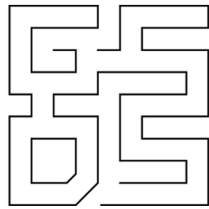
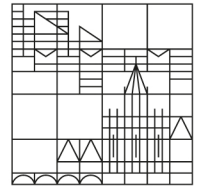


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**Measuring willingness  
to pay for childcare:  
Findings from a vignette  
study in the city of Konstanz**

**Marius R. Busemeyer  
Achim Goerres**

May 2017

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**Measuring willingness to pay for childcare:  
Findings from a vignette study in the city of Konstanz**

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This version: May 2017

**Abstract:**

This paper is about the perceived level of fair fees for childcare usage among residents of a German city. The analysis is based on original data from a vignette study of Konstanz residents, administered in the fall of 2014. The paper studies, which level of fees is perceived as fair and which factors influence these fairness perceptions – either directly or moderated by respondent characteristics. We find that residents in Konstanz on average consider a fee of 191 Euro to be fair, which is slightly below the average fee level that citizens had to pay at the time of the survey. The most important factors influencing the level of (perceived) fair fees are related to resourcefulness: High-income citizens are expected to pay more. Single parents and those without support from grandparents are allowed to contribute less. Religious background, employment status as well as having local roots do not affect the levels of perceived fair fees. The acceptance of the model of income-dependent fees indicates strong feedback effects from policies and institutions at the national level as the local fee level deviates from this most common model in Germany by raising fees independent of income.

*The data collection was funded by seed money to the first-named author. Equal authors are listed alphabetically. The data collection was commissioned to and supervised by Katrin Auspurg, Sandra Walzenbach and Thomas Hinz. The content of the vignette study was the sole responsibility of the authors.*

## Introduction

This paper analyzes the factors determining citizens' acceptance of fees for early childhood education and care (ECEC). This is a very relevant question from the perspective of policy-makers, in particular in countries that are still in the process of expanding institutionalized forms of early childhood education and care such as Germany (Fleckenstein et al. 2011). If citizens regard paying fees for childcare as fair, this would indicate a certain willingness to contribute to the costs of the expansion of ECEC directly via fees to be paid by those who actually use this service rather than financing it out of general tax revenue.

From a scholarly point of view, this question is intriguing as well and connects to larger debates about feedback effects from the level of institutions and policies on popular attitudes towards the welfare state (Svallfors 2012; Kumlin/Stadelmann-Steffen 2014). Germany is a country where citizens are not used to paying high fees for public services, in particular in the educational sector. For instance, when several *Länder* governments introduced moderate tuition fees some years ago, these were highly unpopular and triggered resistances not only among students, but also in the wider public (Garritzmann 2015, 2016). As a consequence, tuition fees were abolished again shortly after they had been introduced.

In the case of ECEC, municipal governments basically decide about the level of fees and these vary significantly across localities as the study by Goerres and Tepe (2013) shows. According to their data, some cities such as Düsseldorf did not charge any fees at all, while others levied about 2600 € per year with an average of about 1400 € per year for half-day childcare.<sup>1</sup> In addition to a massive variance in average fees, there is a significant variation in the institutional design of fee structures across localities. Factors such as parental income, the number and age of children matter in different ways in the calculation of fees. Even though this paper cannot directly assess whether the variation in fee structures is congruent with popular perceptions of the fairness of different models, it provides a first glimpse into what citizens (in Germany) would usually consider to be a fair financing model for early childhood education and care.

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<sup>1</sup> Estimates based on the first child of 3.5 years of a family with in the years 2009/10 in 100 largest German cities with a household gross income of 80.000 € and 5 hours of daily coverage (Kindergartenmonitor 2010)

Measuring fairness perceptions of fees is empirically challenging. Conventional international comparative surveys of public opinion do not contain a lot of information about public attitudes towards the provision of childcare. If they do, they ask more general questions about the respondents' preferences with regard to the government's responsibility to "ensure sufficient childcare services for working parents"<sup>2</sup> or similar things, but not about childcare fees per se. These are only very rough and imprecise indicators of the real willingness to pay, since different levels of "government responsibility" can go along with different cost-sharing arrangements between households and the state. Furthermore, asking citizens directly about their willingness to pay (e.g. "how much would you be willing to pay for childcare every month?") is of course possible, but will likely lead to unreliable answers. The individual characteristics of respondents would severely affect their answering patterns, and therefore this could not be interpreted as general perceptions about the fairness of childcare fees as a policy instrument.

This is why we pursue a different approach in this paper by presenting results from a factorial survey experiment, in which we confronted a representative sample of citizens from a wealthy city in Southern Germany with different "vignettes" to obtain a better measure of the exact level of fees, which would be considered as fair. The decisive difference to conventional survey designs is that respondents are asked to evaluate a hypothetical situation, which might be (and usually is) different from their own personal situation. Of course, individual respondent characteristics might still matter to some extent, but this research design is particularly well-suited to get at abstract policy preferences independent from the respondents' personal situation. Factorial survey experiments and conjoint analyses are not yet widely applied in the field of comparative welfare state research, but they have several advantages compared to traditional surveys, in particular because they allow the manipulation of multiple treatment conditions (see Auspurg/Hinz 2015; Hainmueller et al. 2014; Hainmueller et al. 2015 for accessible introductions).

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<sup>2</sup> This is a question from the European Social Survey (ESS), 4th wave, which contained a special module on welfare state attitudes.

There are some recent examples in political economy and welfare state research that indicate a growing interest in this methodological approach and that demonstrate its applicability and usefulness. For instance, Gallego and Marx (2016) analyze popular preferences for different kinds of labor market policies, paying particular attention to the potential influence of trade-offs. Bansak et al. (2016) and Hainmueller/Hopkins (2015) study attitudes towards migrants and asylum-seekers. Conjoint experiments are particularly useful in this case, because the commonly found social desirability bias in standard surveys is mitigated. Making use of a natural experiment in Switzerland concerning the naturalization of immigrants, Hainmueller et al. (2015) find that survey estimates obtained via conjoint analyses and vignettes mirror real-world behavior rather well.

