Gender Differences within the Firm: Evidence from Two Million Travelers*

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June 4, 2020

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*We especially thank Katherine Baldiga Coffman and Lucas Coffman for their many and helpful suggestions. We also thank the editor, Judith Hellerstein, and anonymous referees for insightful comments. Discussions with Esteban Aucejo, Yana Gallen, Juanna Joensen, Johanna Mollerstrom, and seminar participants at Ohio State have greatly benefited this work. First version: January, 2017. All errors are our

doi:10.3368/jhr.58.2.0818-9664R2

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Abstract

We document gender differences in the price paid for work-related air travel among similar workers within a firm. We show that women pay consistently less per ticket than men, after accounting for a large set of covariates that include the characteristics of the trips, the employers, and the employees. A large proportion of the lower fares paid by women is explained by women booking flights earlier than men. We investigate potential mechanisms that could explain the observed gender differences. We find that gender differences increase with age, but we find no deviation from this trend during the childbearing years. We also find significant variation in gender differences across the regions of the world. Using country-level data on preference differences, we report that positive and negative reciprocity are factors associated with the documented gender differences, although this result is only suggestive. The documented gender differences have important monetary implications for firms and suggest a potentially important role for workers' morale within a firm.

JEL Codes: D91, J16, F00, L93, M50.

Keywords: Gender differences; worker gender differences; airline industry.

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1 Introduction

Despite there being robust experimental evidence about differences in the preferences of men and women, less is understood about gender differences within real-world firms. Measuring and comparing the outcomes of individual workers within a firm is challenging. For many firms, data are only available at the plant or firm level. One approach to understanding individual differences involves estimating a production function using plant-level or firm-level output, and using the structure to identify gender differences.[1] Alternatively, it is possible to directly measure the outcomes of workers in the small fraction of occupations where data are recorded at the individual level, such as lawyers, real estate agents, and salespeople.[2]

This paper takes a complementary approach by studying gender differences in the booking of business air travel. We directly observe worker-specific outcomes and include workers from many different occupations, firms, and countries. Our dataset contains information about the business travel of around two million unique travelers working in over 8,000 unique firms, in over 60 countries, for the year 2014. About 25 percent of the workers in our dataset are women. The data allow us to account for a large set of covariates that includes the characteristics of the trips, the employers, and the employees (over 40,000 fixed effects in our full specification). These covariates explain over 90 percent of the variation in the price paid of an air travel booking.

We document significant gender differences in the booking of business air travel among similar workers within a firm. Women pay consistently less per ticket than men. After accounting for trip, employer, and employee characteristics, the male-female fare paid gap is about 18 U.S. dollars per trip or about 3.6 (2.3) percent of the median (mean) price of a plane ticket. We find that gender differences in advance booking can explain about 80 percent of this gender gap in fare paid. Women are five percent more likely to book at least two weeks in advance compared to men after accounting for our set of covariates. While the documented gender gaps are suggestive of gender differences in booking behavior, it is possible that there are still non-behavioral explanations (*e.g.*, how trips are assigned or accepted). To explore

[1] See, *e.g.*, Hellerstein, Neumark, and Troske (1999, 2002) and Gallen (2018).

[2] See, *e.g.*, Azmat and Ferrer (2017) and Cook, Diamond, Hall, List, and Oyer (2018) for studies using data on lawyers and Uber drivers, respectively.

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this further, we estimate models investigating heterogeneity in the gender gaps.

We explore heterogeneity by estimating models that include gender interactions with age, length of stay, traveler type, and region of the world. We report four main sets of results. (1) The gender differences increase with age. Interestingly, we do not find any deviation from this trend during the childbearing years. (2) Overall the female-male paid fare gap and the female-male gap in days booked in advance increase with the length of stay. (3) The female-male paid fare gap is flat in the number of trips made per year. (4) Finally, we find significant variation by region of the world. Workers in the United States and Europe exhibit the largest gender differences. Differences are smaller in South America, non-significant in Australia, and inverted in Asia. Women book tickets that are on average $10 more expensive in Asia compared to men. The regional heterogeneity suggests that cultural influences may play an important role in understanding gender differences.[3] We complement the business travel data with information about gender differences in economic preferences in each country.[4] On the one hand, we do not find evidence that gender differences in patience, risk taking, or altruism correlate with cross-country variation in the paid fare gender gap. On the other hand, we find that gender differences in positive/negative reciprocity and trust are associated with gender differences in the fare paid.

Although not conclusive, these results are consistent with gender differences in behavioral responses given the same set of tasks. For example, if women are less likely to be assigned to, or to accept, short-notice trips, one might expect the effect to be more pronounced during prime childbearing years or for travelers who travel less frequently. We do not find any such relationships, making the behavioral interpretation more compelling. The preference results suggest that men may be more willing to trade the firms' money for their own utility when they feel they have been treated unfairly. This may be exacerbated in a context of incomplete contracts, whereby the firm cannot specify every possible contingency regarding

[3]Falk, Becker, Dohmen, Enke, Huffman, and Sunde (2018, henceforth FBDEHS) report considerable gender differences in preferences using an experimentally validated survey dataset from 80,000 individuals across 76 countries. They show that positive reciprocity and altruism are more pronounced among women, while negative reciprocity is weaker among women (see Table 5 in FBDEHS).

[4]Preference data are obtained from the Global Preference Survey documented in Falk, Becker, Dohmen, Enke, Huffman, and Sunde (2018, henceforth FBDEHS). See Pope and Sydnor (2010) for another example where geographic variation in cultural attitudes and gender stereotypes is used to understand gender disparities in standardized test scores in the United States.

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the air bookings performed by its workers, increasing the scope to spend the firms' money by the employee.[5] Experimental or exogenous variation is needed to more conclusively establish a causal link between behaviors/preferences and the gender gaps that we observe.

The literature on gender differences in economic experiments has studied several traits which may help explain our results.[6] Women have been documented to be more risk averse than men in the vast majority of studies that select members of the general population (as in, *e.g.*, Sunden and Surette 1998; Finucane, Slovic, Mertz, Flynn, and Satterfield 2000; Bernasek and Shwiff 2001; Croson and Gneezy 2009; Niederle 2016).[7] If women are more risk averse about a price increase or about not finding a seat on their preferred flight, they may book earlier. For managers and professional populations like ours, however, gender differences in risk aversion have been found to be small or nonexistent (*e.g.* Masters and Meier 1988; Birley 1989; Johnson and Powell 1994; Atkinson, Baird, and Frye 2003). There are a number of papers documenting that women are more generous than men in certain contexts. Women have been shown to be more altruistic (*e.g.* Eckel and Grossman 1998; Güth, Schmidt, and Sutter 2007) and more cooperative (*e.g.* Frank, Gilovich, and Regan 1993; Seguino, Stevens, and Lutz 1996; Ortmann and Tichy 1999; Chermak and Krause 2002) than men.[8] Women may book earlier flights to save the firm money, even if they do not receive a direct benefit or recognition for doing so. In Subsection 4.2, we do not find evidence that altruism is a significant driver of the gender difference in the cross-country analysis. Our result on altruism is consistent with the economics experimental literature,

[5]The impact of incentives on the behavior of employees within firms has been investigated in field experiments by Nagin, Rebitzer, Sanders, and Taylor (2002) and Bandiera, Barankay, and Rasul (2005). See Bandiera, Barankay, and Rasul (2011) for a review of field experiments in firms.

[6]See Eckel and Grossman (2008), Croson and Gneezy (2009), and Niederle (2016) for comprehensive reviews of the literature examining gender differences in economics experiments. See Bertrand (2011) and Azmat and Petrongolo (2014) for comprehensive reviews of the literature examining the role of experimental findings on gender differences for labor economics.

[7]This can sometimes be attributed to women experiencing emotions more strongly than men (*e.g.* Harshman and Paivio 1987; Loewenstein, Weber, Hsee, and Welch 2001), or to overconfidence of men relative to women about their relative performance in a task (*e.g.* Niederle and Vesterlund 2007). See also Dohmen, Falk, Huffman, Sunde, Schupp, and Wagner (2011).

[8]These findings, however, do not hold universally (*e.g.* Brown-Kruse and Hummels 1993; Sell and Wilson 1991; Solow and Kirkwood 2002; Ben-Ner, Kong, and Putterman 2004; Bolton and Katok 1995; Ortmann and Tichy 1999). Croson and Gneezy (2009, Section 3) attribute the variation in the findings in these studies to a "differential sensitivity of men and women to the social conditions in the experiment." They show evidence that women are more sensitive to the social context of the experiment, by looking within and between a large number of studies investigating gender differences in social preferences. Andreoni and Vesterlund (2001) find that women (men) are more altruistic than men (women) when it is relatively expensive (cheap) to give.

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where there are not robust differences in average contributions in public good games between men and women (*e.g.* Ledyard 1995; Eckel and Grossman 2008; Croson and Gneezy 2009; Niederle 2016).[9]

Our paper is also related to the literature on gender performance gaps in real world labor markets. This literature is quite small due to the difficulties of measuring the output of individual workers within firms. There are two papers (Hellerstein, Neumark, and Troske, 1999; and Gallen, 2018) that study gender productivity gaps by estimating production functions using data on value added and the labor force of firms. These papers estimate the labor input as the sum of different types of labor, including among other things gender, race, age/experience, education, and occupation. Hellerstein, Neumark, and Troske (1999) use U.S. survey data on firms from the manufacturing sector. They find a gender productivity gap, where men are more productive than women. Most of the difference is driven by non-managerial, non-professional, and younger workers. Gallen (2018) uses data on the full Danish economy and finds that, on the one hand, women with children are less productive than men; on the other hand, women without children are more productive than men. An alternative approach is to focus on a particular occupation/industry, where individual output can be directly measured. Azmat and Ferrer (2017) study the performance of young lawyers in the U.S. They find that male lawyers bill 10 percent more hours and bring in more than twice as much client revenue as female lawyers. Matsa and Miller (2013) study the behavior of firms that are affected by a change in gender quotas for corporate board seats in Norway. They find that affected firms undertake fewer workforce reductions, leading to increased labor costs and reduced short-term profits. Cook, Diamond, Hall, List, and Oyer (2018) study the performance of Uber drivers in the United States. They document that the seven percent gender earnings gap can be explained by experience on the platform, location preference, and preference for driving speed. The goal of most of these studies is to measure the full output of workers and compare the gender productivity gap to the gender wage gap. While this paper does not attempt to explain the gender wage gap, it provides new insights about

[9] Babcock, Recalde, Vesterlund, and Weingart (2017) study gender differences in a task allocation that everyone prefers to be completed by someone else, such as writing a report or serving on a committee. They show that women are more likely to volunteer than men, but find no evidence that the differential is explained by individual characteristics such as risk and altruism. The result is driven by beliefs about who will perform the task (*i.e.* the belief that women are more likely than men to volunteer).

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gender differences within a firm. We observe the air bookings at the worker level for a broad variety of firms, industries, countries, occupations, and employee types within the firm. In addition, we document an association in the gender differences to differences in economic preferences across countries. Studying business travel bookings is also of interest as it is likely not sensitive to biological explanations (*e.g.* physical strength or bearing children) and more sensitive to other sources of gender differences (*e.g.* preferences).

In summary, we make two main contributions: (1) We document robust gender differences in the outcomes of working professionals, using a large dataset spanning a wide variety of industries, firms, countries, occupations, and employee types within the firm. Women pay consistently less per ticket and book flights earlier than men. A large proportion of the lower fares paid by women can be explained by women booking flights earlier than men. Regardless of whether women end up with different travel assignments than men, or actually behave differently, both findings imply that men and women contribute differently to firm outcomes. (2) We investigate heterogeneity in the observed gender gaps. We find that the gender differences in paid fare increase with the length of stay, are independent of the number of trips made per year, and increase with age with no deviation from the trend during the childbearing years. Although not conclusive, these results are consistent with women behaving differently. We also document significant variation in the documented gender differences by region of the world. Finally, by complementing the business travel data with information about economic preferences in each country, we report that average cross-country gender differences in positive/negative reciprocity and trust are correlated with the observed gender differences in paid fare.

The rest of the paper is organized as follows. Section 2 describes the data. Section 3 presents the main empirical results. Section 4 describes potential mechanisms that may be consistent with our findings. Section 5 discusses the robustness of our results. Section 6 presents the conclusions. Details about the preference data, definitions of variables, additional results, and additional robustness analyses are in the appendix.

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2 Data Description

We combine data from two sources. The main data contain information about the business travel bookings of workers. The business travel data are an administrative dataset obtained from a large multinational travel management company. We complement these data with information about economic preferences in each country. Preference data are obtained from the Global Preference Survey as presented by Falk, Becker, Dohmen, Enke, Huffman, and Sunde (2018, henceforth FBDEHS). Below we describe these sources. We devote more space to the business travel data, which are novel. Details about the preference data are in FBDEHS.

2.1 Business Travel Data

We collected business travel data from a large multinational travel management company. This company carries out the business travel needs of corporate clients in North America, South America, Europe, Africa, Asia, and Australia. In a given year, this company fulfills tens of millions of transactions across all travel categories (air, hotel, rental car, rail, *etc.*). The geographical scope comprises over 45 countries in which this company has wholly-owned operations, joint ventures, and minority holdings, plus over 15 countries in their partner network.

For the analysis, we use a unique administrative dataset, which includes information on travelers and their business air bookings in 2014. We observe detailed information about the bookings: price of the ticket, dates of travel, origin and destination airports, ticket class, whether or not the flight is direct, date booked, and the location of the booking. Travelers perform the booking using the website of the travel management company. The booking website may be customized for the firm where the employee works. Although the list of quotes provided by the travel agency's website may fulfill some pre-established criteria (*e.g.*, cheaper flights being displayed first), all options available for the traveler are displayed for the booking. The information on travelers is anonymous, and is based on the information provided by the travelers to the airlines needed to make the booking. This includes the gender and age of the traveler. We also have anonymous identifiers of the firms and the divisions within the firms where the travelers work. In our dataset there are over $8,000$ unique firms,

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and over 25,000 unique division-firm pairs. We also have information about the position of the employee within the division-firm for some firms.

To obtain the final sample used in our analysis, we applied the following selection criteria:

- Only original transactions are included; refunds or ticket modifications are not considered.
- Only round-trip tickets are selected.
- Only routes with 100 tickets or more are included.
- The top one percent of the tickets with the highest fares are excluded.

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The resulting panel dataset has approximately 7.4 million airline transactions corresponding to around two million unique travelers. Based on the information in the dataset we constructed the following variables: length of the trip in days, number of trips per traveler per year, and the number of days in advance that the trip was booked.

Table 1 displays summary statistics for the paid fare, days booked in advance, and share of bookings made two weeks or more in advance. The fare paid varies considerably as expected, given the heterogeneity in destinations, ticket class, and the number of days booked in advance. The mean paid fare is $791.24 U.S. dollars and the standard deviation is $1,021.00 U.S. dollars (pooling together women and men). The mean paid fare for women is 713.16; the mean paid fare for men is $817.12; the raw gender mean difference in paid fare is $103.97. There is also substantial variation in the number of days booked in advance, with a mean of 18.65 days and a standard deviation of 21.05 days.

To get a sense of how the distribution of paid fares look, the top panel in Figure 1 displays a kernel density estimate of the probability distribution function of the paid fare by gender. There is considerable variation in the paid fare, reflecting the wide variety of trips made in different industries, firms, and countries encompassed in the dataset. The bottom panel in Figure 1 shows that the empirical cumulative distribution function of the paid fare for men first order stochastically dominates the one for women. This indicates that women paid lower fares than men consistently throughout the observed range of paid fares.

Table 2 displays summary statistics of selected covariates in our dataset. It can be seen that 25 percent of the trips are booked by female travelers. Although there is considerable variation in the age of the traveler making the booking, 65 percent of the trips are booked by travelers in the age range between 35 and 54 years old. There is also considerable variation in the number of trips per year made by the travelers. The majority of the trips (89 percent) are booked without a connection (*i.e.*, "direct" flights) and are booked in the "economy" ticket class (89 percent). In terms of the length of the stay, 13 percent of the round trips last less than 24 hours, 58 percent last more than one day and less than four days, and the remaining 29 percent last 5 days or more. In terms of the destinations, 63 percent of the trips are domestic (*i.e.*, origin and destination airports are within the same country), 25 percent are continental (*i.e.*, origin and destination airports are within the same continent), and 13 percent are intercontinental. Finally, the trips originating from North America or the European Union constitute 85 percent of the booked flights.

2.2 Preference Data

We complement the previous data with information about economic preferences in each country. Preference data are obtained from the Global Preference Survey (GPS) as presented by Falk, Becker, Dohmen, Enke, Huffman, and Sunde (2018, henceforth FBDEHS). The GPS is an experimentally validated survey dataset of time preference (patience), risk preference (risk taking), positive and negative reciprocity, altruism, and trust from 80,000 individuals in 76 countries. FBDEHS standardizes each preference measure at the individual level, so that, by construction, each preference has a mean of zero and a standard deviation of one in the individual-level world sample. Table 3 from FBDEHS summarizes the survey items for each preference. See FBDEHS for a thorough discussion.

