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New approaches to measuring unpaid work and work-life balance

Measuring the distribution work of couples using household survey data. New approaches and findings from the German Microcensus

Note by the Federal Statistical Office Germany*

Abstract

While indicators like the employment participation rate or the hours usually worked of men and women are widely used as standard indicators in the field of gender statistics, the division of labour of couples less frequently taken into account. This is surprising as – especially when children are born – the division of labour of mothers and fathers are renegotiated at family level, often with the effect that women reduce their engagement in paid work to focus on unpaid care work. Against this background, informing policies to promote gender equality often particularly requires indicators on the division of labour of couples. Based on household surveys, such data are easily accessible. Still, the analysis requires a careful application of the internationally agreed concepts such as the employment status and the measurement of working time in order to avoid misinterpretations. Based on recent findings from Germany, the contribution presents approaches to develop suitable indicators and discusses the conceptual pitfalls.

*Prepared by Thomas Körner. I am grateful to Matthias Keller, who provided the tabulations of the results from the Microcensus. The views expressed in this paper are those of the author and do not necessarily coincide with the views of the Federal Statistical Office.

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I. Introduction

1. Distribution of paid and unpaid work in couples is a key indicator regarding gender equality. The inequalities of the time spent on paid and unpaid work by men and women are one of the main reasons, why women reach lower earnings (Allmendinger 2022) as well as for gender gaps in various social fields. As pointed out by Schrenker and Zucco (2020), unequal distribution of paid and unpaid work between men and women significantly contributes to the Gender Pay Gap.
2. Earnings of men and women, as shown by the regular publications on the Gender Pay Gap, still differ in almost all countries and sectors. It has been frequently noted that the Gender Pay Gap becomes particularly visible when couples have their first child: At this crucial step in life, the distribution of paid and unpaid between the two partners of a couple gets renegotiated. The result is often that the female partner interrupts paid employment to take care of the child, while the man continues paid work (and even increases it). When care obligations decrease as the children grow older, women usually return to the labour market, yet typically in part-time jobs. As a result, when estimating the average earnings over the lifetime, the gap between men and women is around 40 to 45 percent in Germany, with even larger gaps for women with children, which are due to a “child penalty” (Bönke et al. 2020; Kleven et al. 2019).
3. While the distribution of earnings as well as the hours spent on paid employment are readily available from a range of data sources, especially Labour Force Surveys, estimates regarding the distribution of unpaid work are provided less frequently and with more limited precision: Given the more complex data collection process such data are collected by time use surveys in larger intervals and with smaller sample sizes (compared, e.g., to Labour Force Surveys), which consequently have only limited possibilities to provide detailed breakdowns.
4. We argue that indicators on the distribution of paid work in couples can be used as a proxy for the distribution of both paid and unpaid work in couples with and without children. It can be assumed that the partner who is spending less work in paid employment is spending more time on unpaid care and household work. It should however be kept in mind that this relationship is not perfect: As shown by time use surveys, also in couples in which both partners work full-time, the woman on average indicates to spend more time on unpaid household work. In the case of Germany, comparing mothers and fathers in full-time employment, the mothers still provided twice as much time of care work (28 versus 15 minutes per day; Hobler/Pfahl 2017). At the same time, a reduction of the inequality in the hours worked in paid employment is often presented as a key element to close the gender care gap, i.e. the average difference in the number of hours spent on unpaid care work by women and men (Schäper et al. 2023).
5. Figures regarding the distribution of paid work in couples is equally available from many Labour Force Surveys, provided that these are conducted on the basis of a household survey. In Germany, in the Microcensus, one percent of the population is interviewed each year, including detailed information regarding the person’s household situation and detailed information on working time and paid employment.
6. Although indicators on the distribution of paid employment in couples are sometimes used, including in international data bases, their operationalisation is not straightforward. Important conceptual elements of possible indicators require further attention. This concerns especially the definition of employment according to the labour force concept of the International Labour Organization (ILO), the definition of full-time and part-time employment, but also the household and family concepts used.