To briefly foreshadow our main findings: Our analysis reveals that citizens consider, on average, childcare fees of about 191 Euros per months as fair. This by itself is a notable finding as it is significantly above the roughly 80 Euros per months in tuition fees for higher education, which triggered the wave of public opposition as mentioned above. Also, if citizens were of the opinion that the government should pay for childcare services out of general tax revenues, all kinds of childcare fees should be considered as unfair. Furthermore, we find that citizens have completely internalized the model of income-dependent fees since they consider it fair if high-income citizens also pay higher fees. This is also a surprising finding, because in the local fee model of our city, the level of fees is *independent* of income, whereas in Germany overall, the income-dependent model is by far the most common one. This finding therefore shows the strong influence of feedback effects from national- or regional-level institutions and policies on attitudes on the local level. Finally, respondents' perceptions are based on a broader understanding of 'resourcefulness', which goes beyond income: single parents as well as those without grandparents close-by are expected to pay lower fees. The underlying dimension in all these variables is individual *ability* to pay, i.e. citizens think it's fair to pay higher fees if individuals are able to do so, because they earn more or have other family resources at hand.

In the following section, we briefly discuss the relevant literature about public opinion and the welfare state, before we lay out our theoretical framework in greater detail. Next, we introduce the original survey, which is the basis for the subsequent analysis of

fairness perceptions of childcare fees. The concluding section discusses limitations of the present study and some ideas for future research.

### **Public opinion and fairness perceptions about childcare policies and fees**

This paper broadly connects to the large literature on public opinion about the welfare state, which has grown significantly in recent years in line with the increasing availability of high-quality international comparative survey data (see Svallfors (2012) for a recent overview). As a consequence, scholarly knowledge about the individual and institutional determinants of welfare state attitudes has increased enormously. First of all, scholars have repeatedly found that material self-interest influences individual-level policy preferences to a significant extent (see e.g. Busemeyer et al., 2009; Cusack et al., 2006; Hacker et al., 2013; Iversen and Soskice, 2001; Kitschelt and Rehm, 2014; Margalit, 2013; Meltzer and Richard, 1981; Rehm, 2009; Rehm et al., 2012; Schwander et al., 2015). For instance, wealthy citizens are more likely to oppose welfare spending (Meltzer/Richard 1981; Rehm et al. 2012), those with “specific skills” are more likely to support it (Iversen/Soskice 2001; Cusack et al. 2006) as are those facing higher levels of labor market risk (Rehm 2009; Rehm et al. 2012). The elderly are found to be more opposed to spending on education (Busemeyer et al. 2009), whereas the young educated middle-classes are more supportive of social investment policies (Schwander et al. 2015). Besides self-interest, secondly, scholars have repeatedly pointed out that normative orientations and values, also shape policy attitudes and preferences, e.g. altruism, political ideology, religiosity as well as different perceptions of fairness, deservingness and social justice (Alesina/Angeletos 2005; De la O/Rodden 2008; Kangas 1997; Margalit 2013; Scheve/Stasavage 2006).

Thirdly, the literature has paid particular attention to the question of how institutional contexts shape preferences and attitudes on the individual level. A first wave of scholarship studied how welfare state regimes broadly conceived as configurations of macro-level institutions are reflected in individual attitudes towards the welfare state (Andreß and Heien, 2001; Blekesaune and Quadagno, 2003; Jaeger, 2006, 2009; Svallfors, 1997, 2004, 2010, 2012). The initial expectation that preferences would be largely congruent with macro-level institutions was not entirely borne out in the data as more sophisticated analyses by Jaeger (2006, 2009) have shown. Hence, more recent contributions to the literature focus on particular institutional dimensions of the welfare

state rather than broad regimes and/or they are more concerned with understanding how institutions *mediate* associations between variables on the micro level in the form of cross-level interaction effects (Busemeyer 2013; Gingrich/Ansell 2012; Jordan 2010; Zhu/Lipsmeyer 2015).

The literature on institutional determinants of welfare state preferences draws its theoretical inspiration from the notion of policy feedback (Pierson 1993; Campbell 2012; Mettler/Soss 2004; Soroka/Wlezien 2010; Wlezien/Soroka 2012; Kumlin/Stadelmann-Steffen 2014). In an early conceptual contribution to this literature, Pierson (1993: 624) famously distinguished between “resource/incentive” and “interpretive” feedback effects. In the former case, welfare institutions create material incentives for citizens to support the continuous existence (or even expansion) of certain social policy programs, i.e. pensioners support more generous pensions, the unemployed a more generous unemployment insurance scheme etc. Thus, this argument is closely linked to accounts emphasizing the role of material self-interest in shaping attitudes and preferences. In contrast, “interpretive” effects concern the “impact of policies on the cognitive processes of social actors” (ibid.: 610). Hence, institutions also shape cognitive and – one could add – normative expectations of citizens regarding the role of the welfare state in society and in their individual lives.

Despite this wealth of scholarship on welfare state attitudes, there is little research that is specifically devoted to the study of public opinion on childcare policies. This largely reflects the dearth of survey data on childcare policies in existing international surveys, which are mostly concerned with the traditional parts of the welfare state such as pensions, labor market policy or health care. There are, however, a few exceptions: A number of studies have analyzed public opinion on childcare policies across a larger number of OECD countries (Goerres/Tepe 2010, 2011, 2012, 2013; Guo/Gilbert 2014; Meuleman/Chung 2012; Chung/Meuleman 2016), finding that there is overall wide-spread support for these policies and that ideology in terms of egalitarian and gender attitudes matter more than material self-interest as determinants of individual-level support. These findings can broadly be replicated in studies focusing on particular countries (e.g. Henderson et al. (1995) and Bolzendahl/Olafsdottir (2008) for the US; Goerres/Tepe (2012) for Germany and Ellingsaeter et al. (2016) for Norway). A second common finding is that once established, childcare policies create “self-reinforcing



policy feedback effects” in the sense that public support for further government involvement in the provision of childcare increases (Hedegard/Larsen 2014; Ellingsaeter et al. 2016).

