

# VISITINPS

## un anno dopo formazione, ricerca e innovazione

**Female Leadership and Gender Gap within Firms:  
evidence from Italian board reform**

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# MOTIVATION

- Despite the significant increase in female educational attainment and labour market participation, women remain heavily underrepresented in leadership positions.
- In 2011 Italy introduced the “**Golfo-Mosca reform**” requiring gender quotas for boards of directors of listed companies
- Several other European countries, such as Belgium, France, Germany, the Netherlands, Spain introduced similar measures. Norway was the first nation to introduce a law in December 2003 and mandated a minimum of representation of 40% for each gender on the board of directors of publicly limited companies.

# OBJECTIVES

Study the relationship between female representation on the board and gender gap within firm

by taking advantage of the Italian Board Reform using INPS data.

**INPS data**, provide information on gender composition, wage distribution, part-time, maternity leaves, paternity leaves, hirings, firings within firm.

**Reform** provides quasi-natural experiments to study the causal effect of gender quotas on gender disparities within firms avoiding reverse causality.

We evaluate the effect of the mandatory quota both comparing before and after the law within listed firms, and performing a diff in diff model using a sample of control firms, ex-ante selected by a matching algorithm.

# DATA

- VisitINPS: Population of individual job spells in the private non- agricultural sector of the Italian economy, 2008 – 2016
- Linked firm worker structure of the data provides firm level information
- Control group from limited companies: N=34531
- Match INPS data, by fiscal code with 240 firms listed in 2012 firm, for which we have detailed information on board renewals and board gender composition. Merge rate is 99,6%

# SELECTION

- Companies listed in the stock market 2012 that remain listed until december 2016, and that we can observe in INPS from 2008 – 2016; N firms 195 – delisted companies or companies that close are excluded from the sample
- Workers aged 15-64
- With at least 8 working weeks per year
- Drop with tails of firms at 2 percent of the level of employment
- Balanced panel
- For each listed firm, we select, with a nearest neighbour matching procedure a set of the control firms similar in terms of observed characteristics in 2012, just before the reform was implemented.
- Subsample after the match 332 firms, 172 listed, 160 control group.

# OUTCOMES

## **Firm level outcomes, workforce characteristics:**

Mean share of females within firm

Share of part time workers

Share of female part time workers

Share of female workers with earnings between the 75 and the 90 pct of the wage distribution within firm

Share of female workers above 90% pct of the wage distribution within firm

Female hiring rate

Female firing rate

# PROS & CONS OF GENDER QUOTA

- No consensus on the potential benefits of such measures

- **Pros :**

Break the glass ceiling with positive effects on firm performance

Discrimination reduces firm efficiencies (Becker, 1967)

Positive effects of gender quota on firm performance are found :

Weber and Zulehner – LEED Austria (2010, 2014) Schivardi et. al. 2016 LEED Italia

Ferraro et al (2016): no short term effects of the Golgo-Mosca reform on firm performance.

**Spillover effects on gender disparities within firm:** recruitment or promotion of more women or changes in corporate policies that improve work-family balance, such as more part-time work

# RELATED LITERATURE (NOT EXHAUSTIVE)

Cardoso and Winter Ebmer (2010) : positive relationship between female leadership and female wages LEED Portugal.

Gagliarducci and Paserman (2015): LEED Germany no relationship

Schivardi (2016) LEED Italy : positive impact at the top of the female wage distribution and a negative impact at the bottom

**Bertrand (2017) LEED Norway** : positive and significant relationship between gender quota and wages of females within the board – no relationship with other within firm gender gap : mena females, mothers, part-time , wage distribution



# PROS & CONS OF GENDER QUOTA

## Cons :

- Boards are selected to maximize the firm value: external imposition of gender quota may lead to suboptimal allocation.
- Gender quota may increase conflicts within the board, if women are perceived to hold the position in order to fulfill the law and not because of their qualifications.
- For Norway two studies find negative short term effects of mandated gender quota on firm productivity (Ahern and Dittmar, 2012, Matsa and Miller, 2013) .

# GOLFO-MOSCA REFORM

- 12 August 2011: adoption of the law law 120/2011, known as Golfo Mosca reform.
- Corporate bodies of listed firms expiring after **12 August 2012** should reserve at the renewal a quota of at least one fifth of the members to the underrepresented gender: women .
- Board of auditors: at least 1 full member and 1 substitute member
- Starting from the second and the third renewals the underrapresented gender should be at least one third of the total members.
- In **2022**, the law expires its effect.