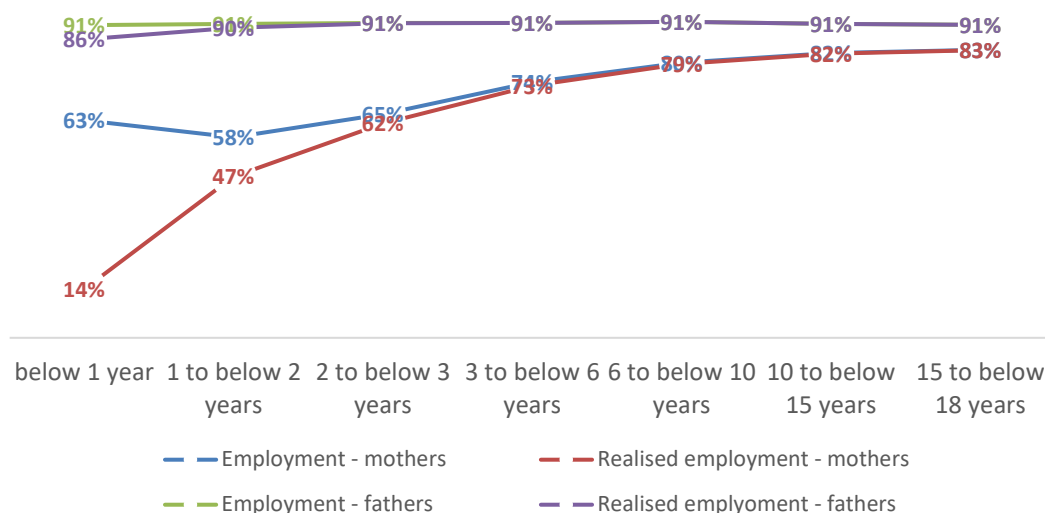
7. This paper, in section II discusses some of the methodological and conceptual challenges. In section III, a range of different indicators, based on results from the German microcensus for the year 2021 are presented. In the concluding section IV, we summarise the findings and provide suggestions for further developments.

II. Conceptual and methodological challenges

A. Defining employment of couples (with children)

8. The labour force concept of the International Labour Organization (ILO 2013) is the international standard guiding the conceptualisation of work and employment in official statistics. The labour force exhaustively subdivides the entire population in three mutually exclusive groups, i.e. employed persons, unemployed persons and persons outside the labour force. In this concept, employment is defined in an extensive way, i.e. also persons engaged in small jobs of one hour or more are considered as employed (Körner 2012).
9. In the labour force concept, persons on temporary absence during the reference week are considered as employed, provided that they maintain a job attachment during their absence. For this reason, persons with a job but not at work are usually included as employed if they were, e.g., on annual leave, sick leave, parental leave, educational leave, leave due care for others, or absent due to strikes or lockouts.
10. The labour force concept therefore may lead to biased conclusions, when comparing the employment situation of mothers and fathers (Hochgürtel 2018; Kahle/Keller 2018): Mothers not at work due to parental leave (which may be longer than three months “where the return to employment in the same economic unit is guaranteed”; ILO 2013: 6) may be counted as employed, thereby systematically over-estimating the employment of mothers. As men and women are typically affected differently by the different reasons for being absent from the job, analyses on the employment situation of mothers and fathers, as well as of couples may be biased if the Labour Force Concept is applied in a naïve way.
11. Against this background, for the area of analyses regarding the employment of men and women, the Federal Statistical Office (FSO) Germany developed the concept of “realised employment”, building on the available criteria of the labour force concept (Hochgürtel 2018). The group of people in realised employment comprises all persons that are employed according to the labour force concept provided that they were not absent from their job due maternity leave or parental leave. As shown in figure 1, referring to the persons in realised employment instead of all employed leads to significant differences in the results, in particular regarding mothers with young children. In 2021 the realised employment rate for mothers with children below the age of one year was 14% while overall employment rate for mothers with children below the age of one year amounted to 63%.