For each preference item in Table 3, we obtain the average gender difference at the country level reported by FBDEHS (online appendix EB). Then we merge the gender difference preferences to the business travel data using the country where the traveler works. See Appendix Section A.2 for details. Panel B in Table 2 displays the summary statistics of the preference data. See FBDEHS for a detailed description and interpretation.

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3 Empirical Results

This section presents our main empirical analysis in two steps. First, we document the female-male paid fare gap. We show that gender differences in advance booking alone explain 80 percent of the residual paid fare gap after accounting for trip, firm, and employee characteristics. Second, we document a robust gender gap in advance booking. The trip, firm, and employee characteristics account for between 34 and 39 percent of the female-male gap in advance booking. In the next section, we discuss potential mechanisms that could explain these gender gaps.

3.1 Female-Male Paid Fare Gap

We begin by analyzing the female-male paid fare gap for business travel. We find that on average women pay 103.97 U.S. dollars less per ticket than men (column 1 of Table 4A). The difference in paid fare by women and men could be due to a number of factors that include the characteristics of the trip, employer/firm characteristics, and employee characteristics. We take advantage of our rich dataset to develop multiple covariates for each of these factors.

Table 4A displays the results of several hedonic regressions of the paid fare on a female indicator, trip characteristics, employer characteristics, and employee characteristics.[10] First, we estimate a hedonic regression including the characteristics of the trip. Trip characteristics include interactions of origin-destination route and ticket class fixed effects, direct flight, length of stay dummy variables, and week of the year fixed effects. Column 2 in Table 4A shows that adding the trip characteristics increases the adjusted R^2 from 0.2 percent to 89.6 percent. In column 3, we add the characteristics of the employer. They include interactions of division and firm fixed effects and country fixed effects, for a total of $23,668$ additional fixed effects. The adjusted R^2 increases only modestly from 89.6% to 90.1%. In column 4, we add the characteristics of the employees, that include age dummy variables, number of trips

[10] All regressions are OLS regressions implemented using the numerical procedure from Gaure (2013). This is an iterative procedure that relies on the Frisch-Waugh-Lovell decomposition theorem (Frisch and Waugh 1933, Lovell 1963, and Lovell 2008), to avoid the inversion of the matrix of fixed effects. This procedure results in savings of computing time when the number of fixed effects is large as it is in our case. The statistical properties of this estimator are the same as the ones of standard OLS (Gaure 2013), whereby one inverts the matrix with all the fixed effects.

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per traveler dummy variables, and employee type fixed effects.[11] Adding the characteristics of the employees does not noticeably change the goodness of fit. The main conclusion from columns 1 to 4 in Table 4A is that the characteristics of the trip can account for almost 90% of the variance in the fare paid, while additional characteristics of the employer and employee do not add much to the goodness of fit. This result is consistent with prior work in the industrial organization literature.[12]

We next decompose the female-male paid fare gap following Gelbach (2016, Gelbach decomposition henceforth). Gelbach (2016) develops a conditional decomposition to account for the role of groups of covariates that may exhibit sequence sensitivity when these groups are added progressively and are inter-correlated. The Gelbach decomposition nests the Oaxaca-Blinder decomposition and, because it is based on estimates from the full specification of the model, is order-invariant. Table 5 displays the Gelbach decomposition of the female-male paid fare gap into the following three components: (i) characteristics of the trips and employers, (ii) characteristics of the employees, and (iii) days booked in advance fixed effects. The latter component captures the advance booking gap between women and men. Columns 1 and 2 in Table 5 compare the unconditional female-male paid fare gap (column 1 in Table 4A) to the female-male paid fare gap after accounting for the full set of trip, employer, employee, and advance booking characteristics (column 5 in Table 4A). Columns 3 and 4 of Table 5 show the amount of the female-male paid fare gap explained by the characteristics in dollars and in percent. The full specification explains about 95.7 percent of the raw female-male paid fare gap. Columns 3 and 4 show that the characteristics of the trips and employers explain about 73 percent of the raw female-male paid fare gap, while employee characteristics explain about 6 percent. With the final component, days booked in advance fixed effects, we seek to understand the share of the female-male paid fare gap explained by the relative difference in advance booking between men and women.[13] Interestingly, advance booking explains a relatively large fraction, about 17 percent, of the raw female-male paid fare gap. In other

[11] See Appendix Section A.1 for the definitions of the variables and fixed effects.

[12] For some recent applications see, *e.g.*, Pakes (2003), Erickson and Pakes (2011), and the references there.

[13] We account for advance booking by including 26 fixed effects for how many days the traveler booked in advance: a set of 15 dummy variables, one for each of the first 15 days prior to a flight; a set of 10 dummy variables, one for each of the 10 weeks following the first 15 days prior to a flight; and an additional dummy variable for a booking that took place more than 85 days ($85 = 15 + 10 \times 7$) before the flight.

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words, after accounting for trip, employer, and employee characteristics, advance booking explains about 80 percent of the residual female-male paid fare gap ($^{-18.003}/_{(-4.46-18.003)}$). To put the results into context, 18.00 U.S. dollars per trip is about 3.6 (2.3) percent of the median (mean) price of a plane ticket in our sample. Similarly, it represents a mean (median) of 2.22 (2.03) percent of the total annual expenditure of the firm in air tickets, or 12,328 (558) U.S. dollars per year for the mean (median) firm, in terms of the firms' flight expenditures.

3.2 Female-Male Advance Booking Gap

We now report the gender gap in advance booking. In Table 4B, we regress the days booked in advance on the characteristics of the trips, employers, and employees. In the base specification, we find that on average women book 2.73 days earlier than men (column 1 of Table 4B). The full specification shows that women book on average 1.81 days earlier than men (column 4 of Table 4B), after accounting for the characteristics of the trips, employers, and employees. Overall, the included characteristics in the full specification explain about 34 percent ($1 - {}^{1.809}/_{2.728} = 0.3369$) of the female-male advance booking gap.

Table 4C reports the female-male probability gap for booking two weeks or more in advance. In the base specification (column 1 of Table 4C), we find that the probability of booking two weeks or more in advance is 9 percent higher for women than for men. In the full specification (column 4 of Table 4C), women are 5 percent more likely than men to book two weeks or more in advance. The probability of a man booking two weeks or more in advance is 44.2 percent. Thus, the gaps represent a substantial increase. The included characteristics explain 39 percent ($1 - {}^{0.053}/_{0.087} = 0.3908$) of the female-male advance booking gap, consistent with the results in Table 4B.

4 Potential Mechanisms

Why do women pay lower fares and book earlier than men in the firm? We now discuss potential mechanisms that could explain the observed gender differences. In the subsections below we report results from two types of interactions with the indicator for female, and discuss which mechanisms *may* be consistent with the correlational evidence and the documented

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heterogeneity results.

4.1 Gender Interactions I

Age. Table 5 shows that a large fraction (17 percent) of the female-male paid fare gap is explained by responses in advance booking. We argued that such cost differences may represent behavioral responses given the same set of tasks. Call this hypothesis the *behavioral differences hypothesis*. An alternative explanation is that women are assigned to different types of tasks—different travel assignments. For instance, if women are less likely to be assigned to, or to accept, short-notice trips, one might expect the effect to be more pronounced during the prime childbearing years. Column 1 in Table 6 investigates this possibility; it displays female interactions with age, using specification 4 from Table 4A. We find that the female-male paid fare gap increases with age. The gap is \$11.75 for workers less than 25 years old, and \$18.89 for workers between 55 and 64 years old. Nevertheless, consistent with the behavioral differences hypothesis, we do not find any deviation from this trend during the childbearing years. Also consistent with the paid fare gap increasing with age, Table 6 column 3 shows that the female-male advance booking gap increases with age for workers aged less than 65 years old.

Length of Stay. Next we explore gender interactions with the length of stay. If the female-male paid fare gap were driven by the task assignment/acceptance, we may see that the paid fare gap is driven by certain kinds of trips. For example, women are given or are more likely to accept longer trips that are assigned earlier. Columns 4 and 6 in Table 6 show that the female-male gap in days booked in advance increases with the length of stay, and that the female-male paid fare gap increases with the length of stay for trips spanning less than 5 days (Table 6 column 2). While there is some heterogeneity, we find that women book earlier and book cheaper tickets for trips of all durations. This evidence is also consistent with the behavioral differences hypothesis.

Trips per Year. We now explore female interactions with the number of trips made per year. If the female-male paid fare gap were driven by task assignment/acceptance, the fare

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paid gap may be larger among less frequent travelers. On the contrary, column 1 in Table 7 shows that the female-male paid fare gap is essentially flat in the number of trips made per year, even when the female-male gap in days booked in advance decreases with the number of trips (Table 7 column 3).

Region of the World. Finally, columns 2, 4, and 6 in Table 7 show that there is significant variation by region of the world in the female-male paid fare gap and in the female-male days booked in advance gap. Workers in North America and Europe exhibit the largest gender differences in both gaps. Paid fare gaps are smaller in South America, non-significant in Australia, and inverted in Asia. Women book tickets that are on average $9 more expensive in Asia compared to men. On average, women book tickets later than men in Australia and in the Middle East.

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4.2 Gender Interactions II: Preference Data by Country

In this section, we explore the potential role of gender differences in economic preferences. In the previous section, we found that the female-male paid fare gap differed by geographic region. Regional heterogeneity suggests that cultural influences may play an important role in understanding the documented gender differences. First, we consider how country-level differences in economic preferences may help explain the paid fare gap in Table 8. Table 8 displays the female-preference interactions in the paid fare model using specification 4 from Table 4A. Column 1 in Table 8 repeats specification 4 in Table 4A using the sample of countries that have preference data.[14] Second, we consider how the advance booking gap co-varies with economic preferences in Tables 9 and 10.[15]

Female-male paid fare gap. We first consider positive reciprocity, where someone who has higher reciprocity is someone who is more likely to give a "gift in exchange for help"

[14] See Appendix Section A.2 for details about the countries without preference data.

[15] Column 1 in these tables shows the base gender difference in fare paid and advance booking without accounting for gender differences in preferences. Similar results to Table 4 are obtained. Columns 2 to 7 in Tables 8, 9, and 10 add interactions between female and each preference item from Table 3. We include both the variable *female* and the interaction between *female* and the *preference*, because we are interested in both the gender difference in fare paid and advance booking in a country with no gender difference in a preference, *i.e.* the *female* coefficient, and how the gender difference in fare paid (advance booking) varies with gender differences in preferences, *i.e.* the *female* × *preference* coefficient.

and "to return a favor." Column 5 in Table 8 shows that the interaction between *female* and positive reciprocity is statistically different from zero and negatively correlated with the paid fare. However, the coefficient on *female* is similar in magnitude to the one in column 1 and statistically different from zero. This result indicates that although gender differences in positive reciprocity are associated with gender differences in the fare paid, it does not seem to explain the average gender differences in paid fares.

As regards to negative reciprocity, the average female-male difference tends to be negative, where men are more "willing to take revenge and to punish unfair behavior towards self/others."[16] A positive interaction term would imply that countries with larger negative reciprocity differences have larger paid fare gaps. In the context of our empirical setting, the paid fare gap may be due to men being more willing to trade the firms' money for their own utility if they feel that they have been treated unfairly. This may be exacerbated in a context of incomplete contracts, whereby the firm cannot specify every possible contingency regarding the air bookings performed by its workers; it may increase the scope to spend firms' money by the employee. Consistent with that, column 6 in Table 8 shows that the interaction between *female* and negative reciprocity is positive, statistically different from zero at the 5 percent level, and large in magnitude. Interestingly, the coefficient on *female* in column 6 in Table 8 is the only one that is not statistically different from zero. Taken together, these results suggest that the paid fare gap may be explained by women being less willing to trade the firms' money for their own utility compared to men.

Column 7 in Table 8 investigates the interaction with trust, in that "people have only the best intentions," according to Table 3. The results are mixed. On the one hand, the interaction between *female* and trust is statistically different from zero. On the other, although the magnitude of the *female* coefficient is reduced, it is still large in magnitude and statistically different from zero. So trust may explain part of the gender difference in paid fare, but not all of it. Gender differences in trust at the country level are highly correlated with gender differences in negative reciprocity (pairwise correlation coefficient of -0.932 in Table A2). Due to this collinearity, when both coefficients' interactions are included, neither is statistically significant. The null hypothesis that both are zero is rejected. So one explanation for

[16] *e.g.*, FBDEHS shows that negative reciprocity is weaker among women (Table 5).

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the mixed results may be that trust is partially capturing the effect of negative reciprocity, which has a more clear interpretation in our empirical context. However, we cannot accept or reject this hypothesis with our data.

Lastly, we do not find significant evidence that patience, risk taking, or altruism play a role explaining the paid fare gap (columns 2 to 4 in Table 8).

Female-male advance booking gap. Tables 9 and 10 display the female-preference interactions in the days booked in advance model and in a linear probability model of booking at least 14 days in advance, respectively. Column 1 in Tables 9 and 10 repeat specification 4 in Tables 4B and 4C using the sample of countries that have preference data. Three main results stand out from adding female-preference interactions to the advance booking models. First, the *female* coefficient is large and statistically significant in all specifications in both models. These results indicate that there is no evidence that the preference differences we consider can explain the advance booking gap. Second, the positive reciprocity, negative reciprocity, and trust interactions are statistically different from zero for the probability of booking two weeks or more in advance (Table 10), while none of the interactions are significant for days booked in advance (Table 9).

Finally, taken together, the results in Tables 8, 9, and 10 indicate that the interaction with preferences data may explain the female-male paid fare gap, but not through differences in advance booking. As emphasized above, our data does not allow us to conclusively accept or reject the behavioral differences hypothesis. Further clarifying the mechanisms at play in this section on gender differences is an avenue of further research.

5 Robustness and Additional Results

We tested the robustness of the empirical results in several ways. First, we obtained similar results using linear probability models for booking: (i) one week or more in advance, (ii) three weeks or more in advance, and (iii) four weeks or more in advance. In Appendix Section D.1, Tables A12-A23, we report similar results to the ones in Tables 4, 6, 7, and 10

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using (i), (ii), and (iii). Second, we repeated the empirical analysis using several subsamples: (iv) the subset of the 25 percent most popular routes, (v) the subset of trips in the United States only, (vi) the subset of trips in the United States only without Thanksgiving week, and (vii) the subsample with all countries without end of the year holiday weeks, and obtained similar results in all cases. The subsample in (iv) addresses a potential concern about gender selection in popular cities (*e.g.*, women being less likely to be employed at firm/divisions in the most popular cities), the subsamples in (v)-(vii) address a concern about the gender differences in ticket costs being driven by differences in preferences for travel during holiday weeks (*e.g.*, women flying back earlier during the Thanksgiving week in the United States, or during the end of the year holiday weeks). We report a summary of these results in Appendix Section D.2 in Tables A24-A27, that show similar coefficients as the ones in specifications (4) and (5) in Table 4A using, respectively, the subsamples in (iv) through (vii). Third, (viii) we also repeated the analysis in Section 3 using the subsample of countries that have preference data (*i.e.*, 7,011,259 observations in Table A1), and obtained similar results. Fourth, (ix) we obtained similar results using other specifications for the "days booked in advance fixed effects." In Appendix Section D.3 Table A28, we report a summary of these results using a more saturated model that includes a set of 91 dummy variables for the days booked in advance fixed effects (rather than 26 dummy variables in column 5 in Table 4A), one for each day booked in advance before the departure for the first 90 days and 1 additional dummy variable for more than 90 days. Fifth, we repeated the analysis clustering the standard errors: (x) at the firm and (xi) at the firm-division level, and obtained similar results to the ones reported in the main text. This robustness check addresses the concern that employees within firms may travel in teams or to the same event, thus introducing correlation in their booking of business travel. We report a summary of these results in Appendix Section D.4 in Tables A29-A30 and A31-A32 that repeats Table 4 adjusting the standard errors for 7,783 firm- and 23,609 firm-division-clusters. Sixth, (xii) similar results to the ones in Tables 4, 5, and 4 were obtained using a log specification for fare paid. Finally, (xiii) from a computational perspective, we performed the empirical analysis in **R** and Stata, using the numerical procedure described in footnote 9, and obtained identical results. We conclude that the implications discussed in the paper are robust in the cases examined.

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In terms of additional results, we also find that women are: (xiv) less likely to book a flight in first class, business class, or premium economy (Appendix Section C.1) although this result is not economically important once the full set of controls are included; (xv) more likely to book a direct flight (Appendix Section C.2); and (xvi) slightly less likely to book a flight that spans over a weekend (Appendix Section C.3) although this result is not important in magnitude. For completeness, in Appendix Section C, we repeated Tables 4, 6, 7, and 10 for (xiv) and (xv).