A significant shortcoming of this existing research is that it is mostly focused on exploring policy preferences on a rather abstract level. Typical questions on the welfare state in the European Social Survey (ESS) or the various modules of the International Social Survey Programme (ISSP) concern preferences on various areas of government spending, government responsibility or involvement without clarifying what kind of involvement is meant here and how exactly public moneys should be spent. To a large extent, this is of course related to the fundamental problem that a higher degree of specificity in question wording would imperil the comparability of responses across countries since the individual country contexts are so different. More importantly for the purpose of this paper, there are no straightforward questions about the citizens’ willingness to pay for a particular service such as childcare, independent of the fact that commonly used survey designs would have a hard time assessing this issue, because citizens’ responses could be too much influenced by their respective personal situation. By using vignettes to measure citizens’ fairness perceptions of different fee levels, we provide a new perspective on the study of public opinion on childcare policies and welfare state policies more generally.

### **Theoretical expectations**

In deriving theoretical expectations and hypotheses, it is important to distinguish between factors included as variables in the vignettes, which could influence perceptions of fairness, and actual characteristics of the respondents themselves. That is in spite of the fact that our research design abstracts from the personal situation, this could still “spill over” into statements about perceived fairness. We focus on the former here – i.e. variables included in the vignettes themselves – and treat the latter as an explorative/empirical issue in the analysis.

We have two core research questions: First, which level of fees would on average be considered as fair by respondents; and second, which characteristics of the (fictitious) parental background would influence these fairness perceptions of fees.

Starting with the first question, there are plausible reasons to expect that citizens might actually not be supportive of any fees at all. If citizens believe that the provision of childcare services falls within the broad remit of the welfare state, it should be financed out of general tax revenues and therefore “free” at the point of delivery just like other welfare state services are. Above, we already mentioned the example of tuition fees, which were strongly opposed by the public and therefore abolished again shortly after introduction. Another example in the German context would be the so-called “*Praxisgebühr*” (doctors’ fee). Introduced in 2004, patients had to pay a fee of 10 Euro every time they visited the general practitioner. Even though patients had to pay this fee only once per quarter (even if they visited the GP more often) and even though low-income individuals were exempt from paying, this fee was very unpopular and therefore abolished again in 2012. These examples show that German citizens loath paying additional fees for social services they consider to be part of the universal welfare state package. This is a nice example of Piersonian interpretive feedback effects in the sense that the absence of fees as financing instrument in the German welfare state makes citizens more opposed to the introduction of even low fees.

This logic could also apply to the case of early childhood education and care. In this particular case, families with young children might even be regarded as particularly deserving beneficiaries of social services, recognizing the valuable contribution of young parents to societal well-being and future economic development. Even though knowledge about the beneficial long-term effects of early investments in childcare (Esping-Andersen 2002; Heckmann 2006) might not necessarily be widely distributed in the general public, it is plausible to assume that citizens are aware of the significant mismatch between demand for childcare on the part of parents and the supply of places. This should have a positive impact on citizens’ support for an expansion of childcare opportunities, including a lower level (or the absence of) fees.

There are, however, also plausible reasons for why citizens might be more willing to consider fees as fair in the case of childcare services compared to other welfare state services. The first is that the constituency benefiting from a lower level of fees does not have a lot of political power, if only for the simple fact that it is relatively small compared to the constituencies of the traditional sectors of the welfare state (e.g.

pensions, health care, labor market policy). Furthermore, in spite of significant advances in the expansion of family policy and institutionalized childcare options in recent years (Fleckenstein et al. 2011), a large share of young parents still does not send their small children to daycare institutions due to the persistence of traditional family values and the male-breadwinner model as a normative reference point.<sup>3</sup> Participation in ECEC is also correlated with socio-economic background (Van Lancker 2013). Hence, those parents who enroll their young children in ECEC institutions tend to be the wealthier ones, so that the general perception might be that they can and should pay for these services. Over time, this constituency might actually develop an interest in maintaining a certain level of fees themselves, because these might help to maintain a certain selectivity in ECEC institutions and additional revenue from fees could be used to improve quality of service delivery.

So, if citizens accept a certain level of fees as justified, which parental characteristics could influence their perceptions of fairness of these fees? There are several potential candidates. First and foremost, we would expect that *parental income* has an effect on fairness perceptions. In particular, the public might consider it fair when wealthier parents contribute more to the financing of childcare, whereas higher fees for poorer parents would be considered unfair. This may sound obvious at first sight, but there are in fact a number of examples of fees for public services that are income-independent, e.g. tuition fees for higher education (at least the German variety was) or – in some countries – insurance premiums for private health care. It might well be the case that citizens prefer income-independent fees in childcare as well.

Second, fairness perceptions could be affected by the parents' *household composition* and *employment status*. For instance, citizens could regard lower fees for single parents as fair and would demand higher fees from dual earner households, because single parents are more dependent on the public provision of childcare services and could therefore be regarded as more deserving recipients of services. Vice versa, if parents can rely on family members such as grandparents to help out with child-rearing, they might

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<sup>3</sup> According to the latest figures of the *Bildungsbericht*, the share of children below the age of 3 in daycare institutions is 51.9 percent in Eastern Germany and 28.2 percent in Western Germany (figures for 2015, Bildungsbericht 2016: 2-3, <http://www.bildungsbericht.de/de/bildungsberichte-seit-2006/bildungsbericht-2016/pdf-bildungsbericht-2016/wichtigste-ergebnisse-bildungsbericht-2016>).

be expected to pay higher fees, because they are richer in resources beyond income. The employment status of parents might matter as well, but the expectations are rather ambivalent. If one parent stays at home, while the other is working, citizens might consider it fair if this type of male/female breadwinner household pays higher fees, because it is less dependent on institutionalized forms of childcare. On the other hand, citizens might think the contribution of (one of) the parents to child-rearing should be “rewarded” with lower fees. What is more, if both parents work, citizens might demand a higher contribution to the financing of childcare (above and beyond the effect of additional income resulting from this dual employment) as a consequence of lingering traditional family values, according to which at least one parent should stay home to take care of the child. In sum, we would expect that individuals construct a discount or premium dependent on the perceived resourcefulness in terms of money and intra-familial help.

