

**TRADE LIBERALISATION AND  
THE GENDER WAGE GAP-  
EVIDENCE FROM PAKISTAN**

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# KEY QUESTIONS

- Has increased trade liberalisation reduced the gender wage-gap in Pakistan?
- Has increased trade liberalisation reduced the residual gender wage gap?

# WHY STUDY THESE QUESTION

- Pakistan stands 134 among 136 countries in the Gender Opportunities Index.
- Women are about 50 percent of the population but only 10% of urban women are in the labor force.
- Aslam (2006) wonders if labor market discrimination is responsible for low participation.
- Pakistan is moving towards increasing liberalisation and de-regulation.
- Munir et al (2014) document increasing women's participation in the wake of liberalisation.

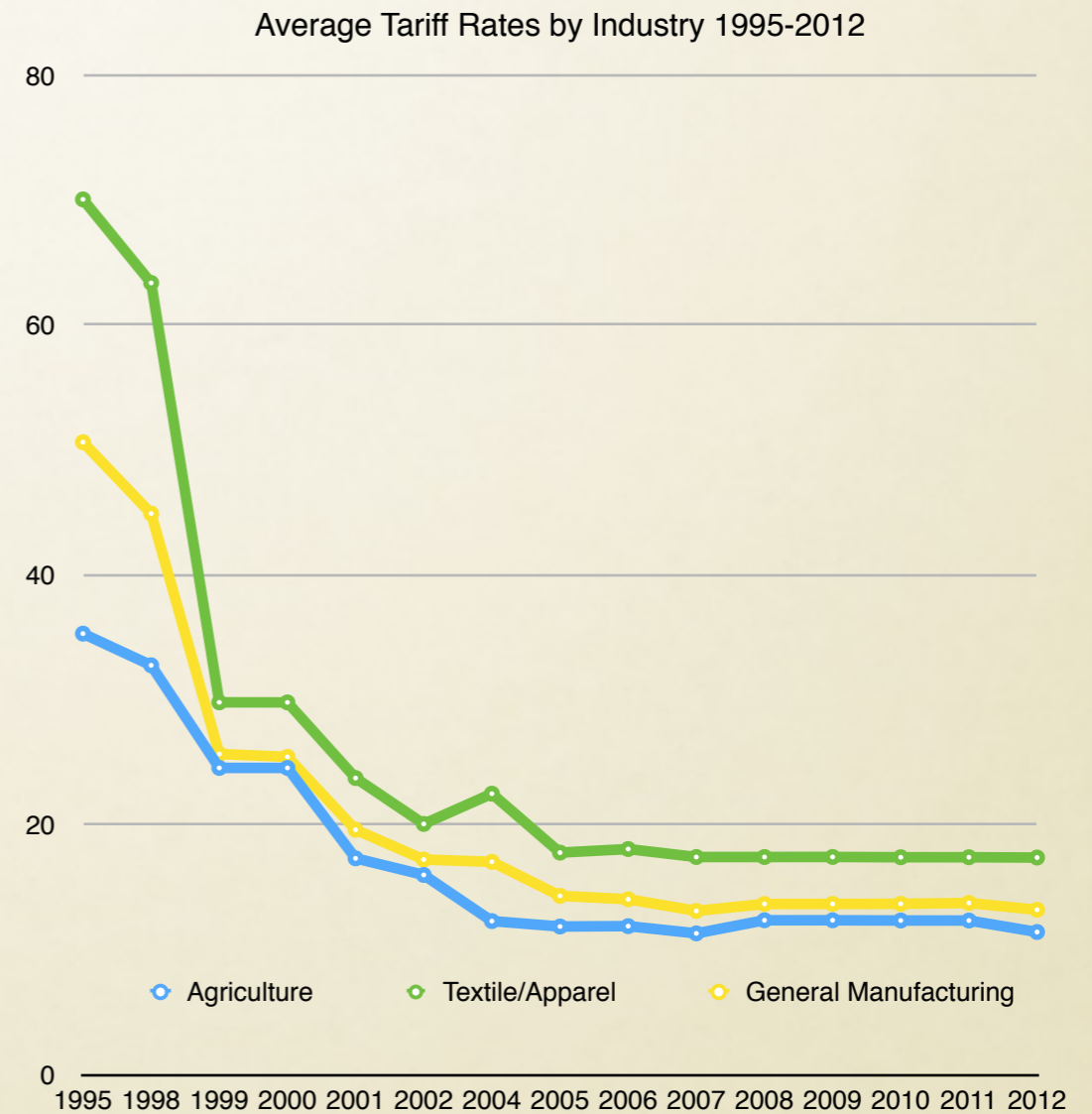
# RELATED LITERATURE

Authors (Year)	Country	Data	Wage gap	Employment Share
Menon & van der Meulen (2008)	India	HH	Negative	
Pardhan (2006) Positive	"	HH		Positive
Chambaragwala (2006)	"	HH	Positive/Negative	
Ozler (2000)	Turkey	Plant		Positive /Negative

# CHANGES IN TARIFFS 1995-2012

- Variation in Tariff rates
- Non-tradable sector as counterfactual