Figure 1
Employment and realised employment for mothers and fathers, by the age of the youngest child (Germany, 2021)

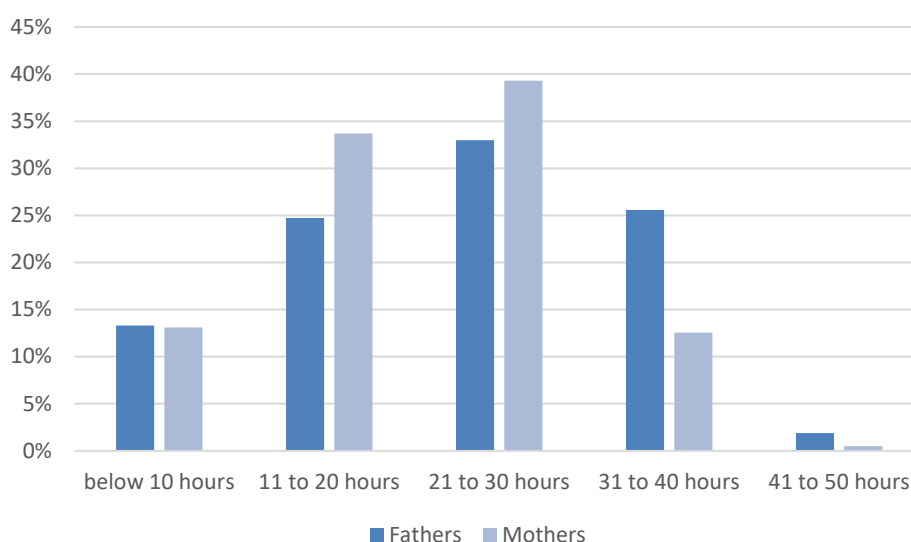


B. Defining full-time vs. part-time employment

12. A frequent indicator to capture a person's volume of work is distinguishing whether the main job is a full-time or a part-time job. This is sometimes less straightforward as it may seem at first sight, since the hours usually worked within the group part-time jobs (as well as full-time jobs) show considerable variation, which is different for women and for men (figure 2). In the context of work arrangements in couples this can lead to biased results, if the working time of men working part-time is different from the working time of women in part-time employment.
13. According to the ILO convention 175, a part-time worker is "an employed person whose normal hours of work are less than those of comparable full-time workers" (ILO 1994). The ILO resolution on the measurement of working time reaffirms this definition, but refers "contractual hours or hours usually worked" (ILO 2008) (and not normal hours), which is of limited importance in the present context. Assuming that most full-time workers would work around 40 hours per week results in a situation in which full-time workers are a relatively homogeneous group (regarding their working time), while part-time workers can usually work between 1 and 39 hours per week (Kahle/Keller 2018). This is a very heterogeneous group, meaning that working part-time can have diverse implications not only on the related earnings, but also regarding the distribution of work in couples.
14. Looking at the question how part-time employment is usually made operational in surveys further complicates the matter. While the in the Labour Force Surveys of EU member states it is recommended to base the measurement of full-time and part-time jobs on the self-assessment given by the respondent, it is common practice in many other surveys to define a fixed threshold (e.g. 30 hours) distinguishing full-time and part-time jobs. Further rules may apply in data editing to correct the data for implausible replies. The German Microcensus, e.g., until 2019 considered all persons as working full-time if their hours usually worked are

36 or above (regardless of the self-assessment provided in the survey). Persons usually working less than 25 hours are considered part-time workers, while only for those whose hours usually worked in the range from 25 to 36 were categorised according to their self-assessment in the survey. Conclusions regarding to the distribution of work in couples can diverge at least to some extent depend on the definition applied in a given survey.

