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*A Matter of Quality? Experimental Evidence
on Preferences and Willingness to Pay for
Domestic Services*

Natascha Nisic, Friederike Molitor, Miriam Trübner

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Contact details

Natascha Nisic
Department of Sociology
Sociology and Quantitative Social Research Methods
University of Mainz
Jakob-Welder-Weg 12
55128 Mainz
Germany
natascha.nisic@uni-mainz.de

Friederike Molitor
Department of Sociology
Sociology and Quantitative Social Research Methods
University of Mainz
Jakob-Welder-Weg 12
55128 Mainz
Germany
fmolitor@uni-mainz.de

Miriam Trübner
Department of Sociology
Sociology and Quantitative Social Research Methods
University of Mainz
Jakob-Welder-Weg 12
55128 Mainz
Germany
truebner@uni-mainz.de

A Matter of Quality?

Experimental Evidence on Preferences and Willingness to Pay for Domestic Services

Natascha Nisic

Johannes Gutenberg University Mainz, Germany

Friederike Molitor

Johannes Gutenberg University Mainz, Germany

Miriam Trübner

Johannes Gutenberg University Mainz, Germany

Abstract

Despite a growing need for domestic help, many households refrain from outsourcing their domestic chores to the market. By drawing on transaction cost theory, the present study sheds light on how demand can be stimulated by overcoming trust problems that are related to the quality and professionalisation of domestic services. The experimental findings from our factorial survey (N=4024) further show how state-subsidised service vouchers not only facilitate outsourcing by alleviating budget constraints, but also how they contribute to better pay for domestic workers while simultaneously reducing the costs for households. Overall, the results support recent policy recommendations that emphasise the role of professionalisation, in combination with service voucher systems, in increasingly shifting paid domestic work from the informal to the formal economy.

Keywords

Domestic outsourcing, trust, transaction costs, professionalisation, formalisation, factorial survey experiment, service vouchers, gender

Introduction

Cooking, cleaning, and caring for dependents are tasks essential to human biological and social reproduction, and an integral part of societal welfare production. Yet both unpaid care and domestic work – undertaken predominantly by women – are becoming an increasingly scarce resource in modern societies: Rising female employment rates, the prevalence of dual-earner couples, and higher work intensity all contribute to increasing time pressures. Demographic shifts will further increase the need for external support with care assistance and domestic services among the elderly, and are likely to add to the time pressures experienced by (unpaid) caregivers.

These social developments have resulted in a growing need for paid household services that support care requirements and facilitate the compatibility of work and private life. But while the need for and the employment of domestic workers has steadily risen over the past years (Farvaque, 2015; Cancedda, 2001), the actual demand for paid household services still lags behind households' needs (e.g., Windebank, 2010; Ruijter et al., 2003).

Research on domestic outsourcing has proposed different explanations as to why households refrain from purchasing domestic services. Economic approaches emphasize time and financial resources that influence outsourcing decisions (Bittman et al., 1999; Oropesa, 1993; Michael and Becker, 1973). In particular, empirical research shows that although an increase in women's potential earnings and time pressures have increased demand, monetary constraints still present barriers (Windebank, 2010). Sociological

approaches have additionally focused on socialisation and gender stereotypes, describing normative expectations towards women to take on caring and nurturing tasks (Oropesa, 1993; van der Lippe et al., 2013; Ruijter et al., 2005). Cultural ideas about privacy in families have also been shown to explain the reluctance to outsource (Ruijter et al., 2005; Geissler, 2010).

Yet an aspect that has received much less attention to date is the role of trust and transaction costs in outsourcing decisions (Ruijter and van der Lippe, 2009; Nisic, 2018; Ruijter et al., 2003; Raz-Yurovich, 2014). Trust problems arise when information or time asymmetries render social exchange difficult because the trustor (the household) cannot be certain about the future actions of the trustee (the domestic worker) (e.g., Williamson, 1981). In the case of outsourcing, an outsider enters the privacy of the home and takes on paid care and domestic tasks. Whereas unpaid domestic work provided by household members is embedded in family loyalties and therefore contributes directly to the household's well-being, a paid domestic worker will be less directly concerned with the household's welfare, pursuing their own economic self-interests (Ruijter et al., 2003). Consequently, substantial trust problems may arise from the potential for undesirable opportunism and uncertainties about the workers' future performance. Domestic services are mostly performed in the absence of household members and are difficult to monitor, for example regarding the time and effort devoted to tasks. In particular, quality is subject to considerable uncertainty, as domestic services often cannot be fully assessed and

observed directly, and also because satisfactory levels of cleanliness might differ between clients and workers or because the latter might lack expertise (Ruijter et al., 2003: 474). Households may, consequently, try to avoid unsatisfactory outcomes by investing in precautionary measures and control mechanisms, which, however, increase transaction costs; this can cause households to refrain from hiring domestic workers altogether. Research has shown that anticipated trust problems reduce the attractiveness of outsourcing and affect the impact of time and monetary constraints (Ruijter and van der Lippe, 2009; Nisic, 2018). One way to increase trust and to minimise transaction costs is by lowering the uncertainty associated with the characteristics and the professional qualifications of domestic workers.

