How Well Do Women Sell?
New Evidence for Non-Professionals

Carina Fleischer   Holger Kraft   Farina Weiss

Goethe University Frankfurt

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Agenda

Introduction

- Most **economic transactions** involve **negotiations**.
- The performance in **selling processes** depends on negotiation skills.
- Previous studies in this context focus on
  - situations from the **business world where the subjects are professionals** or
  - the **buyer side** in a selling process.
- However, sales transactions are often carried out by non-professionals.
- There is no reason to believe that results for professionals carry over.
- Our paper is the first comprehensive study of the **selling performance** of **non-professionals**.

Research Question

- **Rich data set** with a lot of **heterogeneity**:
    - Age of participants between 18 and 93
    - Various jobs and educational levels
    - Various items: paintings, jewelry, furniture, toys,...

Research Questions

1. What drives the selling performance of non-professional females and males?

2. Do the variables explaining negotiation outcomes of professionals carry over to non-professionals?

Some of Our Main Findings – Part I

- Women **lose on average about 7.3%** compared to men.
- We document **heterogeneity across items**.
    - Gender-congruent vs. gender-incongruent
    - Disperse vs. non-disperse valuation
- We further show that the relative performance of women depends on the **characteristics of the buyers**.

Some of Our Main Findings – Part II

- We document a **novel relationship** between **age, education and negotiation** outcomes of females.
  - U-shaped pattern for age.
  - Level of vocational training alone cannot explain the performance of women.
  - Women with a university degree perform worse.
  - Negotiation experience matters.
- We find strong effects of **attractiveness** for women but not for men.
- We provide evidence that **female teams** perform significantly better than single females.

Our paper has two important **policy implications**:

1. Make women better acquainted with negotiation situations.
2. Women should consider teaming up in negotiations.

Bares für Rares – The Show

- Novel, hand-collected data from TV show **Bares für Rares**.
- Popular show with more than 2 million viewers every weekday.
- We watched **video footage of 265 hours** (1,693 selling processes).
- Plot of the show:
  - In every episode, there are five to six **single participants or teams of two** individuals.
  - Selling process consists of two stages:
    1. **First stage**: Neutral expert appraises item.
    2. **Second stage**: Participant can sell the item.
  - **English auction** during which the participant is present.
  - **Professional dealers** buying items for their own accounts.
  - Post-auction **renegotiation** with the highest bidder is possible.

Summary Statistics

	Wom	Man	Overall
Age	57.13	56.72	56.91
Desired	683.01	734.16	710.13
Appraisal	956.80	983.06	970.74
Final	881.82	914.98	899.41
Obs.	529	598	1127

Regression Framework

- We use a **relative performance** measure:

$$\text{Perform} = \frac{\text{Final}}{\text{Appraisal}}$$

- We estimate the **OLS regression (hc3 standard errors)**:

Benchmark Regression

$$\text{Ln\_perform} = \beta_0 + \beta_1 \text{Single\_woman} + \beta_2 \text{Ln\_appraisal} + \sum_{n=1}^{22} \beta_{3n} \text{Item}_n + \sum_{i=1}^{62} \beta_{4i} \text{DealerTeam}_i + \sum_{t=2016}^{2021} \beta_{5t} \text{Year}_t + \epsilon$$

- All further regressions are extensions of this benchmark regression.

Benchmark Results

- **Hypothesis**: Women reach a lower final price relative to the appraised value than men.

	(1)	(2)
Single_woman	-0.064**	-0.073***
	(-2.58)	(-2.88)
Ln_appraisal	-0.184***	-0.186***
	(-14.00)	(-13.61)
R^2	0.246	0.317
Dealer-team dum.	no	yes

$\Longrightarrow$ Women lose relative to men.

Attractiveness

- **Hypothesis**: Attractive participants perform better.
- Sort participants into **beauty terciles** (Low, Mid, High).