Figure 2
Distribution of hours usually worked by mothers and fathers in realised part-time employment (Germany, 2022)



15. A further aspect to be noted is that survey estimates on full- and part-time work usually refer the main job. Secondary jobs are usually not considered, even though their working time may sum up to a full-time job.

C. Defining the household situation of couples

16. According to the UNECE recommendations on the 2020 census round household is defined as “persons who combine to occupy the whole or part of a housing unit and to provide themselves with food and possibly other essentials for living” (UNECE 2015: 162). The two main household concepts in use – the housekeeping concept as well as the household dwelling concept (often used in censuses) – have in common that the basic criterion delimiting the household is that the household members share the same dwelling.
17. Linking the concept of “household” or in particular “family” to the criterion of occupying the same dwelling can be useful for many analytical purposes and may be a straightforward decision to make both concepts operational in surveys. However, it may deviate from the everyday life’s perception of households or families. This may apply, e.g., if not all members of a family share the same dwelling, as persons living in another household by definition cannot be members in further households.
18. Since several decades this delimitation is no longer in line with some household and family constellations, in particular as regards families: Families are no longer limited to the traditional core families living together in a stable way in the same dwelling. A considerable

share of families are recomposed as patchwork families after a separation of the parents. The children living together in a households are no longer necessarily the biological descendants of the adults they live with. In complex or blended families both members of the couple have at least one pre-existing child. Furthermore, children may live in several households at a time, shifting between the households of different biological and step parents, which is often not reflected by survey concepts.

19. Surveys often have to make a choice what they can cover, and analyses of the division of labour of couples is typically limited by such decisions. In household surveys of official statistics (such as the German Microcensus), the focus is often on constellations of living together within the boundaries of one household. Social ties or family relationships to persons living in other households cannot currently be displayed. This means that only those persons are considered as mother or father who live together with their children in the same household. This might be problematic in some family types, such as “single parents” who share the care responsibilities after a separation.
20. To date, there is no solution in the Microcensus regarding families that extend beyond the boundaries of the household. Therefore, the following analyses refer to couples that live in the same household, knowing that this does not fully reflect all current forms of family life.
21. Also the definition of a child deserves some attention: In surveys like the Microcensus, there is principally no age boundary for children, e.g. in many standard tabulations, also full age children living in the household might be included. For analyses of the division of labour of parents, it is advisable to focus on underage children only. Apart from that, it is advisable to apply breakdowns by the age of the youngest child in the household in order to be able to make meaningful comparisons. Persons living together with their full-age children are usually included as households without children.