Policy makers have tried to professionalise and formalise the *personal and home care services sector* (Farvaque, 2015; Baga et al., 2020), for instance by introducing tax subsidies or subsidised service vouchers (OECD, 2021). Such policies aim to increase the employment rates of the low-skilled and unemployed (Brück et al., 2006), counteracting irregular employment (Williams et al., 2017; Windebank, 2004), as well as reintegrating (more highly-skilled) women into the labour market (Morel, 2015). Service vouchers in particular enable households to buy domestic services at reduced prices while simultaneously formalising and professionalising the market by tying its use to legal and professional providers (Meier-Gräwe, 2018; OECD, 2021).

By drawing on experimental data from a factorial survey conducted in Germany in April 2020, we investigate the effects of the quality of cleaning services and professionalisation on respondents' hiring preferences and willingness to pay for cleaning services. We examine how different levels of formal and informal qualifications and the professionalisation of domestic services can help increase demand by reducing the transaction costs related to trust and quality problems. By introducing state-subsidised service vouchers in our vignette design, our study allows us to overcome methodological problems related to the presence of budget constraints and to further examine demand in situations where all social groups are able to afford outsourcing. Our results shed light on the relevance of professionalisation and service vouchers for developing and formalising the domestic labour sector.

Outsourcing domestic work

The existing literature on domestic outsourcing mainly follows research on the division of domestic labour and focuses on household economics and gender approaches to explain outsourcing behaviour; however, the evidence remains inconclusive. Several studies find that economic and structural factors exert significant influence on households' outsourcing decisions, in particular for (women's) income, employment status, age, and education (Cornelisse-Vermaat et al., 2013; van der Lippe et al., 2004;

Nisic, 2018; Oropesa, 1993). Yet in many studies these effects remain small (Ruijter et al., 2003; Ruijter and van der Lippe, 2009) or negligible (Kornrich and Roberts, 2018: 163). Moreover, empirical evidence shows that even among high-income households with severe time restrictions, a large proportion is reluctant to outsource domestic tasks for pay (Windebank, 2010; Farvaque, 2015; Geissler, 2010; Windebank, 2007). Sociological research has shown that gender roles and identity may play a role here, preventing women from outsourcing female-typed household tasks (Oropesa, 1993; Ruijter et al., 2005), but still a large part of variation in outsourcing decisions remains unexplained. However, both strands of literature mostly neglect that hiring a domestic worker constitutes an economic relationship inside the family home and makes the household an employer who additionally faces transaction costs resulting from trust and control problems (Ruijter and van der Lippe, 2009; Nisic, 2018; Ruijter et al., 2003).

Overcoming trust problems: Qualifications and professionalisation

Transaction cost theory (Coase, 1937; Williamson, 1981) frames households' outsourcing decision-making as make-or-buy decisions in exchange relationships (Nisic, 2018; Ruijter et al., 2003; Pollak, 1985). Analogous to the commercial make-or-buy decisions of firms, households are assumed to weigh the costs associated with buying a service or good on the market against those of producing the "commodities" in-home. When costs for outsourcing outweigh those of in-home production, families will decide to "make"

rather than to “buy” and vice versa (Nisic, 2018; Ruijter et al., 2003; Ruijter and van der Lippe, 2009).

The costs of in-home production comprise mostly the opportunity costs of time devoted to the labour market and forgone leisure time, whereas the costs of outsourcing tasks to the market involve monetary expenses for the service. However, another major determinant of total costs are transaction costs, i.e., costs of carrying out the transaction via either market exchange or internal production. The transaction costs of in-home production, for example, include efforts to balance and coordinate different life activities (labour market participation, private life, domestic work) or to negotiate tasks among household members, including potential conflicts about the division of (unpaid) domestic labour.