6 Concluding Remarks

We documented gender differences in the booking of business air travel for similar workers within a firm. Women pay consistently less per ticket and book flights earlier than men, after accounting for a large set of covariates that include the characteristics of the trips, the employers, and the employees, for total of over 40,000 fixed effects. A significant and large proportion of the lower fares paid by women is explained by women booking flights earlier than men. We performed a wide range of robustness checks; the implications are robust to these alternative specifications.

We also investigate heterogeneity in the observed gender gaps. Gender differences in paid fare increase with the length of stay, are flat in the number of trips made per year, and increase with age with no deviation from the trend during the childbearing years. Although not conclusive, these sets of results are consistent with the cost differences representing behavioral responses given the same set of tasks. We also found significant variation by region of the world, suggesting cultural influences may play an important role in understanding these gender differences. Finally, by complementing the business travel data with information about economic preferences in each country, we found that positive/negative reciprocity and trust are correlated with the documented gender differences in paid fare. In particular, negative reciprocity can explain the observed geographic variation in gender difference in paid fare. The observed gender differences for business travel could result in substantial monetary savings for firms. Our findings also suggest a potentially important role of workers' morale within a firm.

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References

Andreoni, J., and L. Vesterlund (2001): "Which is the fair sex? Gender differences in altruism," *The Quarterly Journal of Economics*, 116(1), 293–312. (Cited on page 3.)

Atkinson, S. M., S. B. Baird, and M. B. Frye (2003): "Do female mutual fund managers manage differently?," *Journal of Financial Research*, 26(1), 1–18. (Cited on page 3.)

Azmat, G., and R. Ferrer (2017): "Gender gaps in performance: Evidence from young lawyers," *Journal of Political Economy*, 125(5), 1306–1355. (Cited on pages 1 and 4.)

Azmat, G., and B. Petrongolo (2014): "Gender and the labor market: What have we learned from field and lab experiments?," *Labour Economics*, 30, 32–40. (Cited on page 3.)

Babcock, L., M. P. Recalde, L. Vesterlund, and L. Weingart (2017): "Gender differences in accepting and receiving requests for tasks with low promotability," *American Economic Review*, 107(3), 714–47. (Cited on page 4.)

Bandiera, O., I. Barankay, and I. Rasul (2005): "Social preferences and the response to incentives: Evidence from personnel data," *The Quarterly Journal of Economics*, 120(3), 917–962. (Cited on page 3.)

——— (2011): "Field experiments with firms," *Journal of Economic Perspectives*, 25(3), 63–82. (Cited on page 3.)

Ben-Ner, A., F. Kong, and L. Putterman (2004): "Share and share alike? Gender-pairing, personality, and cognitive ability as determinants of giving," *Journal of Economic Psychology*, 25(5), 581–589. (Cited on page 3.)

Bernasek, A., and S. Shwiff (2001): "Gender, risk, and retirement," *Journal of Economic Issues*, 35(2), 345–356. (Cited on page 3.)

Bertrand, M. (2011): "New perspectives on gender," in *Handbook of Labor Economics*, vol. 4, pp. 1543–1590. Elsevier. (Cited on page 3.)

Birley, S. (1989): "Female entrepreneurs: Are they really any different?," *Journal of Small Business Management*, 27(1), 32. (Cited on page 3.)

Bolton, G. E., and E. Katok (1995): "An experimental test for gender differences in beneficent behavior," *Economics Letters*, 48(3-4), 287–292. (Cited on page 3.)

Brown-Kruse, J., and D. Hummels (1993): "Gender effects in laboratory public goods contribution: Do individuals put their money where their mouth is?," *Journal of Economic Behavior & Organization*, 22(3), 255–267. (Cited on page 3.)

Chermak, J. M., and K. Krause (2002): "Individual response, information, and intergenerational common pool problems," *Journal of Environmental Economics and Management*, 43(1), 47–70. (Cited on page 3.)

Cook, C., R. Diamond, J. Hall, J. A. List, and P. Oyer (2018): "The gender earnings gap in the gig economy: Evidence from over a million rideshare drivers," Working Paper 24732, National Bureau of Economic Research. (Cited on pages 1 and 4.)

Croson, R., and U. Gneezy (2009): "Gender differences in preferences," *Journal of Economic Literature*, 47(2), 448–74. (Cited on pages 3 and 4.)

Dohmen, T., A. Falk, D. Huffman, U. Sunde, J. Schupp, and G. G. Wagner (2011): "Individual risk attitudes: Measurement, determinants, and behavioral consequences," *Journal of the European Economic Association*, 9(3), 522–550. (Cited on page 3.)

Eckel, C. C., and P. J. Grossman (1998): "Are women less selfish than men?: Evidence from dictator experiments," *The Economic Journal*, 108(448), 726–735. (Cited on page 3.)

——— (2008): "Differences in the economic decisions of men and women: Experimental evidence," *Chapter 57 Differences in the Economic Decisions of Men and Women: Experimental Evidence, In: Charles R. Plott and Vernon L. Smith, Editor(s), Handbook of Experimental Economics Results, Elsevier*, 1, 509–519. (Cited on pages 3 and 4.)

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Erickson, T., and A. Pakes (2011): "An experimental component index for the CPI: from annual computer data to monthly data on other goods," *American Economic Review*, 101(5), 1707–38. (Cited on page 10.)

Falk, A., A. Becker, T. Dohmen, B. Enke, D. Huffman, and U. Sunde (2018): "Global evidence on economic preferences," *The Quarterly Journal of Economics*, 133(4), 1645–1692. (Cited on pages 2, 6, 8, 23, 24, A-5, and A-6.)

Finucane, M. L., P. Slovic, C. K. Mertz, J. Flynn, and T. A. Satterfield (2000): "Gender, race, and perceived risk: The 'white male' effect," *Health, Risk & Society*, 2(2), 159–172. (Cited on page 3.)

Frank, R. H., T. Gilovich, and D. T. Regan (1993): "Does studying economics inhibit cooperation?," *Journal of Economic Perspectives*, 7(2), 159–171. (Cited on page 3.)

Frisch, R., and F. V. Waugh (1933): "Partial time regressions as compared with individual trends," *Econometrica*, pp. 387–401. (Cited on page 9.)

Gallen, Y. (2018): "Motherhood and the gender productivity gap," *Unpublished manuscript, University of Chicago*. (Cited on pages 1 and 4.)

Gaure, S. (2013): "OLS with multiple high dimensional category variables," *Computational Statistics & Data Analysis*, 66, 8–18. (Cited on page 9.)

Gelbach, J. B. (2016): "When do covariates matter? And which ones, and how much?," *Journal of Labor Economics*, 34(2), 509–543. (Cited on pages 10 and 26.)

Güth, W., C. Schmidt, and M. Sutter (2007): "Bargaining outside the lab–a newspaper experiment of a three-person ultimatum game," *The Economic Journal*, 117(518), 449–469. (Cited on page 3.)

Harshman, R. A., and A. Paivio (1987): ""Paradoxical" sex differences in self-reported imagery," *Canadian Journal of Psychology/Revue canadienne de psychologie*, 41(3), 287. (Cited on page 3.)

Hellerstein, J. K., D. Neumark, and K. R. Troske (1999): "Wages, productivity, and worker characteristics: Evidence from plant-level production functions and wage equations," *Journal of Labor Economics*, 17(3), 409–446. (Cited on pages 1 and 4.)

——— (2002): "Market forces and sex discrimination," *Journal of Human Resources*, pp. 353–380. (Cited on page 1.)

Johnson, J. E., and P. L. Powell (1994): "Decision making, risk and gender: Are managers different?," *British Journal of Management*, 5(2), 123–138. (Cited on page 3.)

Ledyard, J. O. (1995): "Public Goods: A Survey of Experimental Research," *in Handbook of Experimental Economics, edited by J. Kagel and A. Roth, Princeton University Press.* (Cited on page 4.)

Loewenstein, G. F., E. U. Weber, C. K. Hsee, and N. Welch (2001): "Risk as feelings," *Psychological bulletin*, 127(2), 267. (Cited on page 3.)

Lovell, M. C. (1963): "Seasonal adjustment of economic time series and multiple regression analysis," *Journal of the American Statistical Association*, 58(304), 993–1010. (Cited on page 9.)

——— (2008): "A simple proof of the FWL (Frisch-Waugh-Lovell) theorem," *The Journal of Economic Education*, 39(1), 88–91. (Cited on page 9.)

Masters, R., and R. Meier (1988): "Sex differences and risk-taking propensity of entrepreneurs," *Journal of Small Business Management*, 26(1), 31. (Cited on page 3.)

Matsa, D. A., and A. R. Miller (2013): "A female style in corporate leadership? Evidence from quotas," *American Economic Journal: Applied Economics*, 5(3), 136–69. (Cited on page 4.)

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Nagin, D. S., J. B. Rebitzer, S. Sanders, and L. J. Taylor (2002): "Monitoring, motivation, and management: The determinants of opportunistic behavior in a field experiment," *American Economic Review*, 92(4), 850–873. (Cited on page 3.)

Niederle, M. (2016): "Gender," in *Handbook of Experimental Economics*, pp. 481–553. Princeton University Press. (Cited on pages 3 and 4.)

Niederle, M., and L. Vesterlund (2007): "Do women shy away from competition? Do men compete too much?," *The Quarterly Journal of Economics*, 122(3), 1067–1101. (Cited on page 3.)

Ortmann, A., and L. K. Tichy (1999): "Gender differences in the laboratory: evidence from prisoner's dilemma games," *Journal of Economic Behavior & Organization*, 39(3), 327–339. (Cited on page 3.)

Pakes, A. (2003): "A reconsideration of hedonic price indexes with an application to PC's," *American Economic Review*, 93(5), 1578–1596. (Cited on page 10.)

Pope, D. G., and J. R. Sydnor (2010): "Geographic variation in the gender differences in test scores," *Journal of Economic Perspectives*, 24(2), 95–108. (Cited on page 2.)

Seguino, S., T. Stevens, and M. Lutz (1996): "Gender and cooperative behavior: Economic man rides alone," *Feminist Economics*, 2(1), 1–21. (Cited on page 3.)

Sell, J., and R. K. Wilson (1991): "Levels of information and contributions to public goods," *Social Forces*, 70(1), 107–124. (Cited on page 3.)

Solow, J. L., and N. Kirkwood (2002): "Group identity and gender in public goods experiments," *Journal of Economic Behavior & Organization*, 48(4), 403–412. (Cited on page 3.)

Sunden, A. E., and B. J. Surette (1998): "Gender differences in the allocation of assets in retirement savings plans," *American Economic Review*, 88(2), 207–211. (Cited on page 3.)

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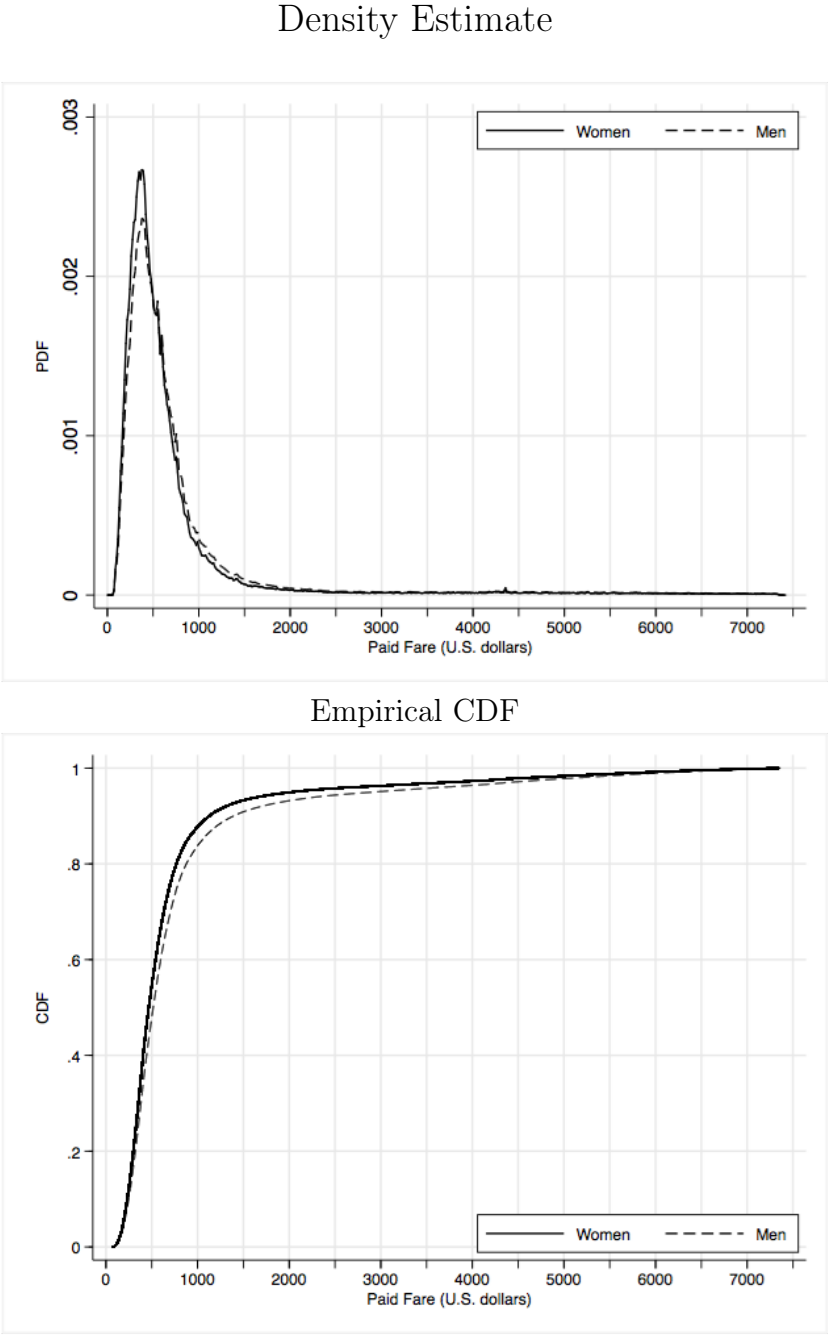
Figure 1: Distribution of paid fare by gender.



Notes: The figure displays the kernel density estimate (top panel) and empirical cumulative distribution (bottom panel) of the paid fare in U.S. dollars by gender. See Appendix Section B for details on the kernel density estimation.

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Table 1: Summary statistics of business travel data (part I).

Summary statistics of selected dependent variables

Statistic	Nmbr. Obs.	Mean	Median	St. Dev.	Min.	Max.
Paid fare (in U.S. dollars)	7,426,390	791.24	502.97	1021.00	78.58	7,344.00
Female	1,848,569	713.16	466.79	930.48	78.58	7,344.00
Male	5,577,821	817.12	515.90	1047.98	78.58	7,344.00
Days booked in advance	7,426,390	18.65	13.00	21.05	0	364.00
Female	1,848,569	20.70	14.00	21.62	0	364.00
Male	5,577,821	17.97	12.00	20.81	0	364.00
Share booking two weeks or more in advance	7,426,390	0.4635	0	0.4987	0	1
Female	1,848,569	0.5291	1	0.4992	0	1
Male	5,577,821	0.4417	0	0.4965	0	1

Notes: Each observation represents one roundtrip flight. The table displays the summary statistics of the dependent variables used in, *e.g.*, Table 4. See Appendix Section A.1 for the definitions of the variables.