Third, besides economic factors and labor market status, *cultural predispositions* might have an influence as well. Since childcare is provided locally, citizens might consider it fair if families who recently moved to the city from other places in the country or even from abroad should pay higher fees compared to local citizens. Furthermore, in a country like Germany, many childcare institutions are run by private providers, in particular churches, which is in line with Germany’s “conservative” welfare state model. Therefore, the religious denomination of parents might affect deservingness perceptions of childcare fees as well, even though we focus on fees for public institutions only in this paper. In particular, families affiliated with a non-Christian faith or who do not belong to any church at all might be expected to pay higher fees for childcare compared to Christian families.

## Data and Methods

### The city context

In 2014, Konstanz had about 83,000 inhabitants. Its foreign population is relatively high at 13.7 % due to the facts that Konstanz is a university town and lies on the border with Switzerland with a considerable price differential, making it attractive to live in Germany and earn income in Switzerland. Konstanz is a rich city (see City of Konstanz 2016). In 2012, the inhabitants of the district had a mean disposable income of about

22,000 € and a gross domestic product per capita of about 57,000 €. The unemployment rate in Konstanz was 4.4 % compared to 7.5 % in Germany overall.

In 2015, there were 555 children below the age of 3 attending childcare institutions, which represents 36.6 % of all children at that age. For children between the ages of 3 and 6, the attendance rate of 93.9 % of the age cohort, which are typical coverage rates for West German urban areas with strong local economies (City of Konstanz 2016). Most childcare (below the age of 3) and kindergarten (between 3 and 6) facilities in Konstanz are public in the sense that they receive funding through the public system even though the organizational responsibility may be in the hands of private actors such as churches. Fully private kindergartens not receiving any public funding are very rare in Germany and tend to be associated with large firms creating a club good for their employees.

Childcare fees vary across local communities as well as across states. In 2014, Konstanz had a fee system in place that is relatively rare across Germany. Unless parents were dependent on social assistance, fees for kindergarten were calculated independently of parental income. There fee levels vary across different municipal institutions as well as depending on the composition of the group (small children vs. all children). For all-day care of a first-born child below the age of 3, fees varied between 126 Euro and 220 Euro per month, with an estimated average of 200 Euro (City of Konstanz 2011, 2015: 4). The average fee level at independent, but publicly supported institutions was slightly higher. In comparison to other cities in the state of Baden-Württemberg and to other municipalities in the region, the fee level in Konstanz had been significantly below average. This is why in 2015 (i.e. after the field period of our survey), the city council decided to raise the fee level, so that the range in public institutions is now between 234 Euro and 274,50 Euro. During this political debate, there was some discussion in the local newspaper about the possibility to introduce income-dependent fees,<sup>4</sup> but so far this has not led to policy changes.

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<sup>4</sup> *Südkurier*, August 16, 2014, p. 21: „Das müssen Eltern künftig zahlen: Stadt sucht neues Modell für Kita-Gebühren“.

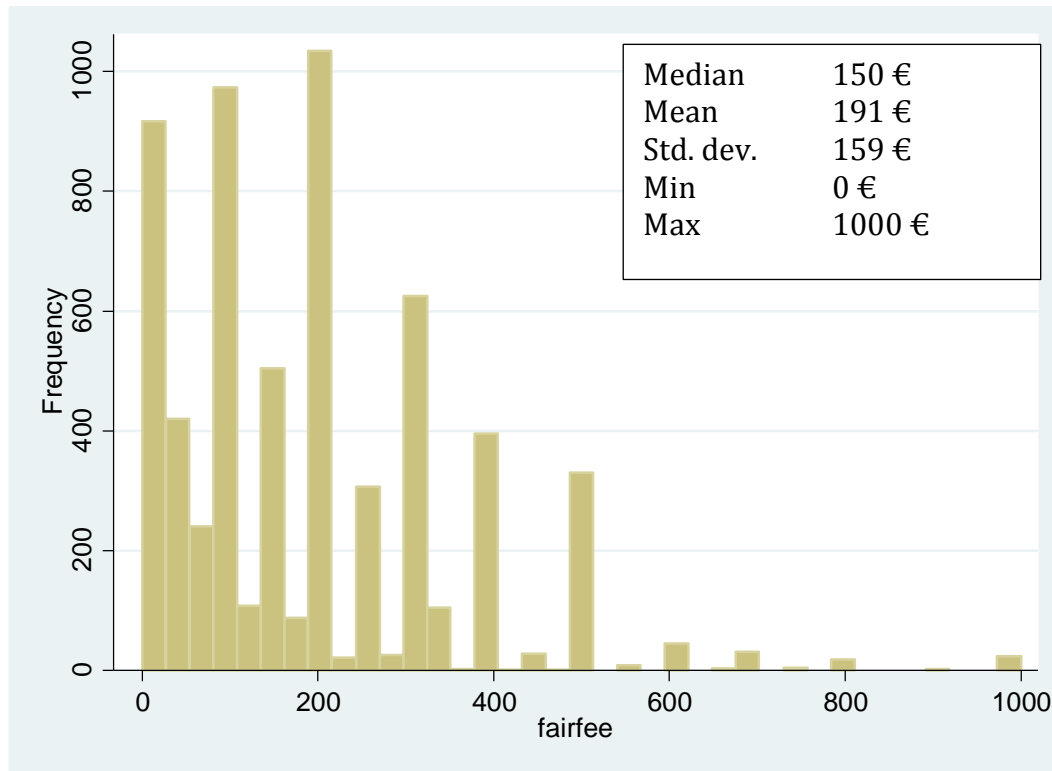
### The vignette study

The field period for the vignette study was between October 17 and December 26, 2014. The sample is a random-sample from the resident population drawn from the official residence register for which all residents in Germany are obliged to register. The respondents are part of a long-term panel sample with regular fresh-ups as part of a collaborative project between the University and the City of Konstanz (*Konstanzer Bürgerbefragung*). The survey was conducted online. The sample is ideally representative of the resident population of Konstanz aged 18 and above. The net sample is somewhat distorted in comparison to the general population in the sense that young, better educated and politically more interested people are overrepresented. In contrast, individuals with foreign citizenship and those living in one-person-households are under-represented. Further details can be found in Appendices A and B.