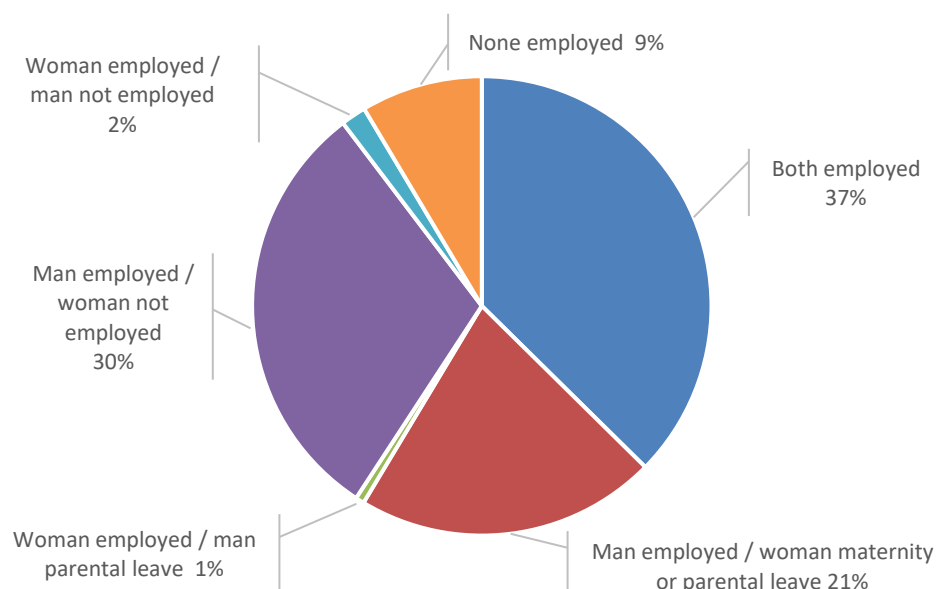
III. Indicators and findings

22. As shown in the preceding section, analysing the division of paid and unpaid work in couples requires some basic conceptual decisions. For the reasons already mentioned, we have chosen to focus on persons in realised employment, i.e. we do not include employed persons who were temporarily absent from their job due to maternity leave or parental leave.
23. As already shown in figure 1, the realised employment rate of mothers and fathers shows large differences: While 90% of the fathers were in realised employment in 2021, this applied to only 69% of the mothers. The gap gets much bigger, the younger the children living in the household are. Note that the gap entirely disappears if we compare men and women without children. If we focus on an age range comparable to the group of parents, e.g. 21 to 55 years, the realised employment rate is 83% for men and 82% for women.
24. If we focus on couples living together, the results become much more focussed on the specific distribution of work negotiated by the mother and father living together with their child or children.
25. A simple, but very rough indicator boiling down the division of paid work of couples, is the average difference of the weekly hours usually worked in parental couples. In Germany, the indicator refers to mothers and fathers from 15 to 64 years whose youngest child is less than three years old. It includes couples with at least one partner in realised employment (partners not in realised employment counting for 0 hours). Such an indicator presents in

one figure the inequality in the distribution of paid employment and unpaid care work between women and men. According to data from the German Microcensus, the average difference of hours usually worked in couples was 20.9 in 2021 (BMFSFJ 2023). Compared to the year 2008, the difference decreased by 30% from 29.9 hours. Despite this reduction the indicator shows a persistent inequality in the division of paid and unpaid work between men and women, in particular for couples with young children.

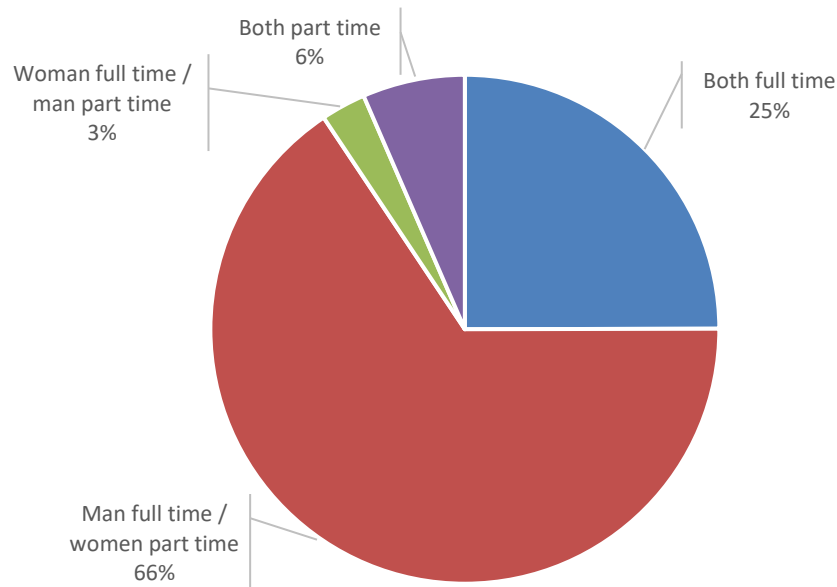
26. While it is helpful for a quick assessment to concentrate a complex phenomenon like the division of labour in couples to one single number, this simplification at the same time prevents from a differentiated analysis. The average mixes couples in which one partner works full-time and the other is not in paid employment, with full-time/part-time constellations and couples in which both partners work part-time. A considerable variation in reality is thus strongly reduced in complexity.
27. Another approach is to focus less on the number of hours usually worked, but on the general types of division of labour. Looking at couples with children who are less than three years old, broad categories are mother and father are both in (realised) paid employment, only one of the partners is in paid employment, and none of the partners. As shown based on the Microcensus for the year 2021, in 9% of the couples with children under the age of three years neither the man nor the woman was in (realised) paid employment and 37% of the couples were both employed. In 51% of the couples in this group, the father was employed, while the mother was either not employed or in parental or maternity leave. Only in 3% of the couples, the mothers was in paid employment, while the father was not employed or in parental leave. This picture shows that in more than half of the couples a traditional division of labour prevails, in which the mother fully interrupts her employment, while the man continues to be employment (and even increases the working hours, as further analyses show). Cases in which the father interrupts his employment are still very rare.