(Source: HSIC codes from Comtrade)



# RESIDUAL WAGE GAP/ “DISCRIMINATION”

$$W_w = X_w \beta_w + \varepsilon_w$$

$$EW_w = \bar{X}_w \beta_w + E\varepsilon_w$$

$$EW_m = \bar{X}_m \beta_m + E\varepsilon_m$$

$$E(W_m - W_w) = \bar{X}_m \beta_m - \bar{X}_w \beta_w + E(\varepsilon_w - \varepsilon_B)$$

Assuming exogeneity and manipulating to get:

$$E\Delta = \beta_w (\bar{X}_m - \bar{X}_w) + \bar{X}_m (\beta_m - \beta_w)$$

- raises the issues of the counterfactual at which the differences are evaluated

# EMPIRICAL STRATEGY

$$W_{jt}^m = X_{jt}^m \beta_{jt}^m + \varepsilon_{jt}^m$$

$$W_{jt}^w = X_{jt}^w \beta_{jt}^w + \varepsilon_{jt}^w$$

$$E \Delta_{jt} = X_{jt}^m (\beta_{jt}^m - \beta_{jt}^w) + \beta_{jt}^w (X_{jt}^m - X_{jt}^w)$$

$$X_{jt}^m (\beta_{jt}^m - \beta_{jt}^w) = \mu \text{ Tariff} + \delta \text{ postlib} + \rho \text{ interaction} + \beta \text{ sectoral dummies}$$

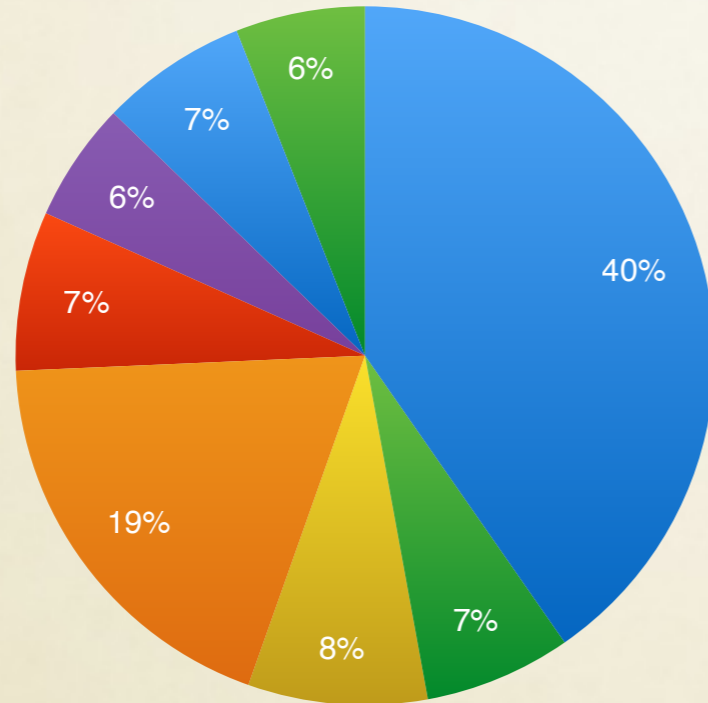
# DATA

- 13 Rounds of the Pakistan Labor Force Survey: 1991-2011.
- Representative at the National, Provincial and Rural/Urban levels.
- Questionnaire almost unchanged
- Sub-sample
  - Wage Earners only.
  - 15-65 years of age.

