hesse K (Hg). Strukturen privater Haushalte und Familien*. Verlag Peter Lang, Frankfurt/M. u. a. (1994), S. 109–140
18. Bögenhold D, Fachinger U. *Konsummuster im Kontrast: Die Entwicklung von Einkommensverwendungsmustern bei verschiedenen Haushaltstypen im zeitlichen Vergleich (2005)*. URL: www.researchgate.net/publication/45135182_Konsummuster_im_Kontrast_die_Entwicklung_von_Einkommensverwendungsmustern_bei_verschiedenen_Haushaltstypen_im_zeitlichen_Wandel Zugriff 10.04.19
19. Hörstermann K (2016) *Der Wandel der Konsumstruktur in Deutschland – ein Indiz für Individualisierung von Lebensstilen oder doch die Folge soziodemografischer Entwicklungen?* *Köln Z Soziol* 68: 713–730
20. Statistisches Bundesamt (Hg). (2016) *Einkommens- und Verbrauchsstichprobe (EVS). Qualitätsbericht*. URL: www.destatis.de/DE/Methoden/Qualitaet/Qualitaetsberichte/Einkommen-Konsum-Lebensbedingungen/einkommens-verbrauchsstichprobe-2013.pdf?__blob=publicationFile&v=3 Zugriff 10.04.19
21. Statistisches Bundesamt (Hg). (2016) *Aufwendungen privater Haushalte für Nahrungsmittel, Getränke und Tabakwaren (NGT)*. URL: www.destatis.de/DE/Themen/Gesellschaft-Umwelt/Einkommen-Konsum-Lebensbedingungen/Konsumausgaben-Lebenshaltungskosten/Publikationen/Downloads-Konsumausgaben/evs-nahrungsmittel-tabakwaren-2152603139004.pdf?__blob=publicationFile&v=4 Zugriff 10.04.19
22. *Verordnung (EG) Nr. 178/2002 des europäischen Parlaments und des Rates vom 28. Januar 2002 zur Festlegung der allgemeinen Grundsätze und Anforderungen des Lebensmittelrechts, zur Errichtung der Europäischen Behörde für Lebensmittelsicherheit und zur Festlegung von Verfahren zur Lebensmittelsicherheit*. URL: www.bfr.bund.de/cm/343/2002_178_de_efsa.pdf Zugriff 10.04.19
23. Holmes M, Maser K (2003) *Using median expenditures: impact on household spending data*. URL: <http://publications.gc.ca/site/eng/9.559402/publication.html> Zugriff 10.04.19
24. Preuße H (2018) *Referenzbudgets 2018 für Haushaltstypen mit Altersdifferenzierung*. *Hauswirtschaft und Wissenschaft*, DOI: 10.23782/HUW_20_2018
25. *FDZ der statistischen Ämter des Bundes und der Länder. Einkommens- und Verbrauchsstichprobe 2013 GF3, eigene Berechnungen*
26. Statistisches Bundesamt (Hg). (2015) *Zeitverwendungserhebung 2012/2013. Aktivitäten in Stunden und Minuten für ausgewählte Personengruppen*. URL: www.destatis.de/DE/Themen/Gesellschaft-Umwelt/Einkommen-Konsum-Lebensbedingungen/Zeitverwendung/Publikationen/Downloads-Zeitverwendung/zeitverwendung-5639102139004.pdf?__blob=publicationFile&v=3 Zugriff 10.04.19
27. Czajka S, Kott K (2006) *Konsumausgaben privater Haushalte für Nahrungsmittel, Getränke und Tabakwaren 2003*. *Wirtschaft und Statistik*. URL: www.destatis.de/GPStatistik/servlets/MCRFileNodeServlet/DEAusgabe_derivate_00000043/1010200061064.pdf Zugriff 10.04.19
28. Engel E. *Die Lebenskosten belgischer Arbeiter-Familien früher und jetzt*. Heinrich Verlag, Dresden (1895)
29. Statistisches Bundesamt (Hg). *Konsumausgaben von Familien mit Kindern. Berechnungen auf der Grundlage der Einkommens- und Verbrauchsstichprobe 2013*. URL: www.destatis.de/DE/Themen/Gesellschaft-Umwelt/Einkommen-Konsum-Lebensbedingungen/Konsumausgaben-Lebenshaltungskosten/Publikationen/Downloads-Konsumausgaben/konsumausgaben-familien-kinder-5632202139004.pdf?__blob=publicationFile&v=4 Zugriff 12.07.18

DOI: 10.4455/eu.2019.035