The vignette consists of the description of a family with a two-year old first child who is attending a public childcare facility in Konstanz. The respondents were asked to rate the fairness of the indicated monthly fee for a fulltime place (excluding costs for meals). We use the common bipolar 11-point scale, where the value of “0” is located in the middle and equivalent to an assessment of the fee as fair. Values ranging from “-1” to “-5” indicate various degrees of “unfairly too low” and the values of “+1” to “+5” various degrees of “unfairly too high”. If the respondent did not choose the mid-point, he or she was given the opportunity to indicate the fee that she considered fair in a second question.

We use these two items to create a new variable “fair fee level”, which we employ as dependent variable in the analysis. The value of this variable is either equal to the originally displayed fee if this was considered fair or the new fee level entered by the respondent herself. For 26.1 % of all ratings, we take the numerical value of the fee level that was given in the respective vignette if this was rated “fair” (between 0 and 500 €). For the remaining 73.9 %, we take the fee level that the respondent indicated as a fair fee level for that situation. The resulting variable fair fee estimate varies between 0 and 5,000 Euro (see Figure 1). Seven estimates are clear outliers at 1,400 to 5,000 € and are deleted from the analysis. We include a technical control variable that flags whether the respondent rated the original fee level as fair or whether she entered a new value.

Figure 1: Distribution of the dependent variable fair fee



The vignette has eight dimensions: (1) the fee as discussed above (0, 100, 200, 300, 400 and 500 Euros); (2) the household situation (child lives with single mother, child lives with single father, child lives with both parents); (3) the mother's attachment to the formal labor market (looking for a job, housewife, working part-time, working full-time); (4) the father's attachment to the formal labor market (looking for a job, househusband, working part-time, working full-time); (5) familial support (grandparents can help out in everyday life, grandparents are not available for everyday life); (6) net household income (for a single-parent household: 750, 1000 [roughly the median in Germany], 1250, 1500, 2000 [75<sup>th</sup> percentile], 5000 € [95<sup>th</sup> percentile]; for a two-parent household times 1.4); (7) local roots (grown up in Konstanz, moved to Konstanz from abroad, moved to Konstanz from elsewhere in Germany); and finally, (8) the religious affiliation of the family (Christian, Muslim, no religious affiliation). The vignettes do not vary the rank of the child within the sequence of siblings (i.e. we only focus on a first-born child), the age of the child (we only concentrate on two year-olds) and what the organizational structure of the kindergarten is (city-run, church-run, run by an social organization or fully private).

Mathematically, the vignette universe contains  $6*2*4*4*2*6*3*3=20,736$  combinations. From this universe, a fractionalized sample of 350 vignettes was drawn with a level of efficiency of 90.3 (out of 100), maximizing simultaneously the level of independence between the dimensions as well as the prevalence of each trait level across the drawn vignettes. The 350 vignettes were distributed evenly across 70 decks. Each respondent was allocated one deck with 5 vignettes whose sequence per respondent was determined randomly. Thus, each vignette level was shown as often as possible and within a constellation of other vignette levels that maximized the level of independence between them. In total, 6.268 personal ratings were entered. Each vignette was rated between 13 and 15 times. The vignette module was extensively pre-tested on a student sample. The correlations between the vignette dimensions are low – between .09 and -.03. –, which is to be hoped for. 93.9 % of all respondents rated all five vignettes. We checked that the rank order of an individual rating within the five does not have a systematic influence in the models.

In order to control for the respondents' personal characteristics, we include a number of respondent-level variables: gender, age in years, education (an ordinal variable of highest qualification obtained), being a German citizen by birth, the logged number of individuals living in the respondent's household, whether there is a kindergarten child in the household, and religious affiliation (Christian, other, no religious affiliation).

### **Empirical analysis**

The average level of fees, which is considered to be fair, is 191 Euro, which sums up to about 2.300 Euro per year. This is – surprisingly – very close to the actual fee level at the time of the survey, if slightly below. This evidence strongly suggests that the public in Konstanz accepts a positive, substantial fee for childcare services. This is quite remarkable given the fact that the introduction of university tuition fees of 80 Euro per month in Baden-Wurttemberg (as elsewhere in Germany) resulted in wide-spread public protests and demonstration a couple of years prior, which contributed to their effective abolishment in 2014. There are two potential reasons for this: For one, in public perception, attending a kindergarten is more than just education. It also allows parents to pursue work in addition to providing children with educational possibilities.



For that reason, the public may be more willing to accept fees since these are balanced out by enhanced employment opportunities. Secondly, students might be able to mobilize more easily than parents of small children, as they have on average more time on their hands and are more flexible. Even though parents share a lot of common policy interests, they lack the resources to mobilize politically.

The standard deviation in the “perceived fair fee level” is relatively high at 159 Euro, indicating that the typical deviation from the mean was almost as large as the mean itself. This heterogeneity in acceptable fee levels is related to varying vignette traits, but not all of the vignette dimensions turn out to be produce significant results. In the following statistical analysis, we correct for the fact that we have multiple ratings by the same respondent by using a multi-level random-intercept model. We start with the empty null model (Model 1), which just contains the estimate of an intercept for every respondent as well as a (technical) dummy variable indicating whether the fee level is provided by the respondent herself or perceived as fair (see discussion above). Then, we estimate the model with all vignette traits (Model 2) followed by Model 3 with vignette traits and respondent characteristics and Model 4 with additional contextual information from the city quarters where respondents live.