Attractive	Wom	Man	W-M
Low	-0.083*	0.076**	-0.158***
Mid	0.000	0.045	-0.045
High	0.000	0.027	-0.027
H-L	0.083*	-0.048	0.131**

$\implies$ **Attractive women** perform better.
$\implies$ No significant effect for men.

- **Hypothesis**: The performance gap between men and women is **age-dependent**, but **not necessarily monotonic**.
- Sort participants in **three age groups**.

Age	Same Age	All Men
18-39	-0.054	-0.082*
40-59	0.022	-0.038
60-99	-0.145***	-0.087***

$\implies$ **Midlife** women perform the best.

- **Hypothesis**: The performance gap between men and women is smaller for women **being used to negotiation** due to their profession.

- Sort participants according to their education in **four educational groups** (1=lowest education, 4=highest education).

Educ	All	18-30	40-59	60-99
1	-0.081	-0.219	-0.094	0.013
2	-0.067*	-0.079	0.004	-0.094**
3	-0.146**	-0.142	-0.075	-0.227***
4	-0.149**	-0.248***	-0.222**	-0.104

$\Longrightarrow$ **Midlife women in group 2** perform the best.
$\Longrightarrow$ Female **university graduates (e.g., doctors, teachers)** lose.

Female Teams

- **Hypothesis**: The performance gap between men and women is smaller for **female teams** (advocacy).

Single_man	-0.047
Single_woman	-0.117***
Team_woman	0.000
Couple_wom_sell	-0.078

$\implies$ Female teams perform the best!

Disperse Valuation and Gender-Congruent Item

- **Hypothesis 1**: The performance gap between men and women is smaller if the item at sale is **congruent with the female gender role**.
- **Hypothesis 2**: The performance gap between men and women is larger for item categories for which the **assessment** of the dealers is **more disperse**.

	Wom	Man	W-M
	Item_fem		
0	-0.156***	-0.064**	-0.092***
1	0.000	0.018	-0.018
	Item_dis		
0	0.000	-0.015	0.015
1	-0.096**	-0.000	-0.096**

$\implies$ Women lose if the item at sale is incongruent with the female gender role or has a disperse valuation.

- Analyze **joint effect** of disperse valuation and gender congruence of the item.

Case	Item_dis	Item_fem	Wom	Man	W–M
a	0	0	-0.134***	-0.102**	-0.032
b	0	1	-0.182***	-0.047	-0.135***
c	1	0	0.000	0.008	-0.008
d	1	1	-0.023	0.030	-0.052

$\implies$ Both moderators matter!

Conclusion

- We analyze novel data for selling processes of non-professionals.
- We document a **significant gender revenue gap** that is as high as 7.3% for non-professionals.
- Some explanations for professionals carry over, whereas other don't.
- We document a **novel relationship** between **age, education and negotiation** outcomes of females.
- We find strong effects of **attractiveness** for women but not for men.
- **Female teams** perform the best.
- The performance **across items** is **heterogeneous**.

Dealer-Team Characteristics

- **Hypothesis 1**: Women perform relatively worse when assigned to generous groups of dealers.
- **Hypothesis 2**: Women perform relatively worse in tough selling environments.

	Wom	Man	W-M	Wom	Man	W-M
	Generous			**Active**		
Low	-0.066	-0.016	-0.050	-0.100**	0.025	-0.125***
Mid	-0.008	0.050	-0.058	-0.085*	-0.031	-0.054
High	0.000	0.133***	-0.133***	0.000	0.062	-0.062
H-L	0.066	0.149***	-0.083	0.100**	0.037	0.063
	Pushy			**Age Male Dealer**		
Low	0.000	0.051	-0.051	0.000	0.054	-0.054
Mid	-0.008	0.070	-0.078*	0.017	0.117***	-0.100**
High	-0.122***	-0.002	-0.120***	-0.015	0.073	-0.087**
H-L	-0.122***	-0.053	-0.069	-0.015	0.019	-0.034

$\implies$ Women lose if dealer teams are **generous**, **inactive**, or **pushy**.