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Table 2: Summary statistics of business travel data (part II).
Summary statistics of selected independent variables

Panel A: Business travel data.				
Variable	Categories	Nmbr. Obs.		Frequency
		Total	Female	Total
Female	0	5,577,821	0	0.7511
	1	1,848,569	1,848,569	0.2489
Direct flight	0	782,045	171,660	0.1053
	1	6,644,345	1,676,909	0.8947
Age	$\leq$ 24 years old	51,943	20,666	0.0700
(dummy	25-34	1,179,011	395,186	0.1588
variables)	35-44	2,388,891	618,159	0.3217
	45-54	2,483,155	557,019	0.3344
	55-64	1,193,808	235,541	0.1608
	$\geq$ 65	129,582	21,998	0.0174
Length of	$\leq$ 1 day	993,032	246,300	0.1337
stay	1-2	1,611,981	399,415	0.2171
(dummy	2-3	1,451,544	376,020	0.1955
variables)	3-4	1,209,934	312,927	0.1629
	$\geq$ 5	2,159,899	513,907	0.2908
Number of trips	$\leq$ 5 trips per year	2,987,066	910,409	0.4022
per traveler	6-10	1,657,749	402,503	0.2232
(dummy	11-15	1,018,632	217,720	0.1372
variables)	$\geq$ 16	1,762,943	317,937	0.2374
Ticket class	Economy Class	6,629,554	1,687,519	0.8927
(dummy	Premium Economy	276,517	58,798	0.0372
variables)	Business Class	486,585	95,579	0.0655
	First Class	33,734	6,673	0.0045
Flight type	Domestic	4,662,523	1,266,326	0.6278
(dummy	Continental	1,909,052	416,330	0.2571
variables)	Intercontinental	854,815	165,913	0.1151

Panel B: Economic preference data.					
	Nmbr. Obs.	Mean	St. Dev.	Min.	Max.
Patience	7,011,259	-0.088	0.090	-0.288	0.085
Risk taking	7,011,259	-0.309	0.102	-0.395	0.028
Altruism	7,011,259	0.197	0.066	-0.161	0.406
Positive reciprocity	7,011,259	0.101	0.085	-0.207	0.270
Negative reciprocity	7,011,259	-0.272	0.117	-0.467	0.036
Trust	7,011,259	0.277	0.154	-0.143	0.418

Notes: Each observation represents one roundtrip flight. The table displays, for selected independent variables used in Table 4, the categories, the number of observations, and the frequency by category. The total number of observations per variable in Panel A is 7,426,390, which is the total number of observations in Table 4. The frequencies of the categories per variable sum to 100 percent. See Appendix Section A.1 for the definitions of the variables and fixed effects. Panel B presents summary statistics from the merged preferences data obtained from the Global Preference Survey (GPS) as presented by Falk, Becker, Dohmen, Enke, Huffman, and Sunde (2018). For each preference item, the number represents the mean gender difference by country in the original preference. A positive coefficient means that women in that country have higher values in the respective preference. The preferences are in the same unit as the original preference measure from the GPS. See Table 3 for a summary of the survey items for each preference. See Section 2.2 and Appendix Section A.2 for details about the preference data.

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Table 3: Survey items of the Global Preference Survey.

Preference	**Item Description**	Weight
Patience	Intertemporal choice sequence using staircase method	0.712
	Self-assessment: Willingness to wait	0.288
Risk taking	Lottery choice sequence using staircase method	0.473
	Self-assessment: Willingness to take risks in general	0.527
Positive reciprocity	Gift in exchange for help	0.515
	Self-assessment: Willingness to return a favor	0.485
Negative reciprocity	Self-assessment: Willingness to take revenge	0.374
	Self-assessment: Willingness to punish unfair behavior towards self	0.313
	Self-assessment: Willingness to punish unfair behavior towards others	0.313
Altruism	Donation decision	0.635
	Self-assessment: Willingness to give to good causes	0.365
Trust	Self-assessment: People have only the best intentions	1

Source: Obtained from Falk, Becker, Dohmen, Enke, Huffman, and Sunde (2018, table 1). See their online appendix AF for the wording of the questions, and online appendix AI for a discussion of the weights.

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Table 4: Female-male business travel gaps.

	(1)	(2)	(3)	(4)	(5)
Panel A: Paid fare (USD)					
Female	-103.966***	-27.656***	-20.791***	-15.482***	-4.460***
	(0.866)	(0.284)	(0.290)	(0.293)	(0.285)
Adjusted R^2	0.002	0.896	0.901	0.901	0.907
Panel B: Days booked in advance					
Female	2.728***	2.693***	1.606***	1.809***	
	(0.018)	(0.017)	(0.017)	(0.017)	
Adjusted R^2	0.003	0.158	0.225	0.228	
Panel C: Booking in advance $\Pr(\geq 2$ **weeks**$)$					
Female	0.087***	0.078***	0.051***	0.053***	
	(4.22e-4)	(4.02e-4)	(4.06e-4)	(4.10e-4)	
Adjusted R^2	0.006	0.128	0.188	0.191	
Trip characteristics (16,405)	No	Yes	Yes	Yes	Yes
Employer characteristics (23,668)	No	No	Yes	Yes	Yes
Employee characteristics (14)	No	No	No	Yes	Yes
Days booked in advance F.E. (26)	No	No	No	No	Yes
Total number of F.E.	0	16,405	40,073	40,087	40,113
Number of Observations	7,426,390	7,426,390	7,426,390	7,426,390	7,426,390

Notes: Dependent variable is listed in each panel. "Trip characteristics" include the following variables: Origin-Destination route × ticket class fixed effects, direct flight, length of stay dummy variables, and week fixed effects. "Employer characteristics" include the following variables: Division × firm fixed effects and country fixed effects. "Employee characteristics" include the following variables: age dummy variables, number of trips per traveler dummy variables, and employee type fixed effects. "F.E." stands for "Fixed Effects." The parenthesis in the initial column, next to the labels, summarizes the number of fixed effects included in each line. The total number of fixed effects reports the number of fixed effects included in each column/specification. See Appendix Section A.1 for the definitions of the variables and fixed effects. All regressions are OLS regressions. Standard errors are in parentheses. * significant at $p < .05$; **$p < .01$; ***$p < .001$.

Table 5: Gelbach decomposition of the female-male paid fare gap

	Specification		Explained	
	Base	Full	Amount	Percent
	(1)	(2)	(3)	(4)
Female-male paid fare gap	-103.966	-4.460	-99.506	95.7%
Covariates:				
Trip and employer characteristics (40,073)	No	Yes	-75.519	72.6%
Employee characteristics (14)	No	Yes	-5.985	5.76%
Days booked in advance F.E. (26)	No	Yes	-18.003	17.3%

Notes: Dependent variable for the specifications is the paid fare, which is measured in U.S. dollars. The coefficient for the female-male paid fare gap in columns (1) and (2) correspond, respectively, to the coefficients in Table 4A, columns (1) and (5). Both specifications use the same 7,426,390 observations and are OLS regressions. Column (3) displays the conditional decomposition of the female-male paid fare gap into three components: trip and employer characteristics, employee characteristics, and days booked in advance F.E., following Gelbach (2016). "Trip characteristics" include the following variables: Origin-Destination route × ticket class fixed effects, direct flight, length of stay dummy variables, and week fixed effects. "Employer characteristics" include the following variables: Division × firm fixed effects and country fixed effects. "Employee characteristics" include the following variables: age dummy variables, number of trips per traveler dummy variables, and employee type fixed effects. "F.E." stands for "Fixed Effects." The parenthesis in the initial column, next to the labels, summarizes the number of fixed effects included in each line. See Appendix Section A.1 for the definitions of the variables and fixed effects.
All coefficients in the table have p-values of $p < .001$.

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Table 6: Female-male business travel gaps: female interactions (part I).

Dependent variable:	Paid fare (USD)		Booking in advance: Days		Booking in advance: Pr($\geq$ 2 weeks)	
	(1)	(2)	(3)	(4)	(5)	(6)
Female $\times$						
(age $\leq$ 24)	-11.752***		1.158***		0.035***	
	(2.931)		(0.169)		(0.004)	
(25 $\leq$ age $\leq$ 34)	-13.420***		1.752***		0.052***	
	(0.640)		(0.037)		(8.96-4)	
(35 $\leq$ age $\leq$ 44)	-14.253***		1.883***		0.056***	
	(0.489)		(0.028)		(6.84e-4)	
(45 $\leq$ age $\leq$ 54)	-16.285***		1.763***		0.051***	
	(0.505)		(0.029)		(7.06e-4)	
(55 $\leq$ age $\leq$ 64)	-18.888***		1.917***		0.053***	
	(0.757)		(0.044)		(0.001)	
(age $\geq$ 65)	-26.386***		1.209***		0.040***	
	(2.422)		(0.140)		(0.003)	
(length of stay $\leq$ 1 day)		-10.596***		0.794***		0.036***
		(0.763)		(0.044)		(1.07e-4)
(1 < length of stay $\leq$ 2 days)		-14.537***		1.432***		0.055***
		(0.598)		(0.034)		(8.37e-4)
(2 < length of stay $\leq$ 3 days)		-16.949***		2.054***		0.065***
		(0.619)		(0.036)		(8.67e-4)
(3 < length of stay $\leq$ 4 days)		-18.395***		2.154***		0.056***
		(0.677)		(0.039)		(9.47e-4)
(length of stay $\geq$ 5 days)		-15.719***		2.199***		0.049***
		(0.532)		(0.030)		(7.44e-4)
Trip characteristics (16,405)	Yes	Yes	Yes	Yes	Yes	Yes
Employer characteristics (23,668)	Yes	Yes	Yes	Yes	Yes	Yes
Employee characteristics (14)	Yes	Yes	Yes	Yes	Yes	Yes
Adjusted R^2	0.901	0.901	0.228	0.228	0.191	0.191

Notes: The table displays female interactions using specification (4) from Table 4. "Trip characteristics" include the following variables: Origin-Destination route $\times$ ticket class fixed effects, direct flight, length of stay dummy variables, and week fixed effects. "Employer characteristics" include the following variables: Division $\times$ firm fixed effects and country fixed effects. "Employee characteristics" include the following variables: age dummy variables, number of trips per traveler dummy variables, and employee type fixed effects. The parenthesis in the initial column, next to the labels, summarizes the number of fixed effects included in each line. See Appendix Section A.1 for the definitions of the variables and fixed effects. All regressions are OLS regressions. Standard errors are in parentheses.
* significant at $p < .05$; ** $p < .01$; *** $p < .001$.

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Table 7: Female-male paid fare gap: female interactions (part II).

Dependent variable:	Paid fare (USD)		Booking in advance: Days		Booking in advance: Pr(≥ 2 weeks)	
	(1)	(2)	(3)	(4)	(5)	(6)
Female ×						
(trips per year ≤ 5)	-15.563***		2.570***		0.064***	
	(0.419)		(0.024)		(5.86e-4)	
(6 ≤ trips per year ≤ 10)	-14.089***		1.562***		0.051***	
	(0.596)		(0.034)		(8.33e-4)	
(11 ≤ trips per year ≤ 15)	-16.293***		1.105***		0.044***	
	(0.792)		(0.046)		(0.001)	
(trips per year ≥ 16)	-16.391***		0.684***		0.035***	
	(0.653)		(0.038)		(9.13e-4)	
Africa		-7.812		1.154***		0.026***
		(4.593)		(0.265)		(0.006)
Australia		2.020		-0.574***		0.016***
		(1.356)		(0.078)		(0.002)
Europe		-16.149***		2.048***		0.051***
		(0.512)		(0.030)		(7.16e-4)
Asia		9.288***		1.771***		0.054***
		(1.457)		(0.084)		(0.002)
Middle East		13.669		-0.206		0.008
		(9.441)		(0.545)		(0.013)
North America		-18.935***		1.908***		0.059***
		(0.397)		(0.023)		(5.55e-4)
South America		-10.292***		1.478***		0.039***
		(1.307)		(0.075)		(0.001)
Trip characteristics (16,405)	Yes	Yes	Yes	Yes	Yes	Yes
Employer characteristics (23,668)	Yes	Yes	Yes	Yes	Yes	Yes
Employee characteristics (14)	Yes	Yes	Yes	Yes	Yes	Yes
Adjusted R^2	0.901	0.901	0.228	0.228	0.191	0.191

Notes: The table displays female interactions using specification (4) from Table 4. "Trip characteristics" include the following variables: Origin-Destination route × ticket class fixed effects, direct flight, length of stay dummy variables, and week fixed effects. "Employer characteristics" include the following variables: Division × firm fixed effects and country fixed effects. "Employee characteristics" include the following variables: age dummy variables, number of trips per traveler dummy variables, and employee type fixed effects. The parenthesis in the initial column, next to the labels, summarizes the number of fixed effects included in each line. See Appendix Section A.1 for the definitions of the variables and fixed effects. All regressions are OLS regressions. Standard errors are in parentheses.
* significant at $p < .05$; ** $p < .01$; *** $p < .001$.

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Table 8: Female-male paid fare gap: female interactions with preference data.

Dependent variable: paid fare	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Female	-15.781***	-14.987***	-9.688	-9.125*	-11.215***	-6.696	-8.294***
	(1.636)	(2.834)	(5.989)	(4.057)	(2.039)	(3.874)	(1.756)
Female ×							
Patience		9.965					
		(20.106)					
Risk taking			19.155				
			(17.856)				
Altruism				-33.451			
				(23.608)			
Positive reciprocity					-40.989**		
					(11.976)		
Negative reciprocity						32.441*	
						(12.500)	
Trust							-25.619***
							(4.329)
Trip characteristics (16,122)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Employer characteristics (20,825)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Employee characteristics (14)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Total number of F.E. included	36,961	36,961	36,961	36,961	36,961	36,961	36,961
Adjusted R^2	0.899	0.899	0.899	0.899	0.899	0.899	0.899
Number of Observations	7,011,259	7,011,259	7,011,259	7,011,259	7,011,259	7,011,259	7,011,259

Notes: Dependent variable is the paid fare, which is measured in U.S. dollars. The table displays female interactions using specification (4) from Table 4A. "Trip characteristics" include the following variables: Origin-Destination route × ticket class fixed effects, direct flight, length of stay dummy variables, and week fixed effects. "Employer characteristics" include the following variables: Division × firm fixed effects and country fixed effects. "Employee characteristics" include the following variables: age dummy variables, number of trips per traveler dummy variables, and employee type fixed effects. "F.E." stands for "Fixed Effects." The parenthesis in the initial column, next to the labels, summarizes the number of fixed effects included in each line. The total number of fixed effects reports the number of fixed effects included in each column/specification. See Appendix Section A.1 for the definitions of the variables and fixed effects. See Table 3 for a summary of the survey items for each preference. All regressions are OLS regressions. Robust standard errors clustered at the country level are in parentheses.
* significant at $p < .05$; ** $p < .01$; *** $p < .001$.

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Table 9: Female-male days booked in advance gap: female interactions with preference data.

Dependent variable: days booked in advance	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Female	1.774***	1.749***	1.583***	1.874***	1.650***	1.655***	1.519***
	(0.111)	(0.131)	(0.372)	(0.403)	(0.236)	(0.210)	(0.223)
Female ×							
Patience		-0.315					
		(1.071)					
Risk taking			-0.600				
			(1.061)				
Altruism				-0.502			
				(2.437)			
Positive reciprocity					1.114		
					(1.234)		
Negative reciprocity						-0.427	
						(0.811)	
Trust							0.873
							(0.438)
Trip characteristics (16,122)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Employer characteristics (20,825)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Employee characteristics (14)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Total number of F.E. included	36,961	36,961	36,961	36,961	36,961	36,961	36,961
Adjusted R^2	0.224	0.224	0.224	0.224	0.224	0.224	0.224
Number of Observations	7,011,259	7,011,259	7,011,259	7,011,259	7,0112,59	7,011,259	7,011,259

Notes: Dependent variable is the days booked in advance. The table displays female interactions using specification (4) from Table 4B. "Trip characteristics" include the following variables: Origin-Destination route × ticket class fixed effects, direct flight, length of stay dummy variables, and week fixed effects. "Employer characteristics" include the following variables: Division × firm fixed effects and country fixed effects. "Employee characteristics" include the following variables: age dummy variables, number of trips per traveler dummy variables, and employee type fixed effects. "F.E." stands for "Fixed Effects." The parenthesis in the initial column, next to the labels, summarizes the number of fixed effects included in each line. The total number of fixed effects reports the number of fixed effects included in each column/specification. See Appendix Section A.1 for the definitions of the variables and fixed effects. See Table 3 for a summary of the survey items for each preference. All regressions are OLS regressions. Robust standard errors clustered at the country level are in parentheses.

* significant at $p < .05$; ** $p < .01$; *** $p < .001$.

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Table 10: Female-male probability gap for booking two weeks or more in advance: female interactions with preference data.

Linear probability model for booking two weeks or more in advance	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Female	0.053***	0.055***	0.038***	0.044***	0.045***	0.041***	0.038***
	(0.003)	(0.004)	(0.009)	(0.007)	(0.004)	(0.004)	(0.004)
Female ×							
Patience		0.028					
		(0.028)					
Risk taking			-0.047				
			(0.027)				
Altruism				0.042			
				(0.044)			
Positive reciprocity					0.072**		
					(0.021)		
Negative reciprocity						-0.040*	
						(0.017)	
Trust							0.049***
							(0.007)
Trip characteristics (16,122)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Employer characteristics (20,825)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Employee characteristics (14)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Total number of F.E. included	36,961	36,961	36,961	36,961	36,961	36,961	36,961
Adjusted R^2	0.189	0.189	0.189	0.189	0.189	0.189	0.189
Number of Observations	7,011,259	7,011,259	7,011,259	7,011,259	7,011,259	7,011,259	7,011,259

Notes: The table displays the estimates of a linear probability model. The dependent variable is a dummy variable equals to 1 if the traveler booked the flight with two weeks or more in advance (*i.e.* if the trip was booked 14 days or more prior to the day of departure), and 0 otherwise. The table displays female interactions using specification (4) from Table 4C. "Trip characteristics" include the following variables: Origin-Destination route × ticket class fixed effects, direct flight, length of stay dummy variables, and week fixed effects. "Employer characteristics" include the following variables: Division × firm fixed effects and country fixed effects. "Employee characteristics" include the following variables: age dummy variables, number of trips per traveler dummy variables, and employee type fixed effects. "F.E." stands for "Fixed Effects." The parenthesis in the initial column, next to the labels, summarizes the number of fixed effects included in each line. The total number of fixed effects reports the number of fixed effects included in each column/specification. See Appendix Section A.1 for the definitions of the variables and fixed effects. See Table 3 for a summary of the survey items for each preference. All regressions are OLS regressions. Robust standard errors clustered at the country level are in parentheses.