The transaction costs from market exchange mostly result from uncertainties due to information asymmetries between the household and the worker; they are largely related to a worker’s productivity and the quality of the service. For the most part, a cleaner’s productivity in the home is not directly observable and it is difficult to continuously assess how much diligence they invest in their tasks. Moreover, potential damages to valuable objects (e.g., due to insufficient care) might only become visible much later, and compliance with hygiene standards (e.g., regularly changing cleaning rags, using appropriate chemicals) might not be verifiable at all. Finally, the quality of the services largely depends on the worker’s competences and quality standards, which can differ

from the household's standards. These uncertainties are enhanced by the fact that domestic tasks are diverse and complex, and lacking standardisation due to the individual needs of households (Cox, 1997).

Households will anticipate these problems and the transaction costs associated with either preventing the problems *ex ante* or dealing with them *ex post*. *Ex ante* households have to invest in precautionary measures and control mechanisms, such as intensive background checks, coming to acceptable agreements, and monitoring the domestic worker (e.g., Ruijter et al., 2003). Monitoring especially increases costs by reducing the very time gains outsourcing domestic work should provide (e.g., Ruijter and van der Lippe, 2009). *Ex post* costs include paying for potential damages or taking legal action if agreements are violated; the legal enforcement of domestic labour contracts is made more difficult by the tasks' aforementioned complexity and individuality. Consequently, many households refrain from outsourcing despite their actual need.

By contrast, the domestic worker's experience and skills are likely to reduce transactions costs by creating certainties and trust about their performance. Equally, the perceived trustworthiness of a worker and their quality standards should increase a household's willingness to outsource, by reducing uncertainties and thus transaction costs. A worker's perceived professional attitude and skills can be crucial in overcoming these issues. In fact, *ability*, often measured via competences, has been defined as a key component in

creating trustworthiness (alongside benevolence and integrity) (Mayer et al., 1995). Contrary to conventional, deeply-engrained beliefs in the gender culture of post-industrial societies – that care and domestic work are simple tasks and more an expression of women’s “nature” than competences that have to be learned (Bock and Duden, 2007[1980]) – a broad array of skills are needed for performing domestic tasks effectively. Domestic work requires complex knowledge of physics, chemistry, and mechanics, as well as organisational skills to efficiently coordinate the various tasks (Cox, 1997). Formal housekeeping training can hence be expected to increase a worker’s skills and productivity. Formal qualifications also help reduce uncertainty regarding a worker’s productivity and appropriate pay. Experience working in other households can consolidate these competences.

Because at present domestic work is largely characterised by informality and a low degree of professionalisation (ILO, 2016; Meier-Gräwe, 2018; OECD, 2021), informal indicators of quality, productivity, and trustworthiness can also be expected to influence households’ willingness to outsource.

Apart from the female gender as a signal for informal, “natural” competences due to traditional gender stereotyping (e.g., Eagly and Wood, 2012), a provider’s age should positively affect demand. Unpaid private domestic and care work is one of the few spheres where specific work experience can be gained outside the labour market. Lastly, the possibility to assess a workers’ trustworthiness in advance should reduce anticipated

problems. The labour market literature has shown that information and recommendations from social networks are effective ways for employers to find reliable employees in situations where uncertainty about workers' characteristics and potential opportunistic behaviour exists (Marsden and Gorman, 2001). In the case of household services, common ways to acquire such information are referrals by friends and acquaintances, advertisements, and more recently also ratings and reviews of the services provided on online platforms for household services.

Moreover, households have very different ideas and preferences about the frequency and quality of tasks. This necessitates constant communication and coordination, and flexible scheduling on the part of the domestic worker. A worker's language proficiency and professional flexibility should therefore significantly facilitate coordination and reduce transaction costs.

In a nutshell, we expect signals of a worker's quality and productivity, as well as their trustworthiness, to increase potential clients' acceptance and thus demand for household services (cf. Spence, 1973). Signals primarily comprise formal training and work experience (formal qualifications), but also a worker's gender, age, and language skills (informal qualifications), as well as their time flexibility and recommendations through social networks. We also assume that households are willing to pay more for workers with favourable characteristics, because both the transaction costs of monitoring the work and the opportunity costs of doing the work themselves are higher.

H1: Signals for workers' formal and informal skills and trustworthiness will increase households' (a) willingness to hire a domestic worker and (b) their willingness to pay for the service.

Budget constraints: The use of service vouchers

Clearly budget constraints also limit demand. Currently, domestic services are mostly bought by high-income and highly-educated earners (e.g., Windebank, 2010; Marx and Vandelannoote, 2015; Kirchmann et al., 2019; Raz-Yurovich and Marx, 2019; Gonalons-Pons, 2015) and financial restrictions render outsourcing irrelevant for many households. By introducing voucher systems that subsidise household services, like in France or Belgium (e.g., Raz-Yurovich and Marx, 2019; Raz-Yurovich and Marx, 2018; Windebank, 2004; Windebank, 2007), or by generous tax reductions on legally provided household services like in Sweden (OECD, 2021), social policy makers have made outsourcing domestic chores more affordable and more formalised, thereby contributing to the professionalisation of domestic services (for an overview on PHS policies in various countries see OECD, 2021; also Morel, 2015). The introduction of a voucher scheme in Germany was envisioned in 2018, and included in the government's 2021 coalition agreement (Bundesregierung, 2018: 25; Bundesregierung, 2021: 70), albeit yet to be implemented.