**Table 1: Random-intercept models of the dependent variable fair fee**

| Variable name, mean, minimum, maximum                  | Model 1             | Model 2a            | Model 2b            | Model 3              | Model 4             |
|--|---------------------|---------------------|---------------------|----------------------|---------------------|
| fair fee estimated by resp., .25, 0, 1                 | 21.35***<br>[4.46]  | 11.28**<br>[3.70]   | 12.06**<br>[3.72]   | 11.31**<br>[3.73]    | 11.34**<br>[3.75]   |
| <i>Vignette variables</i>                              |                     |                     |                     |                      |                     |
| vig: bl 750 Euro (1050)<br>income 1000 Euro (1400)     |                     | 26.21***<br>[5.04]  |                     |                      |                     |
| vig: income 1250 Euro (1750)                           |                     | 44.07***<br>[4.99]  |                     |                      |                     |
| vig: income 1500 Euro (2100)                           |                     | 65.69***<br>[4.95]  |                     |                      |                     |
| vig: income 2000 Euro (2800)                           |                     | 98.79***<br>[5.00]  |                     |                      |                     |
| vig: income 5000 Euro (7000)                           |                     | 233.81***<br>[5.30] |                     |                      |                     |
| vig: income in K Euro, 1.84, .75, 5                    |                     |                     | 52.87***<br>[1.10]  | 53.15***<br>[1.10]   | 53.34***<br>[1.10]  |
| vig: single parent, .50, 0, 1                          |                     | -33.21***<br>[2.92] | -33.28***<br>[2.94] | -33.69***<br>[2.94]  | -33.74***<br>[2.95] |
| vig: bl mother homemaker, mother job-seeker, .25, 0, 1 |                     | -4.61<br>[4.16]     | -4.16<br>[4.18]     | -3.60<br>[4.18]      | -3.09<br>[4.20]     |
| vig: mother wrkng pt, .25, 0, 1                        |                     | -0.81<br>[4.16]     | -1.04<br>[4.18]     | -0.54<br>[4.18]      | -0.27<br>[4.20]     |
| vig: mother wrkng ft, .26, 0, 1                        |                     | -4.64<br>[4.13]     | -4.87<br>[4.14]     | -3.86<br>[4.15]      | -3.24<br>[4.17]     |
| vig: bl father homemaker, father job-seeker, .24, 0, 1 |                     | -7.06<br>[4.18]     | -7.18<br>[4.20]     | -6.49<br>[4.20]      | -6.47<br>[4.22]     |
| vig: father wrkng pt, .26, 0, 1                        |                     | -1.54<br>[4.14]     | -2.24<br>[4.16]     | -1.60<br>[4.16]      | -1.84<br>[4.18]     |
| vig: father wrkng ft, .26, 0, 1                        |                     | 8.16*<br>[4.14]     | 7.74<br>[4.16]      | 7.48<br>[4.16]       | 6.98<br>[4.18]      |
| vig: help from grand-prnts available, .50, 0, 1        |                     | 9.35**<br>[2.91]    | 9.56**<br>[2.92]    | 9.40**<br>[2.93]     | 9.51**<br>[2.94]    |
| vig: bl roots elsewhr in DE, roots in KN, .33, 0, 1    |                     | -6.61<br>[3.53]     | -7.15*<br>[3.55]    | -6.02<br>[3.55]      | -5.62<br>[3.57]     |
| vig: roots abroad, .32, 0, 1                           |                     | -5.52<br>[3.57]     | -5.40<br>[3.58]     | -5.43<br>[3.59]      | -4.89<br>[3.60]     |
| vig: bl non-affiliated, Christian family, .34, 0, 1    |                     | 3.50<br>[4.47]      | 3.72<br>[4.49]      | 2.44<br>[4.50]       | 2.71<br>[4.52]      |
| vig: Muslim family, .35, 0, 1                          |                     | 6.27<br>[4.48]      | 6.52<br>[4.50]      | 6.03<br>[4.50]       | 6.16<br>[4.53]      |
| <i>Respondent variables</i>                            |                     |                     |                     |                      |                     |
| household monthly income in Euro                       |                     |                     |                     | 0.00<br>[0.00]       | 0.00<br>[0.00]      |
| age  |                     |                     |                     | -0.54**<br>[0.17]    | -0.58***<br>[0.17]  |
| female gender, .48, 0, 1                               |                     |                     |                     | -9.74<br>[5.59]      | -10.09<br>[5.63]    |
| highest educational level, 7.0, 1, 9                   |                     |                     |                     | -2.05<br>[1.95]      | -2.46<br>[1.97]     |
| kindergarten child in hh, .08, 0, 1                    |                     |                     |                     | -12.28<br>[9.83]     | -11.14<br>[9.86]    |
| logged number of hh members, .65, 0, 1.9               |                     |                     |                     | -18.25*<br>[8.59]    | -16.88<br>[8.68]    |
| DE citizen by birth, .89, 0, 1                         |                     |                     |                     | 2.95<br>[9.24]       | 3.57<br>[9.30]      |
| bl non-affiliated, Christian, .65, 0, 1                |                     |                     |                     | 14.12*<br>[5.98]     | 13.52*<br>[6.02]    |
| other believer, .02, 0, 1                              |                     |                     |                     | -11.57<br>[18.94]    | -16.40<br>[19.30]   |
| <i>Contextual variables</i>                            |                     |                     |                     |                      |                     |
| purchase power in K Euro, 19.6, 14.2, 27.6             |                     |                     |                     |                      | 0.92<br>[1.18]      |
| % of 0-3 yr olds in childcare                          |                     |                     |                     |                      | -0.17<br>[0.38]     |
| inhabitants per inhabitable acre, 68, 4.5, 100.1       |                     |                     |                     |                      | 0.12<br>[0.16]      |
| % of foreigners, .129, .049, .267                      |                     |                     |                     |                      | -104.00<br>[108.50] |
| Constant   | 185.83***<br>[2.97] | 129.21***<br>[6.80] | 106.35***<br>[6.33] | 140.69***<br>[21.07] | 131.50**<br>[43.94] |
| Observations   | 6268                | 6268                | 6268                | 6163                 | 6108                |
| rho  | 0.220               | 0.346               | 0.342               | 0.344                | 0.344               |

|            |       |       |       |       |       |
|------------|-------|-------|-------|-------|-------|
| r2_within  | 0.001 | 0.351 | 0.343 | 0.349 | 0.350 |
| r2_between | 0.047 | 0.026 | 0.028 | 0.047 | 0.049 |
| r2_overall | 0.008 | 0.225 | 0.221 | 0.232 | 0.233 |

Standard errors in brackets

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Model 1 reveals an intra-class correlation coefficient of 22.0 percent in an empty model. This means that the ratings per individual are moderately similar to one another if we do not control for any particular characteristics of the respondents or vignette traits. The positive and significant coefficient of the technical dummy variable indicates that when the fee estimate is provided by the respondent herself, the perceived fair fee level is slightly higher compared to the situation when it is first given in the vignette and then perceived as fair.