Figure 3
Employment constellations of couples, whose youngest child is less than three years old (Germany, 2021)



28. Following this analytical approach, we can distinguish couples in which the woman entirely stopped working with a highly traditional division of labour. It is analytically fruitful to distinguish this group before taking a closer look into the couples in which both the mother and the father are in paid employment. It should however be noted that such an analysis only covers 37 % of the couples whose youngest child is less than three years old. Out of these 37 % of couples, in which both partners are employed, in two thirds the father is in full-time paid employment, while the mother is employed part time (see figure 4). In 25% of the couples, both partners are working full time, and in 6% both are employed part time. In only 3 percent of the couples, the mother holds a full-time job, while the father is working part time. Note that a very similar distribution can also be observed for employed couples with children aged less than 18 years old (both full-time 27%; both part-time 5%; man full-time/woman part-time 3%; woman part-time/man full-time 66%), the main difference being that in this group the share of couples, in which both partners are in paid employment amounts to 66% (instead of 37% for the couples with a child aged less than 3 years).

Figure 4
Employment constellations of couples in realised employment, whose youngest child is less than three years old (Germany, 2021)

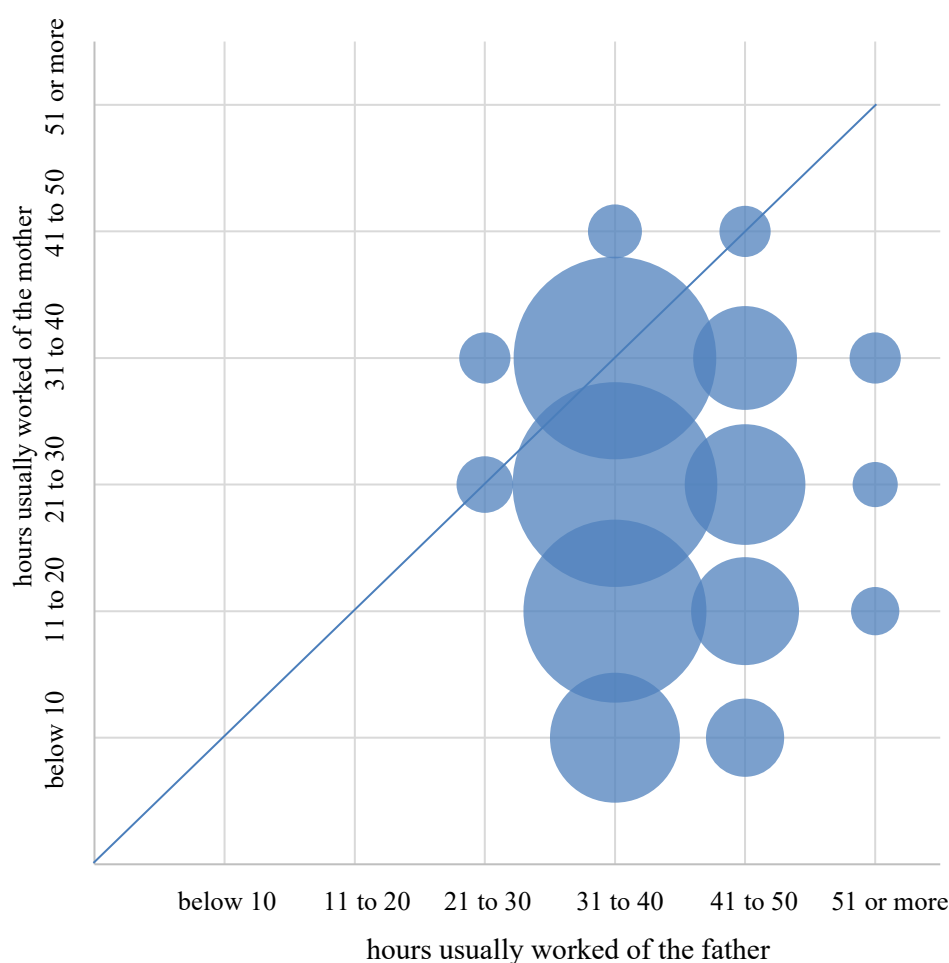


29. The figures presented in figure 4 still not provides a fully accurate picture. As already noted, the range of hours usually worked by part-time (but also full-time) workers is subject to considerable variation. This is particularly relevant, since mothers in part-time employment tend to work less hours than fathers in part-time employment (see figure 2). Similarly, fathers in full-time employment on average work more hours than mothers in full-time employment.

30. A possible solution is to analyse the hours usually worked by couples, broken down by the hours worked of the father and the mother. Figure 5 shows the hours worked by the father on the x-axis and the hours worked by the mother on the y-axis. The figure shows, e.g. that the most frequent employment constellation of couples with children below the age of three is that both the mother usually works 21 to 30 hours and the father 31 to 40 hours (which