Various studies investigating the introduction of vouchers in Belgium and France based on observational data find evidence that the schemes have effectively created new jobs, have expanded the service sector, and have been successful in terms of increasing the numbers of users (Windebank, 2007; ILO, 2016). However, there is little consensus as to the effects on specific social groups among users and providers (Marx and Vandelannoote, 2015; Raz-Yurovich and Marx, 2018; Raz-Yurovich and Marx, 2019; Windebank, 2007; Windebank, 2004).

In the present experimental study, we utilise (fictitious) state-subsidised service vouchers to reduce and exogenously vary the budget constraints of individuals. In this way, we can examine demand effects in the broader population and disentangle monetary constraints from transaction costs. This approach allows us to solve the methodological problems related to the selectivity of the outsourcing decision by preventing dropout in respondents unable to afford outsourcing.

In general, we expect the introduction of service vouchers, by relieving financial constraints, to increase the ability and willingness to pay for domestic services. We are furthermore able to test whether such vouchers affect respondents' decision-making rationale, i.e., whether the willingness to pay for domestic labour differs when respondents are presented with state-subsided vouchers. As transaction costs are assumed to be independent determinants of the outsourcing decision, they are expected to remain unaffected by (changes in) budget constraints. Hence, we test the following hypothesis:

H2: Vouchers will increase respondents' willingness to accept higher pay demands from domestic workers.

Data and Methods

To address the roles of trust and budget constraints in domestic outsourcing, we conducted an online factorial survey experiment (FSE) in Germany in early 2020. Respondents were each presented with a random set of eight hypothetical profiles of domestic workers, and then asked to evaluate the profiles in terms of their hiring preferences and willingness to pay. The multidimensional worker profiles meant respondents evaluated several traits simultaneously, as in real life. Moreover, by varying these traits experimentally, we ensured the orthogonality of the dimensions (Auspurg and Hinz, 2015: 10; 24). With observational data, conversely, the effects of such variables are difficult to separate; some combinations of characteristics are highly correlated (e.g., experience and age) or rarely found on the labour market (e.g., men working as domestic cleaners). Thus, with the decompositional vignette approach, the relative importance of a variety of domestic worker characteristics can be assessed simultaneously (also see Auspurg and Liebe, 2011: 303), and – and at the same time – a comparatively high degree of external validity can be achieved (Auspurg and Hinz, 2015: 10–3).

Factorial surveys measure respondents' judgement principles based on hypothetical situations and not actual behaviour, so our study does not represent an evaluation of policy. Still, we are confident that the study depicts a realistic scenario relevant to our target population and that the stated preferences conform to real-life situations. In fact, Fishbein and Ajzen (2011) have shown that attitudes and intentions correlate highly with behaviour. Especially the relative importance of workers' characteristics for respondents' hiring preferences and willingness to pay are likely to be reflected in actual decisions.

The overview below shows all seven vignette dimensions and levels. Each vignette offers information on a fictitious worker's gender, age, and language skills. They also indicate whether the candidate has formal training, has experience working in private households, and the flexibility of their schedule. Lastly, information about the worker's references was provided, with varying degrees of trustworthiness and of the credibility of the referral itself. The worker was either referred by a friend who was very or only moderately satisfied, or via a digital care-work platform where the worker had a very good reputation based on 100 ratings. We assume that a very good reference from a friend – indicating high trustworthiness from a credible source – will increase demand the most, but we do not have clear hypotheses about the order of the other two levels; this remains exploratory.

Overview of vignette dimensions

Dimensions	Levels	
Gender	1	Male
	2	Female
Age	1	25
	2	43
German language skills	1	German native speaker
	2	Non-native speaker: speaks fluent German
	3	Non-native speaker: speaks simple sentences German
Professional training as domestic worker	1	No
	2	Yes
Cleaning experiences in household	1	9 months
	2	5 years
Availability	1	S/he works flexibly
	2	S/he can only work on a fixed day of the week
Referral	1	Via internet platform for cleaners. Rating 5/5 stars with 100 ratings total
	2	Friend, very satisfied
	3	Friend, moderately satisfied

We employed a vignette split to experimentally vary the introduction of state-subsidised vouchers worth €10 per hour. The vignette split was introduced after 50% of the vignettes (n=4), so each respondent evaluated four vignettes where vouchers were present and four without. The vouchers' introduction was randomised and the legal employment options were held constant across all conditions.