# IMPLEMENTATION

- The Italian law sets the term of office for Board members at a maximum of three years. Rarely, the term of office is shorter.
- 12 July 2011 – adoption of the reform
- 12 August 2012 – entry into force
- Companies with renewal in **2013** : 3 terms of office until **2021**
- Companies with renewal in **2014** : 3 terms of office until **2022**
- Companies with renewal **2015** : 3 terms of office until **2023**
- The Commissione Nazionale per le Società e la Borsa (**CONSOB**) – the public authority responsible for regulating the Italian financial markets – is in charge of monitoring and supervising the implementation of the law
- Sanctions in the event of non-compliance

# TEMPORARY MEASURE

The law is a **temporary measure**, with ten years of validity, aimed at removing barriers that limited the access of women to leading positions, and at supporting a cultural renovation.

During these ten years women in the board will have the responsibility to assert their own expertises and contribute to value creation

The very final objective of the law is to remove the need of a mandatory quota, and starting from 2023, to get past the gender issue, nominating for board position the best candidate no matter if male or female.

# FEMALE REPRESENTATION ON CORPORATE BOARDS – CONSOB, REPORT 2017

**Tab. 2.16 – Female representation on corporate boards of Italian listed companies**  
(end of the year; for 2016, end of June)

	female directorship <sup>1</sup>		diverse-board companies <sup>2</sup>	
	no.	weight on total number of directorships	no.	weight on total number of companies
2008	170	5.9	126	43.8
2009	173	6.3	129	46.4
2010	182	6.8	133	49.6
2011	193	7.4	135	51.7
2012	288	11.6	169	66.8
2013	421	17.8	202	83.5
2014	521	22.7	217	91.9
2015	622	27.6	230	98.3
2016	687	30.3	228	99.1

Source: Consob. Data on corporate boards of Italian companies with ordinary shares listed on Borsa Italiana spa - Mta Stock Exchange. Companies under liquidation at the reference date are excluded. <sup>1</sup> Figures refer to the board seats held by women. <sup>2</sup> Diverse-board companies are firms where at least one female director sits on the board.

# EMPIRICAL STRATEGY

We estimate two models taking advantage of the time staggered implementation of the reform :