* significant at $p < .05$; ** $p < .01$; *** $p < .001$.

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A Data Appendix

A.1 Definitions of Variables and Fixed Effects

Below we present the definitions of the variables and fixed effects used in the regressions in Section 3 and appendix sections C and D. See Table 3 for a summary of the survey items for the preference data.

Paid fare: The price of the flight ticket in U.S. dollars.

Days booked in advance: The number of days booked in advance, as measured by the difference between the day where the booking was done and the day of departure of the flight.

Female: A dummy variable that equals 1 if the traveler's gender is female, and 0 otherwise.

Direct flight: A dummy variable that equals 1 if the flight is a direct flight, and 0 otherwise. A direct flight is defined as a flight between two destinations with no change in flight numbers, nor stops.

Age: The age of the individual who performs the flight in years. In the regressions we use "age dummy variables" using the following 6 groups for age: 1) "24 or less," 2) "$(24, 34]$," 3) "$(34, 44]$," 4) "$(44, 54]$," 5) "$(54, 64]$," 6) "greater than 65." For each individual, each group represents a dummy variable equals to 1 if the age of the individual belongs to that group, and zero otherwise.

Length of stay: The length of the trip in days, as measured by the difference between the day of departure and the day of return. In the regressions we use "length of stay dummy variables" using the following 5 groups for length of stay: 1) "less than 1 day (*i.e.* less than 24 hours)," 2) "$(1, 2]$," 3) "$(2, 3]$," 4) "$(3, 4]$," 5) "5 days or more." For each individual, each group represents a dummy variable equals to 1 if the length of stay of the individual belongs to that group, and zero otherwise.

Number of trips per traveler: The number of trips per traveler per year. In the regressions we use "number of trips per traveler dummy variables" using the following 4 groups for the number of trips per traveler: 1) "5 trips or less," 2) "$(5, 10]$,", 3) "$(10, 15]$," 4) "$(10, 15]$," 5) "16 or more." For each individual, each group represents a dummy variable equals to 1 if the

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number of trips of the individual belongs to that group, and zero otherwise.

Ticket class: The fare basis code (typically referred to as a fare basis) used by the airlines. This is a categorical variable that belongs to one of the following 4 groups: 1) "First Class," 2) "Business Class," 3) "Premium Economy," 4) "Economy Class." In the regressions we use "ticket class dummy variables," where for each individual, each group represents a dummy variable equals to 1 if the ticket class of the individual belongs to that group, and zero otherwise.

Flight type: This is a categorical variable that belongs to one of the following 3 groups: 1) "Continental," 2) "Domestic," 3) "International." In the regressions we use "flight type dummy variables," where for each trip, each group represents a dummy variable equals to 1 if the flight type belongs to that group, and zero otherwise.

Region: A categorical variable that records the region of the world where the flight originates. The possible regiones are: 1) "Africa,", 2) "Australia," 3) "Europe," 4) "Asia," 5) "Middle East," 6) "North America," 7) "South America."

Origin-Destination route fixed effects: A set of 8,192 dummy variables, each corresponding to the unique origin-destination route in our sample (*e.g.* LAX-ORD is one origin-destination route). The round trip "from airport A to airport B" and "from airport B to airport A" are two different dummy variables.

(Origin-Destination route $\times$ ticket class) fixed effects: A set of 18,172 dummy variables, that result from the interaction of "Origin-Destination fixed effects" and the variable "ticket class."

Week of the year fixed effects: A set of 52 dummy variables, each corresponding to the week of the year when the flight is scheduled.

Country fixed effects: A set of 66 dummy variables, each corresponding to the country of origin of the flight.

Firm fixed effects: A set of 8,067 dummy variables, each corresponding to the firm where the individual works when booking the flight.

Employee type: A set of 6 dummy variables, with the classification of the employees by their position within the firm where they work.

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(Division $\times$ Firm) fixed effects: A set of 25,167 dummy variables, each corresponding to the unique division-firm combination (the classification of the divisions are unique to each firm) where the employee works when booking the flight.

Days booked in advance fixed effects: A set of 26 dummy variables, where each of the them equals 1 depending on how many days or weeks in advance the booking was made, defined as follows. A set of 15 dummy variables, one for each of the first 15 days prior to a flight. A set of 10 dummy variables, one for each of the 10 weeks following the first 15 days prior to a flight. An additional dummy variable for a booking that took place 85 days ($85 = 15 + 10 \times 7$) before the flight.

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A.2 Details about Preference Data

Preference data are obtained from the Global Preference Survey (GPS) as presented by Falk, Becker, Dohmen, Enke, Huffman, and Sunde (2018, henceforth FBDEHS). For each preference item in Table 3, we obtain the gender difference at the country-level reported by FBDEHS (online appendix EB). Then we merge the gender difference preferences to the business travel data, using the country of the traveler.

There are twenty, generally small, countries that have business travel data, but do not have preference data. The number of observations from these countries in the business travel data is 415,342. Thus, the number of observations drops from 7,426,390 in Table 1, to 7,011,259 in Table A1. We obtained similar results to the one in Section 3 using the latter sample.

In online appendix EB (tables 15 and 16), FBDEHS report gender coefficients of several regressions by country. For each country, they regress the respective preference on a woman indicator (a dummy variable that equals one if the person is a woman and zero otherwise), age and its square, and subjective math skills. FBDEHS report the coefficients of the woman indicator for each country. Thus, each coefficient is in the same unit as the original preference measure from the GPS. The coefficient represents the mean gender difference by country in the original preference. In other words, a coefficient of 0.1 means that women in a given country report, on average, having 0.1 standard deviations higher in the respective preference compared to men.

Table A2 shows the pairwise correlation coefficients between the gender differences in preferences of the merged GPS. The correlation between some of these coefficients (*e.g.* between negative reciprocity and trust) is relatively large. For this reason we do not simultaneously include all gender differences in preference measures in Tables 8-10. See Section 3 for details.

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Table A1: Summary statistics of preference data.

Panel A: All Observations.

	Nmbr. Obs.	Mean	St. Dev.	Min.	Max.
Patience	7,011,259	-0.088	0.090	-0.288	0.085
Risk taking	7,011,259	-0.309	0.102	-0.395	0.028
Altruism	7,011,259	0.197	0.066	-0.161	0.406
Positive reciprocity	7,011,259	0.101	0.085	-0.207	0.270
Negative reciprocity	7,011,259	-0.272	0.117	-0.467	0.036
Trust	7,011,259	0.277	0.154	-0.143	0.418

Panel B: By Country.

	Nmbr. Countries	Mean	St. Dev.	Min.	Max.
Patience	46	-0.078	0.098	-0.288	0.085
Risk taking	46	-0.203	0.105	-0.395	0.028
Altruism	46	0.139	0.124	-0.161	0.406
Positive reciprocity	46	0.058	0.098	-0.207	0.270
Negative reciprocity	46	-0.161	0.110	-0.467	0.036
Trust	46	0.095	0.128	-0.143	0.418

Notes: Summary statistics from the merged preferences data obtained from the Global Preference Survey (GPS) as presented by Falk, Becker, Dohmen, Enke, Huffman, and Sunde (2018). For each preference item, the number represents the mean gender difference by country in the original preference. A positive coefficient means that women in that country have higher values in the respective preference. The preferences are in the same unit as the original preference measure from the GPS. See Table 3 for a summary of the survey items for each preference. See Section 2.2 and Appendix Section A.2 for details about the preference data.

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Table A2: Pairwise correlation coefficients between gender differences in preferences.

	Patience	Risk taking	Altruism	Positive reciprocity	Negative reciprocity	Trust
Patience	1.0000					
Risk taking	0.5152	1.0000				
Altruism	-0.5340	-0.8888	1.0000			
Positive reciprocity	-0.1570	-0.8247	0.8323	1.0000		
Negative reciprocity	0.5563	0.9629	-0.9018	-0.8209	1.0000	
Trust	-0.3343	-0.9233	0.9012	0.9092	-0.9320	1.0000

Notes: Pairwise correlation coefficients from the merged preferences data obtained from the Global Preference Survey (GPS) as presented by Falk, Becker, Dohmen, Enke, Huffman, and Sunde (2018). See Table 3 for a summary of the survey items for each preference. See Section 2.2 and Appendix Section A.2 for details about the preference data.

B Details on Kernel Density Estimation

We estimate the kernel density and empirical cumulative distribution in Figure 1 as follows. Let pf denote realized paid fare for each observation $j \in \{1, \ldots, J\}$. We estimate the probability density function for the paid fare for women and men, $f(pf)$, as: $\hat{f}_K(pf; h) = \frac{1}{Jh} \sum_{j=1}^{J} K\left(\frac{pf - pf(j)}{h}\right)$, where $K(z)$ is a standard univariate gaussian kernel function, h is the bandwidth that we choose by cross validation, and $pf(j), j = 1, \ldots, J$ are the paid fare for each observation in the data. Given that the paid fare has its domain bounded we use a renormalization method to deal with the boundaries when estimating the probability density function of the paid fare. We estimate the empirical cumulative distribution of paid fare, $F(pf)$, as: $\hat{F}_J(pf) = \frac{1}{J} \sum_{j=1}^{J} \mathbf{1}\{pf(j) \leq pf\}$, where $\mathbf{1}\{A\}$ is the indicator function of the event A.

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C Additional Results

C.1 Booking a Flight in First Class, Business Class, or Premium Economy

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Table A3: Female-male probability gap for booking first class, business class, or premium economy.

Linear probability model for booking first class, business class, or premium economy	(1)	(2)	(3)	(4)	(5)
Female	-0.027***	-0.010***	-0.013***	-0.005***	-0.004***
	(2.62-e4)	(2.04-e4)	(1.95-e4)	(1.96-e4)	(1.96-e4)
Trip characteristics (8,248)	No	Yes	Yes	Yes	Yes
Employer characteristics (23,669)	No	No	Yes	Yes	Yes
Employee characteristics (14)	No	No	No	Yes	Yes
Days booked in advance F.E. (26)	No	No	No	No	Yes
Total number of F.E.	0	8,248	31,917	31,931	31,957
Adjusted R^2	0.001	0.415	0.512	0.519	0.519
Number of Observations	7,426,390	7,426,390	7,426,390	7,426,390	7,426,390

Notes: The table displays the estimates of a linear probability model. The dependent variable is a dummy variable equals to 1 if the traveler booked the flight in any of the following ticket class groups: first class, business class, or premium economy, and 0 otherwise. "Trip characteristics" include the following variables: Origin-Destination route fixed effects, direct flight, length of stay dummy variables, and week fixed effects. "Employer characteristics" include the following variables: Division × firm fixed effects and country fixed effects. "Employee characteristics" include the following variables: age dummy variables, number of trips per traveler dummy variables, and employee type fixed effects. "F.E." stands for "Fixed Effects." The parenthesis in the initial column, next to the labels, summarizes the number of fixed effects included in each line. The total number of fixed effects reports the number of fixed effects included in each column/specification. See Appendix Section A.1 for the definitions of the variables and fixed effects. All regressions are OLS regressions. Standard errors are in parentheses. The probability of a man booking booking first class, business class, or premium economy: 0.070.

* significant at $p < .05$; ** $p < .01$; *** $p < .001$.

Table A4: Female-male probability gap for booking first class, business class, or premium economy: female interactions (part I).

Linear probability model for booking first class, business class, or premium economy	(1)	(2)
Female ×		
(age ≤ 24)	-5.16e-4	
	(0.002)	
(25 ≤ age ≤ 34)	-0.003***	
	(4.28e-4)	
(35 ≤ age ≤ 44)	-0.003***	
	(3.27e-4)	
(45 ≤ age ≤ 54)	-0.006***	
	(3.37e-4)	
(55 ≤ age ≤ 64)	-0.010***	
	(5.06e-4)	
(age ≥ 65)	-0.020***	
	(0.002)	
(length of stay ≤ 1 day)		-0.008***
		(5.10e-4)
(1 < length of stay ≤ 2 days)		-0.008***
		(4.01e-4)
(2 < length of stay ≤ 3 days)		-0.008***
		(4.15e-4)
(3 < length of stay ≤ 4 days)		-0.004***
		(4.53e-4)
(length of stay ≥ 5 days)		5.39e-4
		(3.55e-4)
Trip characteristics (8,248)	Yes	Yes
Employer characteristics (23,669)	Yes	Yes
Employee characteristics (14)	Yes	Yes
Total number of F.E. included	31,931	31,931
Adjusted R^2	0.520	0.520
Number of Observations	7,426,390	7,426,390

Notes: The table displays the estimates of a linear probability model. The dependent variable is a dummy variable equals to 1 if the traveler booked the flight in any of the following ticket class groups: first class, business class, or premium economy, and 0 otherwise. The table displays female interactions using specification (4) from Table A3. "Trip characteristics" include the following variables: Origin-Destination route fixed effects, direct flight, length of stay dummy variables, and week fixed effects. "Employer characteristics" include the following variables: Division × firm fixed effects and country fixed effects. "Employee characteristics" include the following variables: age dummy variables, number of trips per traveler dummy variables, and employee type fixed effects. "F.E." stands for "Fixed Effects." The parenthesis in the initial column, next to the labels, summarizes the number of fixed effects included in each line. The total number of fixed effects reports the number of fixed effects included in each column/specification. See Appendix Section A.1 for the definitions of the variables and fixed effects. All regressions are OLS regressions. Standard errors are in parentheses.

* significant at $p < .05$; ** $p < .01$; *** $p < .001$.

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Table A5: Female-male probability gap for booking first class, business class, or premium economy: female interactions (part II).

Linear probability model for booking first class, business class, or premium economy	(1)	(2)
Female ×		
(trips per year ≤ 5)	-0.002***	
	(2.80e-4)	
(6 ≤ trips per year ≤ 10)	-0.005***	
	(3.99e-4)	
(11 ≤ trips per year ≤ 15)	-0.007***	
	(5.30e-4)	
(trips per year ≥ 16)	-0.011***	
	(4.36e-4)	
Africa		-0.007*
		(0.003)
Australia		-0.004***
		(9.06e-4)
Europe		-0.013***
		(3.42e-4)
Asia		-0.022***
		(9.72e-4)
Middle East		-0.002
		(0.006)
North America		-1.29e-5
		(2.65e-4)
South America		0.003**
		(8.74e-4)
Trip characteristics (8,248)	Yes	Yes
Employer characteristics (23,669)	Yes	Yes
Employee characteristics (14)	Yes	Yes
Total number of F.E. included	31,931	31,931
Adjusted R^2	0.520	0.520
Number of Observations	7,426,390	7,426,390

Notes: The table displays the estimates of a linear probability model. The dependent variable is a dummy variable equals to 1 if the traveler booked the flight in any of the following ticket class groups: first class, business class, or premium economy, and 0 otherwise. The table displays female interactions using specification (4) from Table A3. "Trip characteristics" include the following variables: Origin-Destination route fixed effects, direct flight, length of stay dummy variables, and week fixed effects. "Employer characteristics" include the following variables: Division × firm fixed effects and country fixed effects. "Employee characteristics" include the following variables: age dummy variables, number of trips per traveler dummy variables, and employee type fixed effects. "F.E." stands for "Fixed Effects." The parenthesis in the initial column, next to the labels, summarizes the number of fixed effects included in each line. The total number of fixed effects reports the number of fixed effects included in each column/specification. See Appendix Section A.1 for the definitions of the variables and fixed effects. All regressions are OLS regressions. Standard errors are in parentheses.

* significant at $p < .05$; ** $p < .01$; *** $p < .001$.

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Table A6: Female-male probability gap for booking first class, business class, or premium economy: female interactions with preference data.