In Models 2a and 2b, the vignette variables are added. In Model 2a, we use categorical indicators for income as vignette trait; in Model 2b, we use a continuous measure. Not surprisingly, including vignette traits significantly increased the goodness of fit: The  $R^2$  of within-variation jumps to 35.1 percent of explained variance; the rho increases to 34.6 percent, meaning that respondent answers are more similar once we take into consideration the large variance in ratings between vignettes.

The core finding of the analysis is the strong support for a fee structure, which takes into monetary or other resources in assessing the level of fair fees. The by far strongest effects within the vignettes are associated with parental income. For every higher income group of the fictitious family in the vignette, the model displays a very clear increase in the perceived level of fair fees. The suggested fair fee increases by 99 Euro comparing a family with an income of 1050 Euro (two earners) and with family earning 2800 Euro. Families with a household income of 7000 Euro are expected to pay 234 Euro more than those who live off 1050 Euro. Model 2b, employing the continuous income measure, shows that for every 1,000 Euro of additional household income, respondents would perceive an additional 53 Euro in monthly fees as fair.

The results also show that respondents take into account other resources besides income in their assessment of a fair fee level. For instance, being a single parent is associated with a “discount” of 33 Euro in the perceived level of fair fees, compared to two-parent households. Vice versa, having “grand-parents available for help” has an

effect as well: In this case, respondents would consider an additional fee of 9 Euro per month as fair. This suggests a broader construction of resourcefulness among Konstanz residents, which goes beyond monetary resources only. Based on fairness perceptions, single parenthood qualifies for lower childcare fees, whereas families with familial support from grandparents are expected to pay more. Comparatively speaking, the latter top-up on fees is significantly smaller compared to the “discount” for single parents, however.

Somewhat surprisingly, the employment status of mother or father does not matter. In fact, an F-test shows that the three variables about the employment status of the mother can be dropped from the model without a significant drop in the statistical fit of the model. This is interesting given the presumed persistence of traditional, conservative family values in Western Germany. Against this background, one could have expected that respondents would have considered a higher fee as fair if the mother works full-time as this would be violating long-established social norms. In contrast, however, the employment status of the mother is not systematically related to perceptions about fair fees.

This is slightly different from the employment status of the father. These variables cannot be dismissed in an F-test. Fathers who are unemployed and looking for a job warrant in the eyes of the respondents a fee for their child that is 15 € lower than fathers who work full-time. Stay-home dads or fathers working part-time are also associated with a lower fair fee, but the effect is only half the size of the previous one. Thus, there is some evidence that respondents are willing to support a “discount” in fees, when the presumably male bread-winner’s employment opportunities are compromised. In additional analyses (not shown here), however, we did not find support for the notion that the traditional male breadwinner model (father working full-time, mother not working or working part-time) would be rewarded with a lower level of perceived fair fees, nor would these combinations be punished with higher levels of fees. Hence, we conclude that the employment status of the parents matters less than the actual income situation and the familial networks as discussed above.

The last set of variables can be dismissed as lacking any sufficient explanatory power. Whether the family in the vignette comes from Germany, from Konstanz or from abroad,

does not matter. The religious affiliation of the child does not make a difference either. The F-test suggests that we could drop all four variables without comprising the fit of the model. From a political perspective, these non-findings are good news, since they indicate that the residents of Konstanz do not discriminate against foreigners, new residents or people with a non-Christian religious affiliation by demanding higher levels of childcare fees.

Model 3 introduces respondent-level characteristics into the analysis. In general, we do not find many significant associations. What is remarkable is that the respondent's income does *not* affect the level of fair fees, even though income is the most important vignette dimension related to fairness perceptions. This indicates a broad cross-class consensus on the fairness of the income-dependent fee model: Rich individuals are not opposed to this model, even though they would have to pay higher fees and even though they would be disadvantaged compared to the current status quo.

We pursue this issue further by engaging in an interaction analysis between income as a respondent characteristic and (fictitious) income as vignette trait. A series of F-tests (see Appendix B) confirms that the association between income in the vignettes is moderated by the household income situation of the respondent. Surprisingly, the direction of the interaction is positive: Rich respondents consider even higher fees to be fair compared to residents in low-income families. For respondents with household income one standard deviation below the mean (at about 1.660 €), the coefficient estimate for the income as vignette trait is 50 Euro (std. error of 1.6 Euro), meaning that an additional 1.000 Euro of the hypothetical family income is associated with a level of perceived fair fee 50 Euro higher. For respondents with a mean household income (about 3.300 €), the estimate is 53 Euro (std. error of 1.1 Euro). For respondents at one standard deviation above the mean, it is 57 Euro (std. error of 1.5 Euro). The magnitude of this effect is not huge, but it still indicates that richer Konstanz residents perceive higher levels of fees as fair compared to residents with lower incomes. At first sight, this seems to run counter to material self-interest, and it could indeed indicate altruistic behavior. However, it may also be the case that richer citizens support (and accept) higher fees in order to promote quality in childcare facilities even if this would imply a higher degree of selectivity in access.

With regard to other respondent characteristics, we find that respondents who are older, live in larger households and whose religious affiliation is “other than Christian” or “non-believer” perceive lower fees as fair. The presence of a small child in the household of the respondent does not make a difference, neither does gender. For age, we estimate a surprisingly negative coefficient that implies that older individuals are more likely to perceive lower fees as fair. This could indicate that the elderly are indeed more supportive of ensuring affordable childcare for young families. Alternatively, it could be the case that the youngest age group in the study contains a lot of individuals without children of their own or do not think of Konstanz as the place to raise a family as they are students or recent graduates likely to move away soon.

Model 4, finally, adds variables related to city districts: purchasing power (varying between 14,200 € and 27,600 €), the percentage of foreigners (between 4.9 % and 26.7 %), the relative proportion of children in public childcare between 0 and 3 (between 0.0 % and 79.2 %) and population density (between 4.5 and 100.1 residents per acre of residential area). None of these estimates reaches statistical significance, indicating that the perceptions of fair childcare fees are not contingent on where respondents live in the city. Furthermore, the statistical significance and size of the other coefficient estimates do not change much once the district-level are included in the analysis.