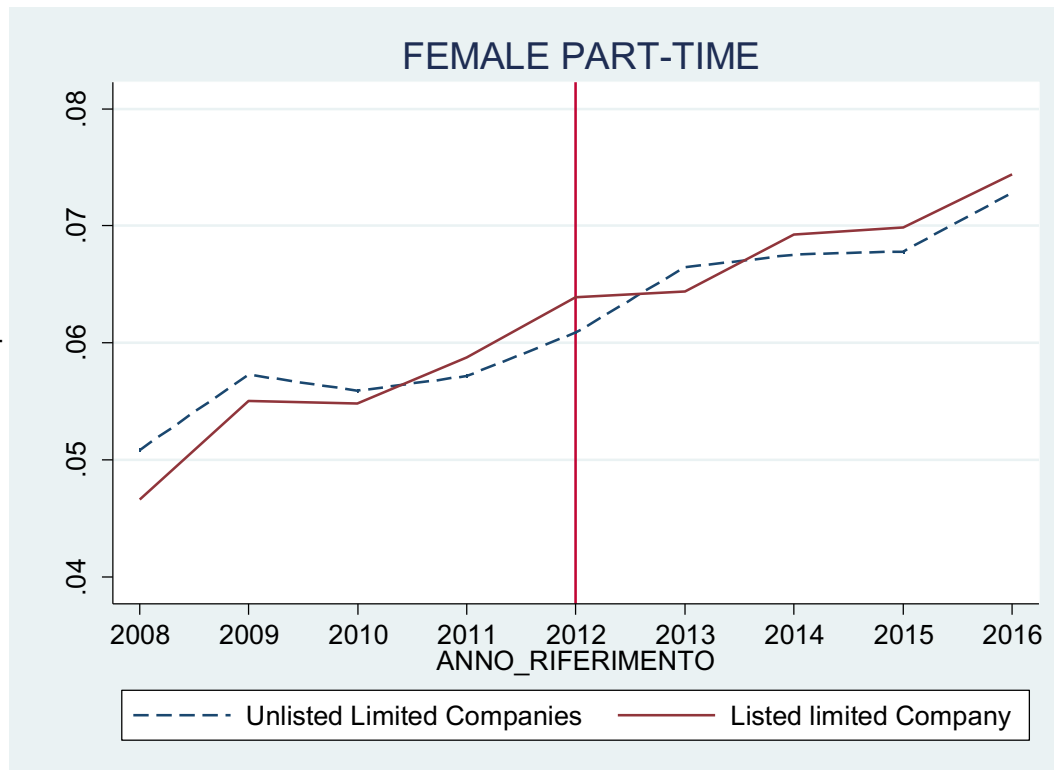
one for the sample of listed firms and

the second on the sample of listed firms and matched control firms.

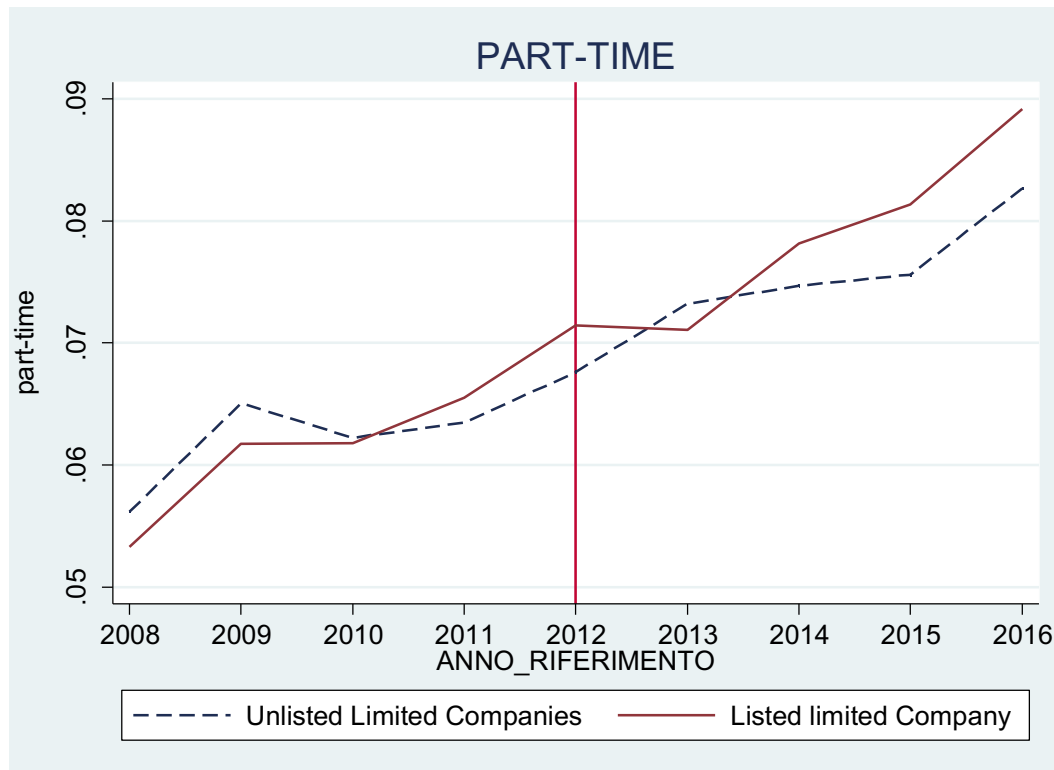
For each treated firm, we select, with a matching procedure a set of the control firms having more similar in terms of observed characteristics in 2012, just before the reform entered in force (part-time mean female part time , female above 75pct and below 75 percent, mean females above 90 pct, firm dimension firm, mean occupation female hiring rate, province dummies, sector dummies at two digit level ect...)