Linear probability model for booking first class, business class, or premium economy	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Female	-0.004***	2.32e-4	-0.007	-0.012	-0.011***	-0.008	-0.012**
	(6.43e-4)	(0.002)	(0.005)	(0.007)	(0.003)	(0.005)	(0.004)
Female ×							
Patience		0.056**					
		(0.016)					
Risk taking			-0.009				
			(0.017)				
Altruism				0.041			
				(0.035)			
Positive reciprocity					0.057**		
					(0.020)		
Negative reciprocity						-0.013	
						(0.018)	
Trust							0.0250*
							(0.011)
Trip characteristics (8,248)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Employer characteristics (23,669)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Employee characteristics (14)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Total number of F.E. included	36,931	36,931	36,931	36,931	36,931	36,931	36,931
Adjusted R^2	0.523	0.523	0.523	0.523	0.523	0.523	0.523
Number of Observations	7,011,259	7,011,259	7,011,259	7,011,259	7,011,259	7,011,259	7,011,259

Notes: The table displays the estimates of a linear probability model. The dependent variable is a dummy variable equals to 1 if the traveler booked the flight in any of the following ticket class groups: first class, business class, or premium economy, and 0 otherwise. The table displays female interactions using specification (4) from Table A3. "Trip characteristics" include the following variables: Origin-Destination route fixed effects, direct flight, length of stay dummy variables, and week fixed effects. "Employer characteristics" include the following variables: Division × firm fixed effects and country fixed effects. "Employee characteristics" include the following variables: age dummy variables, number of trips per traveler dummy variables, and employee type fixed effects. "F.E." stands for "Fixed Effects." The parenthesis in the initial column, next to the labels, summarizes the number of fixed effects included in each line. The total number of fixed effects reports the number of fixed effects included in each column/specification. See Appendix Section A.1 for the definitions of the variables and fixed effects. See Table 3 for a summary of the survey items for each preference. All regressions are OLS regressions. Robust standard errors clustered at the country level are in parentheses.
* significant at $p < .05$; ** $p < .01$; *** $p < .001$.

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C.2 Booking a Direct Flight

Table A7: Female-male probability gap for booking a direct flight.

Linear probability model for booking a direct flight	(1)	(2)	(3)	(4)	(5)
Female	0.017***	0.006***	0.005***	0.006***	0.005***
	(2.60e-4)	(1.46e-4)	(1.51e-4)	(1.53e-4)	(1.53e-4)
Trip characteristics (16,404)	No	Yes	Yes	Yes	Yes
Employer characteristics (23,668)	No	No	Yes	Yes	Yes
Employee characteristics (14)	No	No	No	Yes	Yes
Days booked in advance F.E. (26)	No	No	No	No	Yes
Total number of F.E.	0	16,404	40,072	40,086	40,112
Adjusted R^2	5.45e-4	0.698	0.702	0.702	0.703
Number of Observations	7,426,390	7,426,390	7,426,390	7,426,390	7,426,390

Notes: The table displays the estimates of a linear probability model. The dependent variable is a dummy variable equals to 1 if the traveler booked a direct flight, and 0 otherwise. "Trip characteristics" include the following variables: Origin-Destination route × ticket class fixed effects, length of stay dummy variables, and week fixed effects. "Employer characteristics" include the following variables: Division × firm fixed effects and country fixed effects. "Employee characteristics" include the following variables: age dummy variables, number of trips per traveler dummy variables, and employee type fixed effects. "F.E." stands for "Fixed Effects." The parenthesis in the initial column, next to the labels, summarizes the number of fixed effects included in each line. The total number of fixed effects reports the number of fixed effects included in each column/specification. See Appendix Section A.1 for the definitions of the variables and fixed effects. All regressions are OLS regressions. Standard errors are in parentheses. The probability of a man booking booking a direct flight is: 0.890.

* significant at $p < .05$; ** $p < .01$; *** $p < .001$.

Table A8: Female-male probability gap for booking a direct flight: female interactions (part I).

Linear probability model for booking a direct flight	(1)	(2)
Female ×		
(age ≤ 24)	0.004*	
	(0.002)	
(25 ≤ age ≤ 34)	0.005***	
	(3.34e-4)	
(35 ≤ age ≤ 44)	0.006***	
	(2.55e-4)	
(45 ≤ age ≤ 54)	0.006***	
	(2.64e-4)	
(55 ≤ age ≤ 64)	0.005***	
	(3.96e-4)	
(age ≥ 65)	0.009***	
	(0.001)	
(length of stay ≤ 1 day)		4.20e-4
		(3.98e-4)
(1 < length of stay ≤ 2 days)		0.003***
		(3.13e-4)
(2 < length of stay ≤ 3 days)		0.006***
		(3.24e-4)
(3 < length of stay ≤ 4 days)		0.008***
		(3.54e-4)
(length of stay ≥ 5 days)		0.009***
		(2.78e-4)
Trip characteristics (16,404)	Yes	Yes
Employer characteristics (23,668)	Yes	Yes
Employee characteristics (14)	Yes	Yes
Total number of F.E. included	40,086	40,086
Adjusted R^2	0.702	0.702
Number of Observations	7,426,390	7,426,390

Notes: The table displays the estimates of a linear probability model. The dependent variable is a dummy variable equals to 1 if the traveler booked a direct flight, and 0 otherwise. The table displays female interactions using specification (4) from Table A7. "Trip characteristics" include the following variables: Origin-Destination route × ticket class fixed effects, length of stay dummy variables, and week fixed effects. "Employer characteristics" include the following variables: Division × firm fixed effects and country fixed effects. "Employee characteristics" include the following variables: age dummy variables, number of trips per traveler dummy variables, and employee type fixed effects. "F.E." stands for "Fixed Effects." The parenthesis in the initial column, next to the labels, summarizes the number of fixed effects included in each line. The total number of fixed effects reports the number of fixed effects included in each column/specification. See Appendix Section A.1 for the definitions of the variables and fixed effects. All regressions are OLS regressions. Standard errors are in parentheses.

* significant at $p < .05$; ** $p < .01$; *** $p < .001$.

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Table A9: Female-male probability gap for booking a direct flight: female interactions (part II).

Linear probability model for booking a direct flight	(1)	(2)
Female ×		
(trips per year ≤ 5)	0.006***	
	(2.19e-4)	
($6 \leq$ trips per year ≤ 10)	0.007***	
	(3.11e-4)	
($11 \leq$ trips per year ≤ 15)	0.005***	
	(4.14e-4)	
(trips per year ≥ 16)	0.003***	
	(3.41e-4)	
Africa		-6.68e-4
		(0.002)
Australia		0.002**
		(7.08e-4)
Europe		0.004***
		(2.67e-4)
Asia		0.001
		(7.61e-4)
Middle East		0.014**
		(0.005)
North America		0.008***
		(2.07e-4)
South America		0.002**
		(6.83e-4)
Trip characteristics (16,404)	Yes	Yes
Employer characteristics (23,668)	Yes	Yes
Employee characteristics (14)	Yes	Yes
Total number of F.E. included	40,086	40,086
Adjusted R^2	0.702	0.702
Number of Observations	7,426,390	7,426,390

Notes: The table displays the estimates of a linear probability model. The dependent variable is a dummy variable equals to 1 if the traveler booked a direct flight, and 0 otherwise. The table displays female interactions using specification (4) from Table A7. "Trip characteristics" include the following variables: Origin-Destination route × ticket class fixed effects, length of stay dummy variables, and week fixed effects. "Employer characteristics" include the following variables: Division × firm fixed effects and country fixed effects. "Employee characteristics" include the following variables: age dummy variables, number of trips per traveler dummy variables, and employee type fixed effects. "F.E." stands for "Fixed Effects." The parenthesis in the initial column, next to the labels, summarizes the number of fixed effects included in each line. The total number of fixed effects reports the number of fixed effects included in each column/specification. See Appendix Section A.1 for the definitions of the variables and fixed effects. All regressions are OLS regressions. Standard errors are in parentheses.

* significant at $p < .05$; ** $p < .01$; *** $p < .001$.

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Table A10: Female-male probability gap for booking a direct flight: female interactions with preference data.

Linear probability model for booking a direct flight	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Female	0.006***	0.007***	1.37e-4	0.004*	0.003***	0.002	0.001*
	(0.002)	(0.001)	(0.001)	(0.002)	(6.94e-4)	(0.001)	(5.90e-4)
Female ×							
Patience		0.018*					
		(0.007)					
Risk taking			-0.018**				
			(0.005)				
Altruism				0.008			
				(0.010)			
Positive reciprocity					0.026***		
					(0.006)		
Negative reciprocity						-0.013*	
						(0.006)	
Trust							0.015***
							(0.002)
Trip characteristics (16,121)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Employer characteristics (20,825)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Employee characteristics (14)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Total number of F.E. included	36,960	36,960	36,960	36,960	36,960	36,960	36,960
Adjusted R^2	0.700	0.700	0.700	0.700	0.700	0.700	0.700
Number of Observations	7,011,259	7,011,259	7,011,259	7,011,259	7,011,259	7,011,259	7,011,259

Notes: The table displays the estimates of a linear probability model. The dependent variable is a dummy variable equals to 1 if the traveler booked a direct flight, and 0 otherwise. The table displays female interactions using specification (4) from Table A7. "Trip characteristics" include the following variables: Origin-Destination route × ticket class fixed effects, length of stay dummy variables, and week fixed effects. "Employer characteristics" include the following variables: Division × firm fixed effects and country fixed effects. "Employee characteristics" include the following variables: age dummy variables, number of trips per traveler dummy variables, and employee type fixed effects. "F.E." stands for "Fixed Effects." The parenthesis in the initial column, next to the labels, summarizes the number of fixed effects included in each line. The total number of fixed effects reports the number of fixed effects included in each column/specification. See Appendix Section A.1 for the definitions of the variables and fixed effects. See Table 3 for a summary of the survey items for each preference. All regressions are OLS regressions. Robust standard errors clustered at the country level are in parentheses.

* significant at $p < .05$; ** $p < .01$; *** $p < .001$.

C.3 Booking a Flight that Spans over a Weekend

Table A11: Female-male probability gap for booking a flight that spans over a weekend.

Linear probability model for booking a flight that spans over a weekend	(1)
Female	-0.00013***
	(0.00033)
Trip characteristics (16,405)	Yes
Employer characteristics (23,668)	Yes
Employee characteristics (14)	Yes
Number of F.E. included	40,087
Adjusted R^2	0.456
Number of observations	7,426,390

Notes: The table displays the estimates of a linear probability model. The dependent variable is a dummy variable equals to 1 if the traveler booked a flight that spans a weekend, defined as the trip extending across Friday, Saturday, or Sunday, and 0 otherwise. "Trip characteristics" include the following variables: Origin-Destination route × ticket class fixed effects, direct flight, length of stay dummy variables, and week fixed effects. "Employer characteristics" include the following variables: Division × firm fixed effects and country fixed effects. "Employee characteristics" include the following variables: age dummy variables, number of trips per traveler dummy variables, and employee type fixed effects. "F.E." stands for "Fixed Effects." The parenthesis in the initial column, next to the labels, summarizes the number of fixed effects included in each line. The total number of fixed effects reports the number of fixed effects included in each column/specification. See Appendix Section A.1 for the definitions of the variables and fixed effects. See Table 3 for a summary of the survey items for each preference. All regressions are OLS regressions. Standard errors are in parentheses.

* significant at $p < .05$; ** $p < .01$; *** $p < .001$.

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D Robustness

D.1 Alternative Specifications for the Linear Probability Model

D.1.1 One week or more in advance

Table A12: Female-male probability gap for booking one week or more in advance.

Linear probability model for booking one week or more in advance	(1)	(2)	(3)	(4)
Female	0.082***	0.070***	0.047***	0.049***
	(3.81e-4)	(3.67e-4)	(3.71e-4)	(3.75e-4)
Trip characteristics (16,405)	No	Yes	Yes	Yes
Employer characteristics (23,668)	No	No	Yes	Yes
Employee characteristics (14)	No	No	No	Yes
Total number of F.E.	0	16,405	40,073	40,087
Adjusted R^2	0.006	0.109	0.165	0.167
Number of Observations	7,426,390	7,426,390	7,426,390	7,426,390

Notes: The table displays the estimates of a linear probability model. The dependent variable is a dummy variable equals to 1 if the traveler booked the flight with one week or more in advance (*i.e.* if the trip was booked 7 days or more prior to the day of departure), and 0 otherwise. "Trip characteristics" include the following variables: Origin-Destination route × ticket class fixed effects, direct flight, length of stay dummy variables, and week fixed effects. "Employer characteristics" include the following variables: Division × firm fixed effects and country fixed effects. "Employee characteristics" include the following variables: age dummy variables, number of trips per traveler dummy variables, and employee type fixed effects. "F.E." stands for "Fixed Effects." The parenthesis in the initial column, next to the labels, summarizes the number of fixed effects included in each line. The total number of fixed effects reports the number of fixed effects included in each column/specification. See Appendix Section A.1 for the definitions of the variables and fixed effects. All regressions are OLS regressions. Standard errors are in parentheses. The probability of a man booking one week or more in advance is: 0.697.

* significant at $p < .05$; ** $p < .01$; *** $p < .001$.

Table A13: Female-male probability gap for booking one week or more in advance: female interactions (part I).

Linear probability model for booking one week or more in advance	(1)	(2)
Female ×		
(age ≤ 24)	0.033***	
	(0.004)	
(25 ≤ age ≤ 34)	0.056***	
	(8.20e-4)	
(35 ≤ age ≤ 44)	0.053***	
	(6.26e-4)	
(45 ≤ age ≤ 54)	0.045***	
	(6.47e-4)	
(55 ≤ age ≤ 64)	0.041***	
	(9.71e-4)	
(age ≥ 65)	0.028***	
	(0.003)	
(length of stay ≤ 1 day)		0.058***
		(9.77e-4)
(1 < length of stay ≤ 2 days)		0.063***
		(7.67e-4)
(2 < length of stay ≤ 3 days)		0.057***
		(7.94e-4)
(3 < length of stay ≤ 4 days)		0.041***
		(8.68e-4)
(length of stay ≥ 5 days)		0.034***
		(6.81e-4)
Trip characteristics (16,405)	Yes	Yes
Employer characteristics (23,668)	Yes	Yes
Employee characteristics (14)	Yes	Yes
Total number of F.E. included	40,087	40,087
Adjusted R^2	0.167	0.167
Number of Observations	7,426,390	7,426,390

Notes: The table displays the estimates of a linear probability model. The dependent variable is a dummy variable equals to 1 if the traveler booked the flight with one week or more in advance (*i.e.* if the trip was booked 7 days or more prior to the day of departure), and 0 otherwise. The table displays female interactions using specification (4) from Table A12. "Trip characteristics" include the following variables: Origin-Destination route × ticket class fixed effects, direct flight, length of stay dummy variables, and week fixed effects. "Employer characteristics" include the following variables: Division × firm fixed effects and country fixed effects. "Employee characteristics" include the following variables: age dummy variables, number of trips per traveler dummy variables, and employee type fixed effects. "F.E." stands for "Fixed Effects." The parenthesis in the initial column, next to the labels, summarizes the number of fixed effects included in each line. The total number of fixed effects reports the number of fixed effects included in each column/specification. See Appendix Section A.1 for the definitions of the variables and fixed effects. All regressions are OLS regressions. Standard errors are in parentheses.
* significant at $p < .05$; ** $p < .01$; *** $p < .001$.

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Table A14: Female-male probability gap for booking one week or more in advance: female interactions (part II).

Linear probability model for booking one week or more in advance	(1)	(2)
Female ×		
(trips per year ≤ 5)	0.053***	
	(5.37e-4)	
($6 \leq$ trips per year ≤ 10)	0.049***	
	(7.63e-4)	
($11 \leq$ trips per year ≤ 15)	0.047***	
	(0.001)	
(trips per year ≥ 16)	0.040***	
	(8.36e-4)	
Africa		0.038***
		(0.006)
Australia		0.031***
		(0.002)
Europe		0.049***
		(6.56e-4)
Asia		0.058***
		(0.002)
Middle East		0.018
		(0.012)
North America		0.050***
		(5.08e-4)
South America		0.050***
		(0.002)
Trip characteristics (16,405)	Yes	Yes
Employer characteristics (23,668)	Yes	Yes
Employee characteristics (14)	Yes	Yes
Total number of F.E. included	40,087	40,087
Adjusted R^2	0.167	0.167
Number of Observations	7,426,390	7,426,390

Notes: The table displays the estimates of a linear probability model. The dependent variable is a dummy variable equals to 1 if the traveler booked the flight with one week or more in advance (*i.e.* if the trip was booked 7 days or more prior to the day of departure), and 0 otherwise. The table displays female interactions using specification (4) from Table A12. "Trip characteristics" include the following variables: Origin-Destination route × ticket class fixed effects, direct flight, length of stay dummy variables, and week fixed effects. "Employer characteristics" include the following variables: Division × firm fixed effects and country fixed effects. "Employee characteristics" include the following variables: age dummy variables, number of trips per traveler dummy variables, and employee type fixed effects. "F.E." stands for "Fixed Effects." The parenthesis in the initial column, next to the labels, summarizes the number of fixed effects included in each line. The total number of fixed effects reports the number of fixed effects included in each column/specification. See Appendix Section A.1 for the definitions of the variables and fixed effects. All regressions are OLS regressions. Standard errors are in parentheses.
* significant at $p < .05$; ** $p < .01$; *** $p < .001$.