The vouchers' value was chosen to facilitate respondents' calculations when evaluating the vignettes and is based on the middle price category used in a non-experimental pilot study conducted in the German state of Baden-Württemberg from 2017 to 2019 (starting

off with €8 with a subsequent increase to €12; Kirchmann et al. (2019)). Moreover, in 2020 it was above the minimum wage of €9.35 (Destatis, 2022).

The full factorial consists of 288 vignettes, resulting from seven dimensions with two to three levels each. The vignettes were randomly assigned to 72 decks with four vignettes each; the full factorial (and the total set of decks) was used in both vignette splits, allowing us to estimate all main and interaction effects without confounding parameters (see Figure 1 in online supplement for a vignette example).

The dependent variables are acceptance of domestic help, measured via respondents' hiring preferences (HP) and their willingness to pay (WTP). Respondents were asked to give their HP on an 11-point scale ranging from 0 *not at all* to 10 *definitely* (“*Regardless of money: How well can you imagine hiring this cleaner?*”). HP was a mandatory item – respondents indicating a number larger than 0 were then asked about their WTP. WTP had slightly different wordings in the two experimental splits (“*What is the **maximum** hourly pay that the cleaner could ask for **in addition to the €10 voucher** so that you would still hire them?*” (“with voucher” condition) and “*What is the **maximum** hourly pay that the cleaner could ask for so you would still hire them?*” (“status quo” condition, i.e., without vouchers). Respondents were asked to fill in the respective amount in an open field. Where respondents indicated 0 HP in the first question, they were allowed to skip the question on WTP. With this no-choice alternative we can differentiate between those who are not willing to spend (additional) money on domestic help and those who do not

want to employ domestic help at all. This is another advantage over studies of household consumption, where observed zero expenses are difficult to disentangle from budget constraints and the lack of need for the service.

Note that although our experimental design does not require control variables, we further adjusted the models for respondents' household income and education, as well as the family situation, which included having a partner, children, and/or a household help and whether household income had been affected through the COVID-19 pandemic (see model 2 in tables 3 and 4 in online appendix).

Data Collection

The data were collected in April 2020 by means of an online access panel conducted by a survey institute. To ensure high data quality, panellists were only able to take part in surveys on invitation. Moreover, the sociodemographic structure of the panel is compared regularly with the general population and hard-to-reach populations are recruited systematically. Additionally, we included several validity checks (via fake questions) that allowed us to screen out dishonest respondents. The sampling frame included panellists aged between 30 and 60, to target those individuals in the primary workforce most challenged by combining work, family, and private life. The response rate was 29%.

As the survey was conducted in April 2020, shortly after the beginning of the first COVID-19 lockdown in Germany, we explicitly reminded respondents at several points

in the questionnaire to base their answers on pre-pandemic circumstances, in order to avoid biases due to health fears or changes in budget constraints.

Sample and analysis

The analytical sample comprises 503 respondents, whose socio-demographic characteristics are shown in table 2 in the online appendix. Our analytical vignette samples comprise 4024 vignette observations for hiring preferences and a reduced sample of 3312 vignette observations for willingness to pay. Given the hierarchical data structure, with vignettes nested within respondents, we estimated multilevel linear models (random intercept, fixed slope) to adequately account for autocorrelation within respondents' vignette responses (Auspurg and Hinz, 2015).

Results

Figure 1 shows the distribution of respondents' hiring preferences and willingness to pay by voucher condition. Respondents' mean hiring preferences scored at the middle value of 5.3 scale points (with 5.4 scale points when vouchers were present and 5.2 scale points in the status quo condition), with a median value of 6 scale points in both conditions. The respondents rejected almost 20% of the vignettes; 7% of the respondents rejected all eight vignettes they had to evaluate (i.e., evaluated the vignettes with zero scale points). This might reflect determinants of the outsourcing decision that are not covered in our study,

such as gender and family norms, or a general reluctance to accept status differences – or premodern master-servant relationships – within the private sphere (Bittman et al., 1999; Windebank, 2010: 391).

[insert Figure 1 here]

The mean amount that respondents were willing to pay for a worker without any subsidies was €11.4 per hour (median €12). Respondents with vouchers were willing to pay on average €5 additionally to the €10 voucher (with median pay also €15). Vouchers thus encourage respondents to pay extra, instead of just using the voucher, increasing domestic workers' average pay to €15 per hour. This is substantially higher than what they would earn without vouchers. In essence, both parties tend to benefit from the introduction of a subsidised voucher: Workers earn more while clients save money.