Outcome : Mean share of females within firm ,Share of part time workers,Share of female part time workers, Share of female workers with earnings between the 75 and the 90 pct of the wage distribution within firm, Share of female workers above 90% pct of the wage disribution within firm Female hiring rate, Female firing rate

# VISUAL INSPECTION: FEMALE PART-TIME

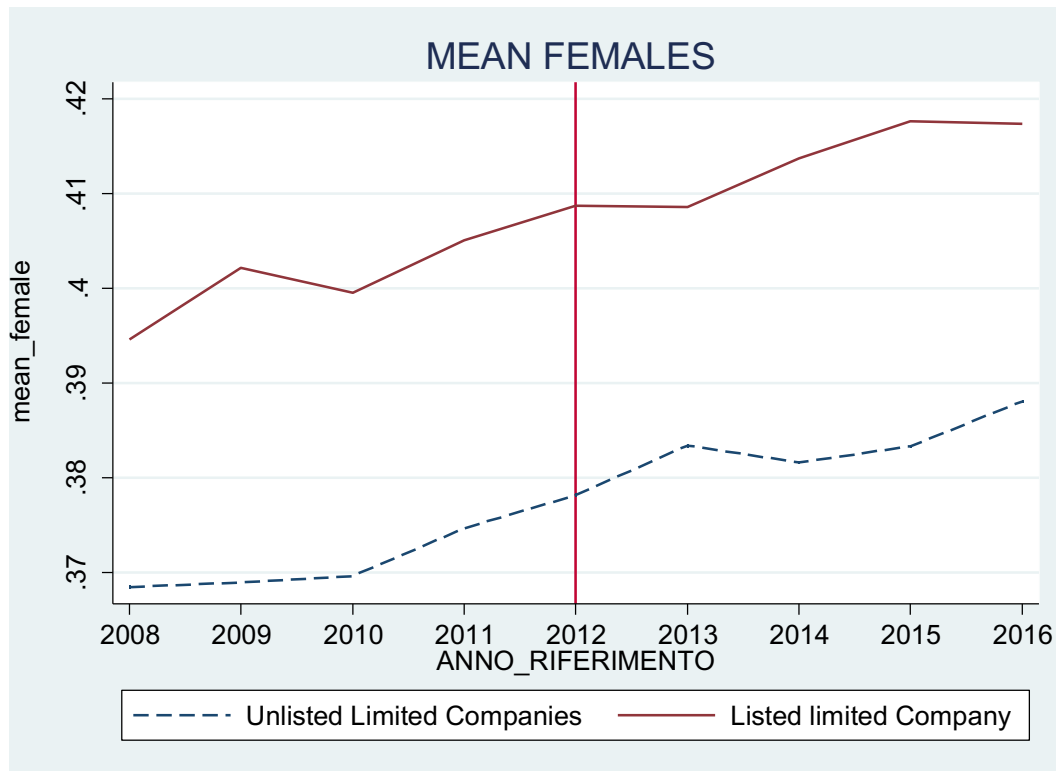


# VISUAL INSPECTION: PART-TIME

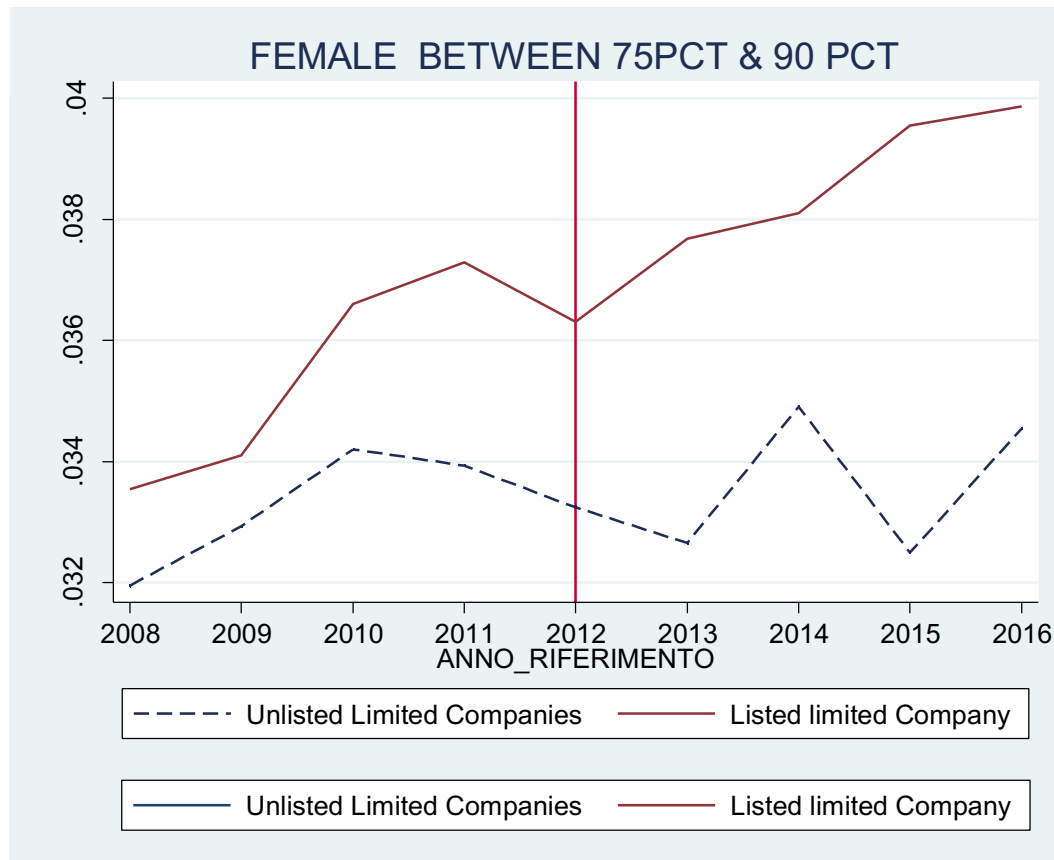