### **Summary and conclusions**

Overall, the core findings of our analysis can be summarized as such: First, Konstanz residents consider on average a fee of 191 Euro as fair. This is slightly below the average fee at public childcare institutions at the time of the survey, but given the subsequent increase in fee levels shortly thereafter, it is significantly below the current level of fees. Second, the dominant factor explaining variation in the level of perceived fair fees is the resourcefulness of the (fictitious) families in need of childcare services. High-income citizens and those with help from grandparents are expected to pay more, whereas respondents consider it fair if single parents pay somewhat less. Comparatively speaking, the income effect is by far the strongest one with an increase of about 53 Euro in perceived fair fees for each 1,000 Euro of fictitious household income. The income-relatedness of fees is generally accepted by respondents independent of their own income situation, and more fine-grained interaction analyses even revealed that richer respondents want richer families to pay more compared to less well-off respondents.

Third, the employment status of the parents does not matter as a factor affecting the level of perceived fair fees. In particular, the employment situation of the mother – in spite of the large changes in this regard during the last decade – is not associated with fairness perceptions of fees. Given the great importance attributed to income, this means that the public's construction of resourcefulness as a factor related to fair fees is mostly driven by income, income potential (e.g. for single parents) and family resources, not the employment situation as such. Fourth, religious background does not matter, neither as a vignette trait, nor as a respondent characteristic. Equally, having established roots in Konstanz (or not) is not associated with fairness perceptions of fees.

What are the broader implications of a study of a particular rich city in the South of Germany for the politics of childcare and welfare state reform? On the one hand, Konstanz is quite representative for many German cities confronted with massively increased demand for the public provision of childcare. Even though the public resources are less constrained in this wealthy city compared to others, our survey indicates that citizens are still willing to pay a considerable amount of fees to contribute to the financing of childcare. For policy-makers intent on expanding childcare provision without ruining public finances, this is good news.

On the other hand, Konstanz is untypical because of its wealth, its location on the border to Switzerland and the particular fee model (income-independent fees). These peculiarities offer some analytical leverage to draw broader conclusions. The widespread support for the income-dependent fee model among our survey respondents indicates significant policy feedback effects, but in a particular manner. For one, Konstanz residents support the fee model, which is most common across German localities, but different from the local one practiced in Konstanz. At the same time, the respondents did *not* support fee models that are very different from the prevalent local status quo. For instance, the analysis could have revealed an average fair fee level of zero, indicating that citizens would consider having access to childcare at no additional cost as fair (i.e. the Scandinavian model). Alternatively, citizens could have been willing to pay even higher fees as is common in neighborly Switzerland. Instead we found that public opinion is largely congruent with prevailing policies and institutions on the national level as argued in the policy feedback literature (Pierson 1993), but still sufficiently independent from the prevailing status quo in order to promote incremental

policy changes. What is also striking is that the income-dependent fee model is accepted and supported across different income categories, i.e. even the wealthy are willing to pay higher fees. This might be driven by some kind of sophisticated material self-interest in quality and selectivity or it could reflect a genuine higher willingness to pay among the wealthy. Finally, while our insignificant findings for religious background and local “rootedness” may be disappointing from a scholarly point of view, they are reassuring from a political and societal perspective: By and large, residents in Konstanz do not discriminate against foreigners or people with a different religious background by expecting them to pay more for childcare services.



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## Appendix

### Appendix A: Additional information on the survey methodology

As mentioned in the main part of the paper, the survey was conducted online. Individuals who had been selected into the sample and but had not had access to the internet were given a paper-and-pencil version. If they refuse to participate, they were not contacted again. In the panel study, respondent are asked to participate in one survey per year. Out of the 1,255 respondents for whom we have data, 38.3 % were recruited fresh in the latest wave (the seventh for the larger project). 32.2 % were recruited in waves 4 to 6 (2011-13). The remaining 29.0 % were recruited in 2007-2010. We also have data on the city quarter that the respondent lives in out of the 14 possible quarters. We can thus merge contextual residential data, for instance about purchasing power, with the survey information. The size of city quarter in Konstanz varied between about 800 and 12,000 residents in 2014.

### Appendix B: Screenshot of the vignette

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Auf den nächsten Seiten stellen wir Ihnen fünf verschiedene Familien vor, die **ihr erstes Kind im Alter von zwei Jahren ganztägig in einer öffentlichen Kindertagesstätte in Konstanz** betreuen lassen. In der Beschreibung finden Sie jeweils Angaben über die Gebühren (ohne Essensgeld), die dafür anfallen. Uns interessiert, inwiefern Sie die angegebene Gebührenhöhe als gerecht empfinden.

Für Ihre Angabe steht Ihnen jeweils die folgende Skala zur Verfügung. Die Mittelkategorie 0 symbolisiert eine gerechte Gebührenhöhe. Indem Sie nach links und rechts abweichen, können Sie zum Ausdruck bringen, in welchem Ausmaß Sie die Gebühren als ungerecht empfinden.

**Beispielskala:**

|                             |    |    |    |    |    |   |   |   |   |   |   |                          |
|-----------------------------|----|----|----|----|----|---|---|---|---|---|---|--------------------------|
| ungerechterweise zu niedrig | -5 | -4 | -3 | -2 | -1 | 0 | 1 | 2 | 3 | 4 | 5 | ungerechterweise zu hoch |
|-----------------------------|----|----|----|----|----|---|---|---|---|---|---|--------------------------|

Unterbrechen Zurück Weiter

### Appendix C: Interaction analysis: Income as respondent characteristic and vignette trait

We center the three variables income class, respondent household income and purchase power. We create two two-way product terms and one three-way product term. We run the baseline model without any product terms (model A). Then, we include the two-way product term vignette income X respondent income (model B). The comparative F-test reveals a p-value of .001. In addition, we try alternatively the inclusion of vignette income X purchase power that yields a p-value of .133 (compared to model A). The third model has both two-way product terms and leads to an F-test p-value of .167 (compared against model B). Finally, we run a model with all product terms and compare it against

model B. The p-value is .378. We conclude that only the two-way interaction between respondent income and vignette income increases the statistical fit of the model and interpret it in more detail.