Hiring Preferences

The results from the multilevel analysis are shown graphically in the coefficient plot below (figure 2; see table 3 in the online appendix for regression tables). The left panel shows the regression coefficients for HP. As hypothesised, both formal and informal qualifications positively affect HP. A formal apprenticeship increases HP by .41 scale

points; this finding lends credence to our assumptions regarding the professionalisation of domestic services. Similarly, five years' work experience positively affects HP by .3 scale points, compared to only 9 months. Strikingly, we also find a relatively strong effect for informal qualifications. Being female increases respondents' HP by one scale point compared to male workers. This lends support to our theory, since gender likely functions as an informal signal for competence, via gender roles and stereotyping. Unexpectedly, the age coefficient is not significant: This dimension may capture different signals based on, for example, negative age stereotypes, nullifying a worker's accumulated experience within their own household.

Assuming that communication is key to work in private homes and that language proficiency reduces transaction costs, we find that HP is substantially higher for a native speaker compared to someone with basic German language skills (1.1 scale points). Likewise, fluent speakers are clearly preferred to the less fluent (.72 points). In a separate analysis, we found that native speakers were also preferred over fluent speakers (results available upon request), assuming comparable language competences: Whether these differential preferences constitute discriminatory behaviour or are due to cultural differences cannot be established here. Our hypothesis is further supported by the positive effect of flexible scheduling (.65 points): Clients' transaction costs are considerably reduced when domestic workers can work when needed. Lastly, we tested the influence

of a worker's degree of trustworthiness on HP. A recommendation by a friend who was very satisfied significantly increases respondents' hiring preferences by .27 scale points compared to a very good internet reputation, whereas a referral by a friend who was only moderately satisfied exerts a negative effect of -.6 points. A very good digital reputation thus trumps a moderately satisfied friend's recommendation, while a very satisfied friend's recommendation outweighs the digital referral. In light of the increasing trend to trade services via internet platforms, this is an important finding, confirming results of earlier studies on the relevance of reputation for stabilising digital markets (e.g., Diekmann et al., 2014). Overall, our hypothesis H1a – on the effects of formal and informal qualifications and trustworthiness on hiring preferences – can be confirmed, with the exception of age.

The predictive margins reveal that a female worker with an apprenticeship, longer working experience, and a recommendation from a very satisfied friend scores 6.52 scale points compared to only 3.95 scale points for a male worker with no apprenticeship, little work experience, and only a moderate recommendation from a friend.

Finally, there is a comparatively small voucher effect on HP, which is unexpected because respondents were instructed to think about their willingness to hire *regardless of money*.

[insert Figure 2 here]

Willingness to pay

The right-hand panel of figure 2 reveals a similar general pattern, suggesting that respondents' preferences translate into willingness to pay for these desirable traits.

First and foremost, formal qualifications (an apprenticeship) have a fairly strong positive effect on WTP, adding nearly €0.50 per hour. Similarly, work experience adds another €0.26 to the worker's hourly pay. In line with our hypotheses on informal competences and gender stereotyping, being female adds another €0.24 per hour compared to men – revealing that domestic services are one of the few labour market segments where women can apparently earn more than their male counterparts. However, while women are clearly preferred over men in terms of being hired, and being female is the second most important predictor of hiring, this does not translate equally into monetary value. By comparison, formal qualifications pay much more than being female, and a female worker with formal training and considerable work experience can earn €1 more per hour than a male worker without training or work experiences. Again, age does not yield a significant effect.

With respect to transaction costs related to communication in the home, we find that native speakers earn €0.27 more per hour than fluent, non-native speakers. Fluency in the language is worth €0.50 compared to a basic level of German, meaning language fluency is roughly equal in value to formal training (compared to no formal training). Again, our additional analyses also show that native German language skills translate into €0.40 per

hour compared to fluency (results available upon request), suggesting discriminatory practices or the relevance of cultural attributes as signals of shared quality standards and trustworthiness. In line with our hypothesis, flexible schedules come with a bonus of €0.40 per hour compared to an inflexible work schedule.

Interestingly, we do not find statistically significant WTP differences between a good recommendation from a friend or a very good internet reputation. Although clients prefer a good recommendation from a friend when it comes to hiring, this does not translate into increased pay for workers. However, we do find that a recommendation from a moderately satisfied friend is considerably worse than a very good reputation on a digital care-work platform, and is penalised with €0.47 per hour. With the exception of age, hypothesis H1b, on the positive influence on pay of formal and informal qualifications and trustworthiness, can thus be confirmed.