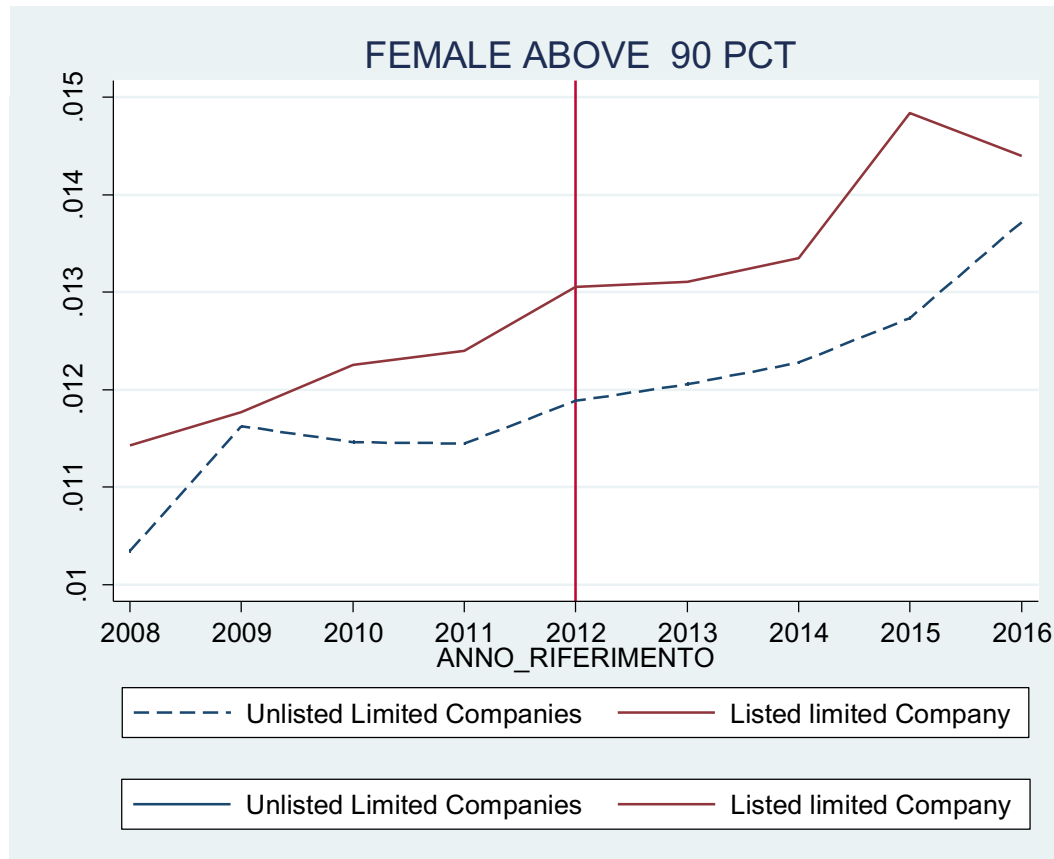
# VISUAL INSPECTION : MEAN FEMALES



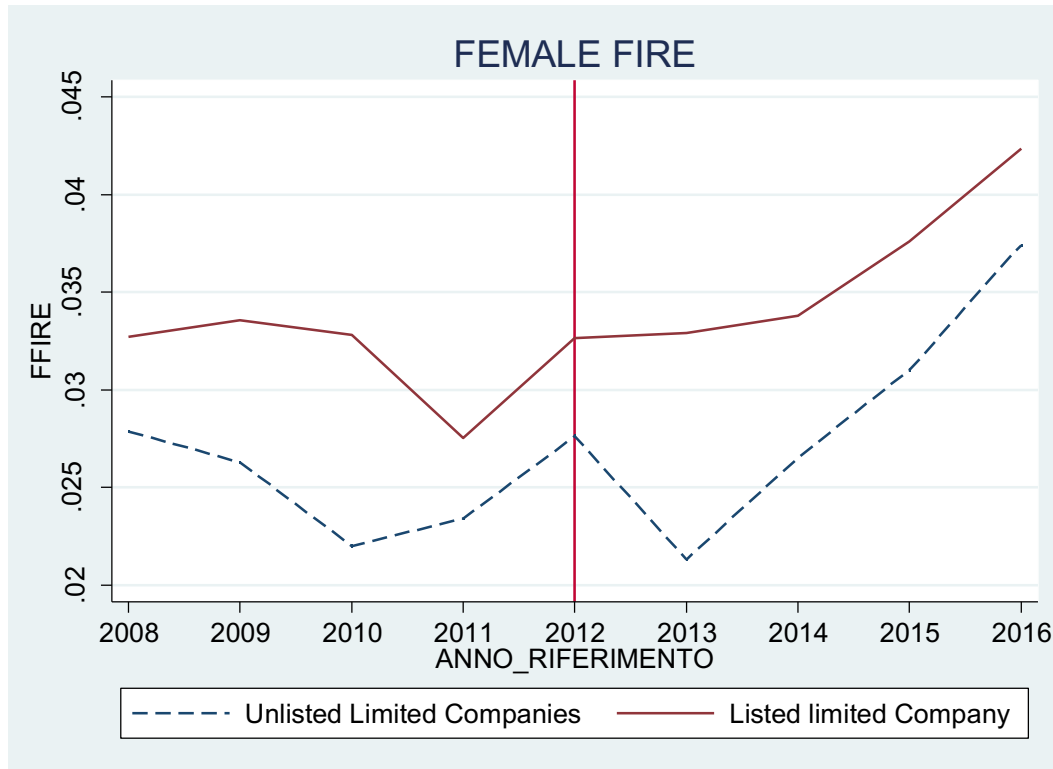
# VISUAL INSPECTION: FEMALE REPRESENTATION BETWEEN 75 AND 90 PCT OF THE WITHIN FIRM WAGE DISTRIBUTION