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Table A15: Female-male probability gap for booking one week or more in advance: female interactions with preference data.

Linear probability model for booking one week or more in advance	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Female	0.0486***	0.0494***	0.0471***	0.0442***	0.0462***	0.0459***	0.0455***
	(0.00114)	(0.000842)	(0.00336)	(0.00436)	(0.00197)	(0.00266)	(0.00223)
Female ×							
Patience		0.00962					
		(0.0135)					
Risk taking			-0.00473				
			(0.00881)				
Altruism				0.0222			
				(0.0259)			
Positive reciprocity					0.0215*		
					(0.00956)		
Negative reciprocity						-0.00970	
						(0.00916)	
Trust							0.0107*
							(0.00457)
Trip characteristics (16,122)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Employer characteristics (20,825)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Employee characteristics (14)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Total number of F.E. included	36,961	36,961	36,961	36,961	36,961	36,961	36,961
Adjusted R^2	0.166	0.166	0.166	0.166	0.166	0.166	0.166
Number of Observations	7,011,259	7,011,259	7,011,259	7,011,259	7,011,259	7,011,259	7,011,259

Notes: The table displays the estimates of a linear probability model. The dependent variable is a dummy variable equals to 1 if the traveler booked the flight with one week or more in advance (*i.e.* if the trip was booked 7 days or more prior to the day of departure), and 0 otherwise. The table displays female interactions using specification (4) from Table A12. "Trip characteristics" include the following variables: Origin-Destination route × ticket class fixed effects, direct flight, length of stay dummy variables, and week fixed effects. "Employer characteristics" include the following variables: Division × firm fixed effects and country fixed effects. "Employee characteristics" include the following variables: age dummy variables, number of trips per traveler dummy variables, and employee type fixed effects. "F.E." stands for "Fixed Effects." The parenthesis in the initial column, next to the labels, summarizes the number of fixed effects included in each line. The total number of fixed effects reports the number of fixed effects included in each column/specification. See Appendix Section A.1 for the definitions of the variables and fixed effects. See Table 3 for a summary of the survey items for each preference. All regressions are OLS regressions. Robust standard errors clustered at the country level are in parentheses.

* significant at $p < .05$; ** $p < .01$; *** $p < .001$.

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D.1.2 Three weeks or more in advance

Table A16: Female-male probability gap for booking three weeks or more in advance.

Linear probability model for booking three weeks or more in advance	(1)	(2)	(3)	(4)
Female	0.066***	0.063***	0.038***	0.041***
	(3.88e-4)	(3.71e-4)	(3.76e-4)	(3.80e-4)
Trip characteristics (16,405)	No	Yes	Yes	Yes
Employer characteristics (23,668)	No	No	Yes	Yes
Employee characteristics (14)	No	No	No	Yes
Total number of F.E.	0	16,405	40,073	40,087
Adjusted R^2	0.004	0.118	0.171	0.174
Number of Observations	7,426,390	7,426,390	7,426,390	7,426,390

Notes: The table displays the estimates of a linear probability model. The dependent variable is a dummy variable equals to 1 if the traveler booked the flight with three weeks or more in advance (*i.e.* if the trip was booked 21 days or more prior to the day of departure), and 0 otherwise. "Trip characteristics" include the following variables: Origin-Destination route × ticket class fixed effects, direct flight, length of stay dummy variables, and week fixed effects. "Employer characteristics" include the following variables: Division × firm fixed effects and country fixed effects. "Employee characteristics" include the following variables: age dummy variables, number of trips per traveler dummy variables, and employee type fixed effects. "F.E." stands for "Fixed Effects." The parenthesis in the initial column, next to the labels, summarizes the number of fixed effects included in each line. The total number of fixed effects reports the number of fixed effects included in each column/specification. See Appendix Section A.1 for the definitions of the variables and fixed effects. All regressions are OLS regressions. Standard errors are in parentheses. The probability of a man booking three weeks or more in advance is: 0.282.

* significant at $p < .05$; ** $p < .01$; *** $p < .001$.

Table A17: Female-male probability gap for booking three weeks or more in advance: female interactions (part I).

Linear probability model for booking three weeks or more in advance	(1)	(2)
Female ×		
(age ≤ 24)	0.029***	
	(0.004)	
(25 ≤ age ≤ 34)	0.040***	
	(8.31e-4)	
(35 ≤ age ≤ 44)	0.042***	
	(6.34e-4)	
(45 ≤ age ≤ 54)	0.040***	
	(6.55e-4)	
(55 ≤ age ≤ 64)	0.045***	
	(9.83e-4)	
(age ≥ 65)	0.025***	
	(0.003)	
(length of stay ≤ 1 day)		0.015***
		(9.90e-4)
(1 < length of stay ≤ 2 days)		0.033***
		(7.77e-4)
(2 < length of stay ≤ 3 days)		0.051***
		(8.04e-4)
(3 < length of stay ≤ 4 days)		0.051***
		(8.78e-4)
(length of stay ≥ 5 days)		0.048***
		(6.90e-4)
Trip characteristics (16,405)	Yes	Yes
Employer characteristics (23,668)	Yes	Yes
Employee characteristics (14)	Yes	Yes
Total number of F.E. included	40,087	40,087
Adjusted R^2	0.174	0.174
Number of Observations	7,426,390	7,426,390

Notes: The table displays the estimates of a linear probability model. The dependent variable is a dummy variable equals to 1 if the traveler booked the flight with three weeks or more in advance (*i.e.* if the trip was booked 21 days or more prior to the day of departure), and 0 otherwise. The table displays female interactions using specification (4) from Table A16. "Trip characteristics" include the following variables: Origin-Destination route × ticket class fixed effects, direct flight, length of stay dummy variables, and week fixed effects. "Employer characteristics" include the following variables: Division × firm fixed effects and country fixed effects. "Employee characteristics" include the following variables: age dummy variables, number of trips per traveler dummy variables, and employee type fixed effects. "F.E." stands for "Fixed Effects." The parenthesis in the initial column, next to the labels, summarizes the number of fixed effects included in each line. The total number of fixed effects reports the number of fixed effects included in each column/specification. See Appendix Section A.1 for the definitions of the variables and fixed effects. All regressions are OLS regressions. Standard errors are in parentheses.
* significant at $p < .05$; ** $p < .01$; *** $p < .001$.

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Table A18: Female-male probability gap for booking three weeks or more in advance: female interactions (part II).

Linear probability model for booking three weeks or more in advance	(1)	(2)
Female ×		
(trips per year ≤ 5)	0.056***	
	(5.44e-4)	
($6 \leq$ trips per year ≤ 10)	0.037***	
	(7.73e-4)	
($11 \leq$ trips per year ≤ 15)	0.028***	
	(0.001)	
(trips per year ≥ 16)	0.019***	
	(8.47e-4)	
Africa		0.029***
		(0.006)
Australia		-0.001
		(0.002)
Europe		0.042***
		(6.64e-4)
Asia		0.038***
		(0.002)
Middle East		0.002
		(0.012)
North America		0.046***
		(5.15e-4)
South America		0.029***
		(0.002)
Trip characteristics (16,405)	Yes	Yes
Employer characteristics (23,668)	Yes	Yes
Employee characteristics (14)	Yes	Yes
Total number of F.E. included	40,087	40,087
Adjusted R^2	0.174	0.174
Number of Observations	7,426,390	7,426,390

Notes: The table displays the estimates of a linear probability model. The dependent variable is a dummy variable equals to 1 if the traveler booked the flight with three weeks or more in advance (*i.e.* if the trip was booked 21 days or more prior to the day of departure), and 0 otherwise. The table displays female interactions using specification (4) from Table A16. "Trip characteristics" include the following variables: Origin-Destination route × ticket class fixed effects, direct flight, length of stay dummy variables, and week fixed effects. "Employer characteristics" include the following variables: Division × firm fixed effects and country fixed effects. "Employee characteristics" include the following variables: age dummy variables, number of trips per traveler dummy variables, and employee type fixed effects. "F.E." stands for "Fixed Effects." The parenthesis in the initial column, next to the labels, summarizes the number of fixed effects included in each line. The total number of fixed effects reports the number of fixed effects included in each column/specification. See Appendix Section A.1 for the definitions of the variables and fixed effects. All regressions are OLS regressions. Standard errors are in parentheses.
* significant at $p < .05$; ** $p < .01$; *** $p < .001$.

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Table A19: Female-male probability gap for booking three weeks or more in advance: female interactions with preference data.

Linear probability model for booking three weeks or more in advance	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Female	0.041***	0.042***	0.030**	0.037***	0.035***	0.033***	0.029***
	(0.003)	(0.004)	(0.010)	(0.007)	(0.004)	(0.004)	(0.004)
Female ×							
Patience		0.014					
		(0.027)					
Risk taking			-0.034				
			(0.028)				
Altruism				0.021			
				(0.046)			
Positive reciprocity					0.055*		
					(0.025)		
Negative reciprocity						-0.029	
						(0.017)	
Trust							0.039***
							(0.008)
Trip characteristics (16,122)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Employer characteristics (20,825)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Employee characteristics (14)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Total number of F.E. included	36,961	36,961	36,961	36,961	36,961	36,961	36,961
Adjusted R^2	0.171	0.171	0.171	0.171	0.171	0.171	0.172
Number of Observations	7,011,259	7,011,259	7,011,259	7,011,259	7,011,259	7,011,259	7,011,259

Notes: The table displays the estimates of a linear probability model. The dependent variable is a dummy variable equals to 1 if the traveler booked the flight with three weeks or more in advance (*i.e.* if the trip was booked 21 days or more prior to the day of departure), and 0 otherwise. The table displays female interactions using specification (4) from Table A16. "Trip characteristics" include the following variables: Origin-Destination route × ticket class fixed effects, direct flight, length of stay dummy variables, and week fixed effects. "Employer characteristics" include the following variables: Division × firm fixed effects and country fixed effects. "Employee characteristics" include the following variables: age dummy variables, number of trips per traveler dummy variables, and employee type fixed effects. "F.E." stands for "Fixed Effects." The parenthesis in the initial column, next to the labels, summarizes the number of fixed effects included in each line. The total number of fixed effects reports the number of fixed effects included in each column/specification. See Appendix Section A.1 for the definitions of the variables and fixed effects. See Table 3 for a summary of the survey items for each preference. All regressions are OLS regressions. Robust standard errors clustered at the country level are in parentheses.

* significant at $p < .05$; ** $p < .01$; *** $p < .001$.

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D.1.3 Four weeks or more in advance

Table A20: Female-male probability gap for booking four weeks or more in advance.

Linear probability model for booking four weeks or more in advance	(1)	(2)	(3)	(4)
Female	0.047***	0.047***	0.028***	0.030***
	(3.38e-4)	(3.26e-4)	(3.31e-4)	(3.35e-4)
Trip characteristics (16,405)	No	Yes	Yes	Yes
Employer characteristics (23,668)	No	No	Yes	Yes
Employee characteristics (14)	No	No	No	Yes
Total number of F.E.	0	16,405	40,073	40,087
Adjusted R^2	0.003	0.108	0.157	0.159
Number of Observations	7,426,390	7,426,390	7,426,390	7,426,390

Notes: The table displays the estimates of a linear probability model. The dependent variable is a dummy variable equals to 1 if the traveler booked the flight with four weeks or more in advance (*i.e.* if the trip was booked 28 days or more prior to the day of departure), and 0 otherwise. "Trip characteristics" include the following variables: Origin-Destination route × ticket class fixed effects, direct flight, length of stay dummy variables, and week fixed effects. "Employer characteristics" include the following variables: Division × firm fixed effects and country fixed effects. "Employee characteristics" include the following variables: age dummy variables, number of trips per traveler dummy variables, and employee type fixed effects. "F.E." stands for "Fixed Effects." The parenthesis in the initial column, next to the labels, summarizes the number of fixed effects included in each line. The total number of fixed effects reports the number of fixed effects included in each column/specification. See Appendix Section A.1 for the definitions of the variables and fixed effects. All regressions are OLS regressions. Standard errors are in parentheses. The probability of a man booking four weeks or more in advance is: 0.187.

* significant at $p < .05$; ** $p < .01$; *** $p < .001$.

Table A21: Female-male probability gap for booking four weeks or more in advance: female interactions (part I).

Linear probability model for booking four weeks or more in advance	(1)	(2)
Female ×		
(age ≤ 24)	0.021***	
	(0.002)	
(25 ≤ age ≤ 34)	0.028***	
	(7.31e-4)	
(35 ≤ age ≤ 44)	0.031***	
	(5.58e-4)	
(45 ≤ age ≤ 54)	0.030***	
	(5.76e-4)	
(55 ≤ age ≤ 64)	0.035***	
	(8.65e-4)	
(age ≥ 65)	0.017***	
	(0.003)	
(length of stay ≤ 1 day)		0.004***
		(8.71e-4)
(1 < length of stay ≤ 2 days)		0.019***
		(6.83e-4)
(2 < length of stay ≤ 3 days)		0.036***
		(7.07e-4)
(3 < length of stay ≤ 4 days)		0.042***
		(7.73e-4)
(length of stay ≥ 5 days)		0.040***
		(6.07e-4)
Trip characteristics (16,405)	Yes	Yes
Employer characteristics (23,668)	Yes	Yes
Employee characteristics (14)	Yes	Yes
Total number of F.E. included	40,087	40,087
Adjusted R^2	0.159	0.159
Number of Observations	7,426,390	7,426,390

Notes: The table displays the estimates of a linear probability model. The dependent variable is a dummy variable equals to 1 if the traveler booked the flight with four weeks or more in advance (*i.e.* if the trip was booked 28 days or more prior to the day of departure), and 0 otherwise. The table displays female interactions using specification (4) from Table A20. "Trip characteristics" include the following variables: Origin-Destination route × ticket class fixed effects, direct flight, length of stay dummy variables, and week fixed effects. "Employer characteristics" include the following variables: Division × firm fixed effects and country fixed effects. "Employee characteristics" include the following variables: age dummy variables, number of trips per traveler dummy variables, and employee type fixed effects. "F.E." stands for "Fixed Effects." The parenthesis in the initial column, next to the labels, summarizes the number of fixed effects included in each line. The total number of fixed effects reports the number of fixed effects included in each column/specification. See Appendix Section A.1 for the definitions of the variables and fixed effects. All regressions are OLS regressions. Standard errors are in parentheses.

* significant at $p < .05$; ** $p < .01$; *** $p < .001$.

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Table A22: Female-male probability gap for booking four weeks or more in advance: female interactions (part II).

Linear probability model for booking four weeks or more in advance	(1)	(2)
Female ×		
(trips per year ≤ 5)	0.045***	
	(4.79e-4)	
($6 \leq$ trips per year ≤ 10)	0.025***	
	(6.80e-4)	
($11 \leq$ trips per year ≤ 15)	0.018***	
	(9.05e-4)	
(trips per year ≥ 16)	0.010***	
	(7.45e-4)	
Africa		0.021***
		(0.005)
Australia		-0.009***
		(0.002)
Europe		0.032***
		(5.84e-4)
Asia		0.029***
		(0.002)
Middle East		-0.002
		(0.011)
North America		0.034***
		(4.53e-4)
South America		0.020***
		(0.001)
Trip characteristics (16,405)	Yes	Yes
Employer characteristics (23,668)	Yes	Yes
Employee characteristics (14)	Yes	Yes
Total number of F.E. included	40,087	40,087
Adjusted R^2	0.159	0.159
Number of Observations	7,426,390	7,426,390

Notes: The table displays the estimates of a linear probability model. The dependent variable is a dummy variable equals to 1 if the traveler booked the flight with four weeks or more in advance (*i.e.* if the trip was booked 28 days or more prior to the day of departure), and 0 otherwise. The table displays female interactions using specification (4) from Table A20. "Trip characteristics" include the following variables: Origin-Destination route × ticket class fixed effects, direct flight, length of stay dummy variables, and week fixed effects. "Employer characteristics" include the following variables: Division × firm fixed effects and country fixed effects. "Employee characteristics" include the following variables: age dummy variables, number of trips per traveler dummy variables, and employee type fixed effects. "F.E." stands for "Fixed Effects." The parenthesis in the initial column, next to the labels, summarizes the number of fixed effects included in each line. The total number of fixed effects reports the number of fixed effects included in each column/specification. See Appendix Section A.1 for the definitions of the variables and fixed effects. All regressions are OLS regressions. Standard errors are in parentheses.
* significant at $p < .05$; ** $p < .01$; *** $p < .001$.

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Table A23: Female-male probability gap for booking four weeks or more in advance: female interactions with preference data.