The predictive margins further show that WTP for a female worker with an apprenticeship, longer working experience, and a recommendation from a very satisfied friend translates into an hourly pay of €13.77 compared to the €12.26 respondents are willing to pay for a male worker without apprenticeship, less work experience, and only a moderate recommendation from a friend.

Regarding the effect of the voucher on WTP, note that we recoded the variable by adding a constant amount equal to the value of the voucher (€10) to improve the presentation and interpretation of the results. Remarkably, the introduction of vouchers results in an

additional €3.71 per hour, which supports H2. This is a substantial increase in workers' pay and shows that respondents are willing to pay extra instead of simply using the voucher. In the presence of vouchers, workers' pay could increase to a total of €13.70 per hour. At the same time, clients would save as much as €6.30 were they able to use a voucher. We interpret this finding to mean that service vouchers can assist both families and domestic workers. Our hypotheses derived from transaction cost theory, and the idea that transaction costs can be reduced and trust problems overcome by means of professionalisation and qualification, are largely confirmed.

Additional analyses and robustness checks

Interaction effects

To test whether the underlying decision-making process and the rating of single vignette characteristics remain unaffected by the introduction of service vouchers, we calculated additional models with interaction terms between vignette characteristics and vouchers (Tables 5 and 6 in online appendix). None of the interaction effects were significant. The decision-making rationale underlying respondents' evaluation of single worker characteristics does not change substantially with the introduction of service vouchers. As expected, transaction costs remain effective in the presence of vouchers and budget constraints do not lead to selective responses.

Order effects

Despite randomisation, we tested whether there were differences between respondents in the voucher condition first and those in the status quo condition first. There is no significant effect of the voucher order on respondents' HP. However, we find that respondents' WTP decreased by more than €1.30 per hour when the voucher condition was presented first (Tables 7 and 8 in online appendix): Perhaps the voucher functions as a guideline for appropriate pay.

Between-subject analyses

We therefore restricted our analyses to a subsample of vignette evaluations from the respondents' first experimental voucher condition (i.e., the first four vignettes they were asked to evaluate), with both voucher conditions included. The coefficients in the model on hiring preferences remain stable in direction and significance, with the exception of the coefficient for the voucher, which (in accordance with our theoretical expectation) is no longer significant. Also, with respect to WTP, the coefficients largely remain stable in terms of direction and significance. Only the effect size of the voucher is reduced to €2.40 per hour, roughly reflecting the negative order effect of €1.30 when vouchers were presented first (see Tables 9 and 10 in online appendix).

Conclusion

The aim of the present study was to establish how quality and trust issues associated with domestic outsourcing translate into demand. Going beyond sociological and economic approaches, which focus on gender stereotypes and time and budget constraints, recent studies have emphasised the role of trust and transaction costs. The present study adds to this strand of literature by providing experimental evidence on the extent to which different aspects of quality and professionalisation translate into willingness to hire and pay for domestic services.

The findings support the theoretical reasoning that the trust problems associated with transaction costs in exchange relationships can be reduced through qualification and professionalisation. Strong quality signals such as formal training and work experience, but also informal signals such as language skills and gender, reduce uncertainty and foster trust. Ultimately, clients are more willing “to buy” (and pay more) rather than “to make” when meaningful formal and informal quality indicators are available.

Moreover, by also experimentally introducing subsidised service voucher and considerably reducing budget constraints, our study avoids selective responses and allows for higher generalisability to the broader population. Moreover, we can show that households are willing to pay an extra €3.70 in addition to a €10 subsidy, meaning an hourly wage of almost €14 for domestic workers. While workers’ pay increases, households save more than €6 compared to hiring someone without state-subsidised vouchers. These findings suggest that domestic workers and households could both benefit from such a subsidy, substantially increasing demand.

The private home is a unique workplace, and care and domestic labour is often regarded as low skill, low status work, which remains “invisible” and devalued (e.g., Hatton, 2017; England, 2005). However, our study emphasises the role of professionalisation for both increasing demand for services and securing a supply of well-paid and legal service jobs. Professionalisation, for example via improved training, could increase quality by

standardising the services provided in the domestic sphere, thereby creating career opportunities through the revaluation and recognition of domestic work (Steiner et al., 2012). By professionalising the domestic services industries, undeclared work in private households could be reduced (Kirchmann et al., 2019). In this way, the rights and working conditions of domestic workers could be improved by setting standards for tasks, minimum pay, skills, and working hour regulations. Such initiatives can be very well combined with, for example, state-subsidised vouchers tied to legal and qualified work (ILO, 2016).