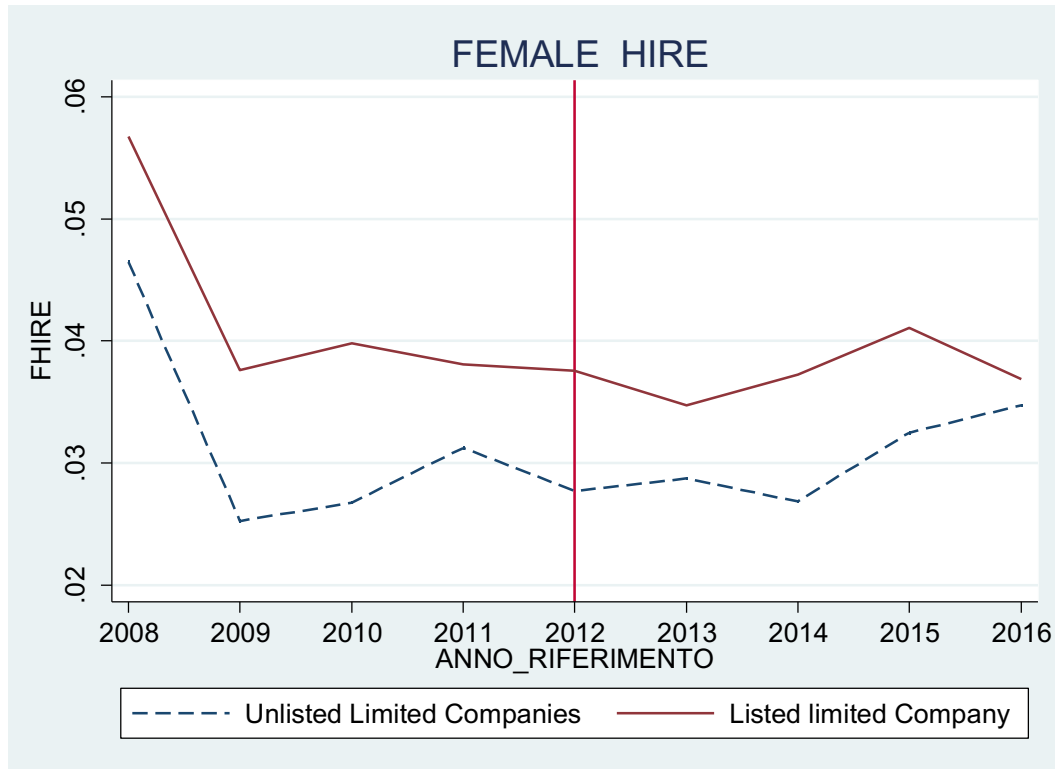
# VISUAL INSPECTION: FEMALE REPRESENTATION BETWEEN ABOVE 90 PCT OF THE WITHIN FIRM WAGE DISTRIBUTION



# FEMALE FIRE



# FEMALE HIRE



# RESULTS

- Part time and female part-time presents negative sign coefficients are significant in the listed sample.

Part time may exert an important role in achieving work-life balance. However, (involuntary) part-time work may reflect the shortage of full time work. In Italy more than 60% of total part-time workers report that they would like a full-time job but cannot find one (ISTAT, 2014)

- The share of female within firm is positive both sample and significant in the matched sample. Female share within firm and the share female above 75% and 90 % of the wage distribution show positive and significant coefficient in the listed sample, however results become insignificant once control for firm size are added.
- No significant results for : Share of female workers above 90% pct of the wage distribution within firm Female hiring rate, Female firing rate

# INTENSITY TO TREAT

Companies that started with a low shares of women in the board had to make higher changes with respect of companies that started with higher shares of female. We further explore the intensity to treat defining the intensity according to the company board female share in June 2012 as following

- reform\_low: female\_share $\geq$ 20
  - reform\_med : female share $\leq$ 20 & female share $\geq$ 11 ( median share)
  - reform\_high : female\_share $<$ 11
- Analysis shows that the higher is intensity to treat the stronger is the significance of the coefficients for part-time ad female share.

# CONCLUSIONS

We explored the relationship between female leadership and several outcome of gender gaps within firm using INPS data taking advantage of the Italian board reform requiring gender quotas for boards of directors of listed companies.

We performed diff in diff model both on listed firm and also using a sample of control firms, selected by matching algorithm. Results between two samples are consistent.

Part time and female part-time presents negative sign coefficients are significant in the listed sample.

Part time may exert an important role in achieving work-life balance. However, (involuntary) part-time work may reflect the shortage of full time work. In Italy more than 60% of total part-time workers report that they would like a full-time job but cannot find one (ISTAT, 2014)

The share of female within firm is positive both sample and significant in the matched sample. Female share within firm and the share female above 75% and 90 % of the wage distribution show positive and significant coefficient in the listed sample, however results become insignificant once control for firm size are added.

We further explored these results focus on the intensity to treatment effects. Companies that started with a low shares of women in the board had to make higher changes with respect of companies that started with higher shares of female. Analysis shows that the higher is intensity to treat the stronger is the significance of the coefficients for part-time ad female share. While the representation of female in the highest part of income distribution seems not to be strictly correlated with the reform.



# NEXT

## Research agenda:

Monitoring the reform in the future

We can evaluate the effect of the law further on other interesting outcome variables

Maternity leave,

Paternity leaves,

Parental leaves,

Work injuries

Firm value and firm productivity measures matching INPS dataset with datastream-Bureau Van Dijk data

**THANK YOU!**