Linear probability model for booking four weeks or more in advance	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Female	0.030***	0.030***	0.021*	0.030***	0.026***	0.024***	0.022***
	(0.002)	(0.003)	(0.008)	(0.007)	(0.004)	(0.004)	(0.004)
Female ×							
Patience		0.005					
		(0.023)					
Risk taking			-0.028				
			(0.023)				
Altruism				0.001			
				(0.041)			
Positive reciprocity					0.038		
					(0.023)		
Negative reciprocity						-0.021	
						(0.015)	
Trust							0.028**
							(0.009)
Trip characteristics (16,122)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Employer characteristics (20,825)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Employee characteristics (14)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Total number of F.E. included	36,961	36,961	36,961	36,961	36,961	36,961	36,961
Adjusted R^2	0.156	0.156	0.156	0.156	0.156	0.156	0.156
Number of Observations	7,011,259	7,011,259	7,011,259	7,011,259	7,011,259	7,011,259	7,011,259

Notes: The table displays the estimates of a linear probability model. The dependent variable is a dummy variable equals to 1 if the traveler booked the flight with four weeks or more in advance (*i.e.* if the trip was booked 28 days or more prior to the day of departure), and 0 otherwise. The table displays female interactions using specification (4) from Table A20. "Trip characteristics" include the following variables: Origin-Destination route × ticket class fixed effects, direct flight, length of stay dummy variables, and week fixed effects. "Employer characteristics" include the following variables: Division × firm fixed effects and country fixed effects. "Employee characteristics" include the following variables: age dummy variables, number of trips per traveler dummy variables, and employee type fixed effects. "F.E." stands for "Fixed Effects." The parenthesis in the initial column, next to the labels, summarizes the number of fixed effects included in each line. The total number of fixed effects reports the number of fixed effects included in each column/specification. See Appendix Section A.1 for the definitions of the variables and fixed effects. See Table 3 for a summary of the survey items for each preference. All regressions are OLS regressions. Robust standard errors clustered at the country level are in parentheses.

* significant at $p < .05$; ** $p < .01$; *** $p < .001$.

D.2 Alternative Subsamples

D.2.1 Subsample with Most Popular Routes

Table A24: Female-male paid fare gap: most popular routes.

Dependent variable: paid fare	(1)	(2)
Female	-17.970***	-8.817***
	(0.385)	(0.380)
Trip characteristics (16,405)	Yes	Yes
Employer characteristics (23,668)	Yes	Yes
Employee characteristics (14)	Yes	Yes
Days booked in advance F.E. (26)	No	Yes
Number of F.E. included	25,267	25,293
Adjusted R^2	0.823	0.829
Number of observations	5,893,358	5,893,358

Notes: Dependent variable is the paid fare, which is measured in U.S. dollars. Sample restricted to the 25 percent most popular routes in the original sample. The table displays similar coefficients as the ones in specifications (4) and (5) in Table 4A using the sample of 25 percent most popular routes in the original sample. "Trip characteristics" include the following variables: Origin-Destination route × ticket class fixed effects, direct flight, length of stay dummy variables, and week fixed effects. "Employer characteristics" include the following variables: Division × firm fixed effects and country fixed effects. "Employee characteristics" include the following variables: age dummy variables, number of trips per traveler dummy variables, and employee type fixed effects. "F.E." stands for "Fixed Effects." The parenthesis in the initial column, next to the labels, summarizes the number of fixed effects included in each line. The total number of fixed effects reports the number of fixed effects included in each column/specification. See Appendix Section A.1 for the definitions of the variables and fixed effects. All regressions are OLS regressions. Standard errors are in parentheses.

* significant at $p < .05$; ** $p < .01$; *** $p < .001$.

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D.2.2 Subsample with United States Trips Only.

Table A25: Female-male paid fare gap: Sample restricted to trips in the United States (with Thanksgiving Week).

Dependent variable: paid fare	(1)	(2)
Female	-18.05***	-3.564***
	(0.365)	(0.345)
Trip characteristics (10,223)	Yes	Yes
Employer characteristics (3,368)	Yes	Yes
Employee characteristics (14)	Yes	Yes
Days booked in advance F.E. (26)	No	Yes
Total number of F.E.	13,631	13,631
Adjusted R^2	0.890	0.902
Number of Observations	3,263,836	3,263,836

Notes: Dependent variable is the paid fare, which is measured in U.S. dollars. Sample restricted to trips in the United States only. The table displays similar coefficients as the ones in specifications (4) and (5) in Table 4A using the sample of trips that took place in the United States only. "Trip characteristics" include the following variables: Origin-Destination route × ticket class fixed effects, direct flight, length of stay dummy variables, and week fixed effects. "Employer characteristics" include the following variables: Division × firm fixed effects. "Employee characteristics" include the following variables: age dummy variables, number of trips per traveler dummy variables, and employee type fixed effects. "F.E." stands for "Fixed Effects." The parenthesis in the initial column, next to the labels, summarizes the number of fixed effects included in each line. The total number of fixed effects reports the number of fixed effects included in each column/specification. See Appendix Section A.1 for the definitions of the variables and fixed effects. All regressions are OLS regressions. Standard errors are in parentheses.
* significant at $p < .05$; ** $p < .01$; *** $p < .001$.

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D.2.3 Subsample with United States Trips Only, without Thanksgiving Week.

Table A26: Female-male paid fare gap: Sample restricted to trips in the United States without Thanksgiving Week.

Dependent variable: paid fare	(1)	(2)
Female	-18.15***	-3.660***
	(0.365)	(0.345)
Trip characteristics (10,200)	Yes	Yes
Employer characteristics (3,356)	Yes	Yes
Employee characteristics (14)	Yes	Yes
Days booked in advance F.E. (26)	No	Yes
Total number of F.E.	13,596	13,596
Adjusted R^2	0.889	0.902
Number of Observations	3,241,740	3,241,740

Notes: Dependent variable is the paid fare, which is measured in U.S. dollars. Sample restricted to trips in the United States only, without Thanksgiving week. The table displays similar coefficients as the ones in specifications (4) and (5) in Table 4A using the sample of trips that took place in the United States only, without Thanksgiving week (*i.e.*, same subsample as Table A25 without including the trips during Thanksgiving week from November 23 to November 30 2014). "Trip characteristics" include the following variables: Origin-Destination route × ticket class fixed effects, direct flight, length of stay dummy variables, and week fixed effects. "Employer characteristics" include the following variables: Division × firm fixed effects. "Employee characteristics" include the following variables: age dummy variables, number of trips per traveler dummy variables, and employee type fixed effects. "F.E." stands for "Fixed Effects." The parenthesis in the initial column, next to the labels, summarizes the number of fixed effects included in each line. The total number of fixed effects reports the number of fixed effects included in each column/specification. See Appendix Section A.1 for the definitions of the variables and fixed effects. All regressions are OLS regressions. Standard errors are in parentheses.
* significant at $p < .05$; ** $p < .01$; *** $p < .001$.

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D.2.4 Subsample without End of the Year Holiday Weeks

Table A27: Female-male paid fare gap: Subsample without end of the year trips.

Dependent variable: paid fare	(1)	(2)
Female	-15.542***	-4.551***
	(0.315)	(0.307)
Trip characteristics (15,990)	Yes	Yes
Employer characteristics (22,728)	Yes	Yes
Employee characteristics (14)	Yes	Yes
Days booked in advance F.E. (26)	No	Yes
Total number of F.E.	38,732	38,758
Adjusted R^2	0.902	0.908
Number of Observations	7,426,390	7,426,390

Notes: Dependent variable is the paid fare, which is measured in U.S. dollars. Sample restricted to trips that do not take place in November or December. The table displays similar coefficients as the ones in specifications (4) and (5) in Table 4A using the sample of trips that do not take place in November or December. "Trip characteristics" include the following variables: Origin-Destination route × ticket class fixed effects, direct flight, length of stay dummy variables, and week fixed effects. "Employer characteristics" include the following variables: Division × firm fixed effects and country fixed effects. "Employee characteristics" include the following variables: age dummy variables, number of trips per traveler dummy variables, and employee type fixed effects. "F.E." stands for "Fixed Effects." The parenthesis in the initial column, next to the labels, summarizes the number of fixed effects included in each line. The total number of fixed effects reports the number of fixed effects included in each column/specification. See Appendix Section A.1 for the definitions of the variables and fixed effects. All regressions are OLS regressions. Standard errors are in parentheses.
* significant at $p < .05$; ** $p < .01$; *** $p < .001$.

D.3 Alternative Specifications for "days booked in advance Fixed Effects"

Table A28: Female-male paid fare gap: Alternative specifications for advance booking fixed effects.

Dependent variable: paid fare	(1)	(2)
Female	4.460***	-4.414***
	(0.285)	(0.285)
Trip characteristics (16,405)	Yes	Yes
Employer characteristics (23,668)	Yes	Yes
Employee characteristics (14)	Yes	Yes
Days booked in advance F.E. specification 1 (26)	Yes	No
Days booked in advance F.E. specification 2 (91)	No	Yes
Number of F.E. included	40,113	40,178
Adjusted R^2	0.907	0.907
Number of observations	7,426,390	7,426,390

Notes: Dependent variable is the paid fare, which is measured in U.S. dollars. The specification in column (1) in this table is the same specification as the specification in column (5) in Table 4A. "Trip characteristics" include the following variables: Origin-Destination route × ticket class fixed effects, direct flight, length of stay dummy variables, and week fixed effects. "Employer characteristics" include the following variables: Division × firm fixed effects and country fixed effects. "Employee characteristics" include the following variables: age dummy variables, number of trips per traveler dummy variables, and employee type fixed effects. "F.E." stands for "Fixed Effects." "Days booked in advance F.E. specification 1:" A set of 26 dummy variables, where each of the them equals 1 depending on how many days or weeks in advance the booking was made, defined as follows; a set of 15 dummy variables, one for each of the first 15 days prior to a flight; a set of 10 dummy variables, one for each of the 10 weeks following the first 15 days prior to a flight; an additional dummy variable for a booking that took place 85 days ($85 = 15 + 10 \times 7$) before the flight. "Days booked in advance F.E. specification 2:" A set of 91 dummy variables, one for each day booked in advance before the departure for the first 90 days and 1 additional dummy variable for more than 90 days. The parenthesis in the initial column, next to the labels, summarizes the number of fixed effects included in each line. The total number of fixed effects reports the number of fixed effects included in each column/specification. See Appendix Section A.1 for the definitions of the variables and fixed effects. All regressions are OLS regressions. Standard errors are in parentheses.
* significant at $p < .05$; **$p < .01$; ***$p < .001$.

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D.4 Alternative Clustering of Standard Errors

D.4.1 Firm Level: 7,783 clusters.

Table A29: Female-male paid fare gap: Standard errors clustered at the firm level.

Dependent variable: paid fare	(1)	(2)	(3)	(4)	(5)
Female	-103.966***	-27.656***	-20.791***	-15.482***	-4.460***
	(7.870)	(1.051)	(0.749)	(0.666)	(0.508)
Trip characteristics (16,405)	No	Yes	Yes	Yes	Yes
Employer characteristics (23,668)	No	No	Yes	Yes	Yes
Employee characteristics (14)	No	No	No	Yes	Yes
Days booked in advance F.E. (26)	No	No	No	No	Yes
Total number of F.E.	0	16,405	40,073	40,087	40,113
Adjusted R^2	0.002	0.896	0.901	0.901	0.907
Number of Observations	7,426,390	7,426,390	7,426,390	7,426,390	7,426,390

Notes: Dependent variable is the paid fare, which is measured in U.S. dollars. "Trip characteristics" include the following variables: Origin-Destination route × ticket class fixed effects, direct flight, length of stay dummy variables, and week fixed effects. "Employer characteristics" include the following variables: Division × firm fixed effects and country fixed effects. "Employee characteristics" include the following variables: age dummy variables, number of trips per traveler dummy variables, and employee type fixed effects. "F.E." stands for "Fixed Effects." The parenthesis in the initial column, next to the labels, summarizes the number of fixed effects included in each line. The total number of fixed effects reports the number of fixed effects included in each column/specification. See Appendix Section A.1 for the definitions of the variables and fixed effects. All regressions are OLS regressions. Standard errors, adjusted for 7,783 firm clusters, are in parentheses.

* significant at $p < .05$; ** $p < .01$; *** $p < .001$.

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Table A30: Female-male days booked in advance gap:: Standard errors clustered at the firm level.

Dependent variable: days booked in advance	(1)	(2)	(3)	(4)
Female	2.728***	2.693***	1.606***	1.809***
	(0.257)	(0.144)	(0.100)	(0.0820)
Trip characteristics (16,405)	No	Yes	Yes	Yes
Employer characteristics (23,668)	No	No	Yes	Yes
Employee characteristics (14)	No	No	No	Yes
Total number of F.E.	0	16,405	40,073	40,087
Adjusted R^2	0.003	0.158	0.225	0.228
Number of Observations	7,426,390	7,426,390	7,426,390	7,426,390

Notes: Dependent variable is the days booked in advance. "Trip characteristics" include the following variables: Origin-Destination route × ticket class fixed effects, direct flight, length of stay dummy variables, and week fixed effects. "Employer characteristics" include the following variables: Division × firm fixed effects and country fixed effects. "Employee characteristics" include the following variables: age dummy variables, number of trips per traveler dummy variables, and employee type fixed effects. "F.E." stands for "Fixed Effects." The parenthesis in the initial column, next to the labels, summarizes the number of fixed effects included in each line. The total number of fixed effects reports the number of fixed effects included in each column/specification. See Appendix Section A.1 for the definitions of the variables and fixed effects. All regressions are OLS regressions. Standard errors, adjusted for 7,783 firm clusters, are in parentheses.

* significant at $p < .05$; ** $p < .01$; *** $p < .001$.

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D.4.2 Firm-division Level: 23,609 clusters.

Table A31: Female-male paid fare gap: Standard errors clustered at the firm-division level.

Dependent variable: paid fare	(1)	(2)	(3)	(4)	(5)
Female	-103.966***	-27.656***	-20.791***	-15.482***	-4.460***
	(7.870)	(0.961)	(0.733)	(0.643)	(0.481)
Trip characteristics (16,405)	No	Yes	Yes	Yes	Yes
Employer characteristics (23,668)	No	No	Yes	Yes	Yes
Employee characteristics (14)	No	No	No	Yes	Yes
Days booked in advance F.E. (26)	No	No	No	No	Yes
Total number of F.E.	0	16,405	40,073	40,087	40,113
Adjusted R^2	0.002	0.896	0.901	0.901	0.907
Number of Observations	7,426,390	7,426,390	7,426,390	7,426,390	7,426,390

Notes: Dependent variable is the paid fare, which is measured in U.S. dollars. "Trip characteristics" include the following variables: Origin-Destination route × ticket class fixed effects, direct flight, length of stay dummy variables, and week fixed effects. "Employer characteristics" include the following variables: Division × firm fixed effects and country fixed effects. "Employee characteristics" include the following variables: age dummy variables, number of trips per traveler dummy variables, and employee type fixed effects. "F.E." stands for "Fixed Effects." The parenthesis in the initial column, next to the labels, summarizes the number of fixed effects included in each line. The total number of fixed effects reports the number of fixed effects included in each column/specification. See Appendix Section A.1 for the definitions of the variables and fixed effects. All regressions are OLS regressions. Standard errors, adjusted for 23,609 firm-division clusters, are in parentheses.

* significant at $p < .05$; ** $p < .01$; *** $p < .001$.

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Table A32: Female-male days booked in advance gap: Standard errors clustered at the firm-division level.

Dependent variable: days booked in advance	(1)	(2)	(3)	(4)
Female	2.728***	2.693***	1.606***	1.809***
	(0.257)	(0.113)	(0.0891)	(0.0716)
Trip characteristics (16,405)	No	Yes	Yes	Yes
Employer characteristics (23,668)	No	No	Yes	Yes
Employee characteristics (14)	No	No	No	Yes
Total number of F.E.	0	16,405	40,073	40,087
Adjusted R^2	0.003	0.158	0.225	0.228
Number of Observations	7,426,390	7,426,390	7,426,390	7,426,390

Notes: Dependent variable is the days booked in advance. "Trip characteristics" include the following variables: Origin-Destination route × ticket class fixed effects, direct flight, length of stay dummy variables, and week fixed effects. "Employer characteristics" include the following variables: Division × firm fixed effects and country fixed effects. "Employee characteristics" include the following variables: age dummy variables, number of trips per traveler dummy variables, and employee type fixed effects. "F.E." stands for "Fixed Effects." The parenthesis in the initial column, next to the labels, summarizes the number of fixed effects included in each line. The total number of fixed effects reports the number of fixed effects included in each column/specification. See Appendix Section A.1 for the definitions of the variables and fixed effects. All regressions are OLS regressions. Standard errors, adjusted for 23,609 firm-division clusters, are in parentheses.

* significant at $p < .05$; ** $p < .01$; *** $p < .001$.