While the present study is not a policy evaluation per se, we are confident that we have created a realistic scenario that respondents could relate to.

With respect to the use of service vouchers, our study provides important insights into how households make use of a subsidised voucher scheme that ultimately increases demand and possibly reduces undeclared or informal work. More critical studies on the effect of the Belgian or French scheme (e.g., Windebank, 2004; Lens et al., 2021) underline the importance of carefully designing and introducing an approach that benefits all parties involved. Our study can inform policy evaluations and policy makers concerned with developing and formalising the personal and household services sector, in line with both the public and academic calls for the professionalisation of domestic services and the introduction of service vouchers (ILO, 2016; Meier-Gräwe, 2015; Meier-

Gräwe, 2018), and the emphasis on professionalisation and quality assurance in domestic labour advocated by organisations representing domestic workers like the *Deutsche Gesellschaft für Hauswirtschaft* or the *Kompetenzzentrum PQDH*¹ (Meier-Gräwe, 2015; for France see e.g., <https://www.fepem.fr/>).

To this end, more detailed analyses of the differential effects of vouchers on preferences and willingness to pay across different economic and social groups are also needed, albeit beyond the scope of this study. If the field of domestic labour is to be further formalised and professionalised, a more detailed exploration of similar voucher schemes is advisable.

Notes

¹ Kompetenzzentrum „Professionalisierung und Qualitätssicherung haushaltsnaher Dienstleistungen“

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Figures

Figure 1: HP and WTP by voucher condition

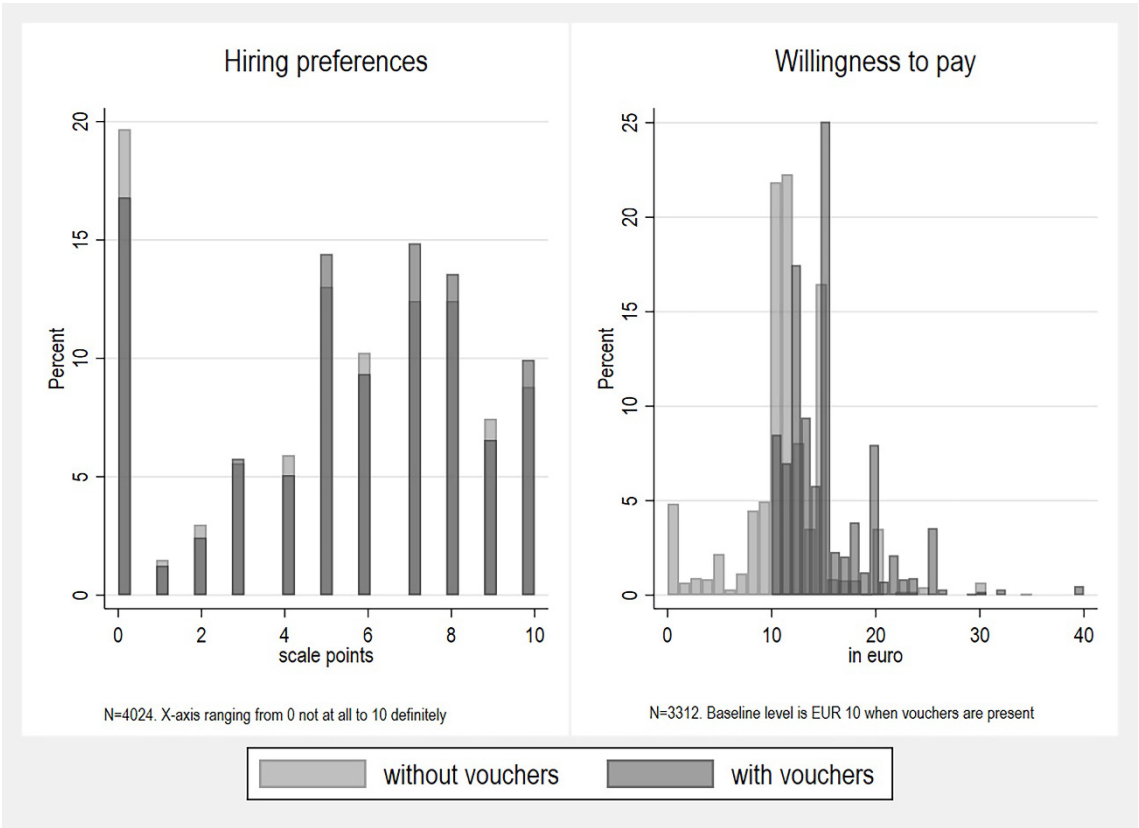


Figure 2: Coefficient plot