applies to 20 % of the couples).¹ The bubbles on the diagonal represent cases, in which the mother's and the father's usual working hours fall into the same category. The (few) bubbles above the diagonal represent couples in which the mother usually works more hours than the father and the bubbles below the diagonal represent cases in which the father usually works longer. Overall, the hours usually worked are equal in 24.1 % of the couples, whose youngest child is less than three years old. In 73.1 % of the couples, the father falls into a higher category of hours usually worked and only in 2.8 % the mother is working longer hours. Compared to the results shown in figure 4, one can conclude that the comparison based on the full-time/part-time distinction underestimates the differences in working time of mothers and fathers.

Figure 5
Employment constellations of couples in realised employment, whose youngest child is less than three years old (Germany, 2021)



¹ Note that in figure 5 data cannot be presented for several data points due to insufficient cell size.

IV. Conclusions

31. Information on the distribution of paid work in couples can provide important hints also regarding the distribution of unpaid work in couples. Without measuring unpaid work directly, information on paid work can be used as a proxy for arrangements regarding unpaid work, and at least describes the potential of an equal distribution of unpaid work.
32. The indicators presented in this paper can be a highly useful complement to results on the division of unpaid work from Time Use Surveys, typically collected in large intervals and in relatively small samples. The indicators presented in this paper can be produced on the basis of Labour Force Surveys based on a household sample. As Labour Force Surveys are usually run more frequently and based on larger sample sizes, more differentiated analyses are possible, e.g. focussing on the situation of couples with young children by their socio-economic status.
33. As we have shown, several conceptual decisions need to be taken that have implications on the interpretation of the indicators. This includes the definition of employment (for which we suggest the concept of realised employment), which is facing different requirements when applied to the division of labour of couples, compared, e.g. to economic analysis. We have also shown that the common distinction between full-time and part-time employment is going along with some uncertainty, since the group if part-time employed tends to be very heterogeneous and often a harmonised operationalisation is lacking. Using the information regarding the hours usually worked is analytically richer, however more difficult to communicate.
34. All the indicators presented in section III have their right, and are appropriate measures in different contexts. We have shown that, nevertheless, relying on some of the indicators proposed only can lead to biased results, as, e.g., the inequality of the division of labour of couples might be under-estimated.

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