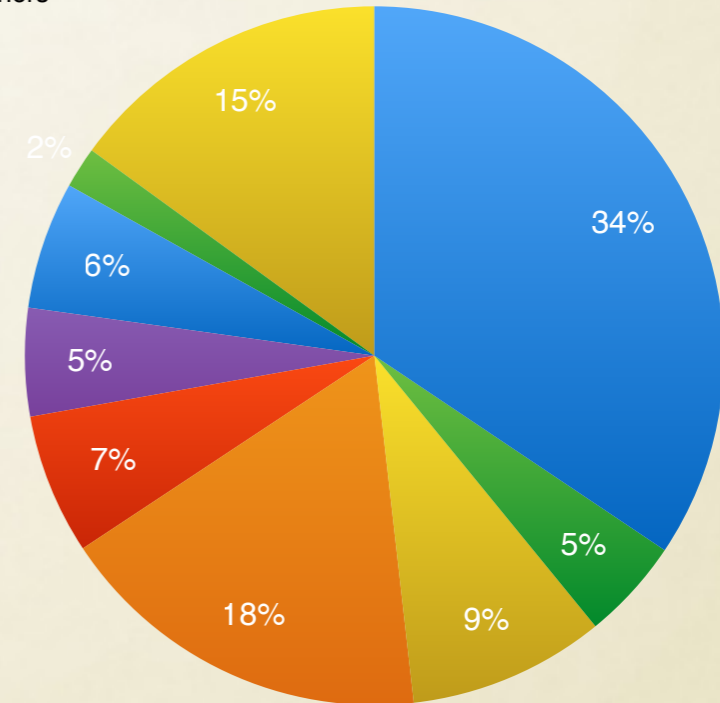


# INDUSTRIAL DISTRIBUTION (MEN: 1990-2010)

- Agriculture
- Textile Manufacturing
- Construction
- Sales
- Transport
- Government Service
- Education
- Services

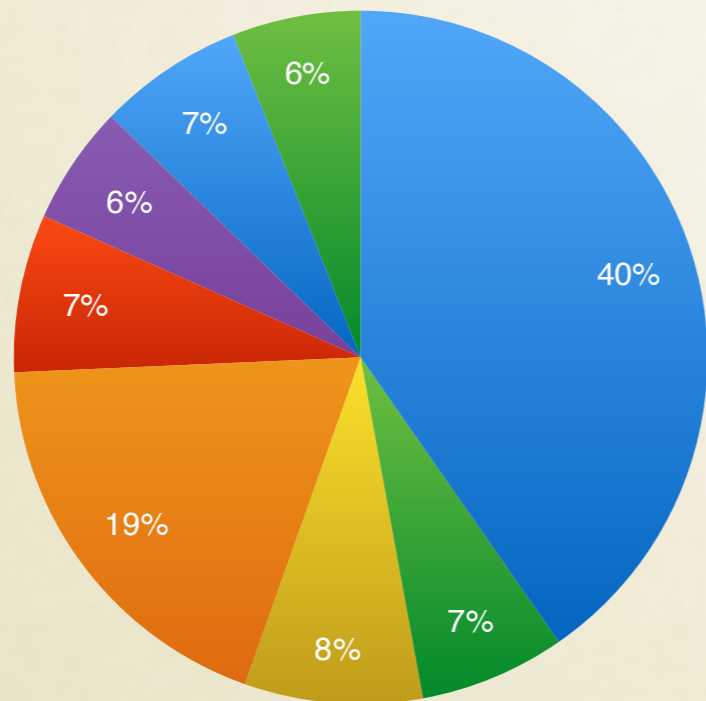


- Agriculture
- Textile Manufacturing
- Construction
- Sales
- Transport
- Government Service
- Education
- Services
- Others

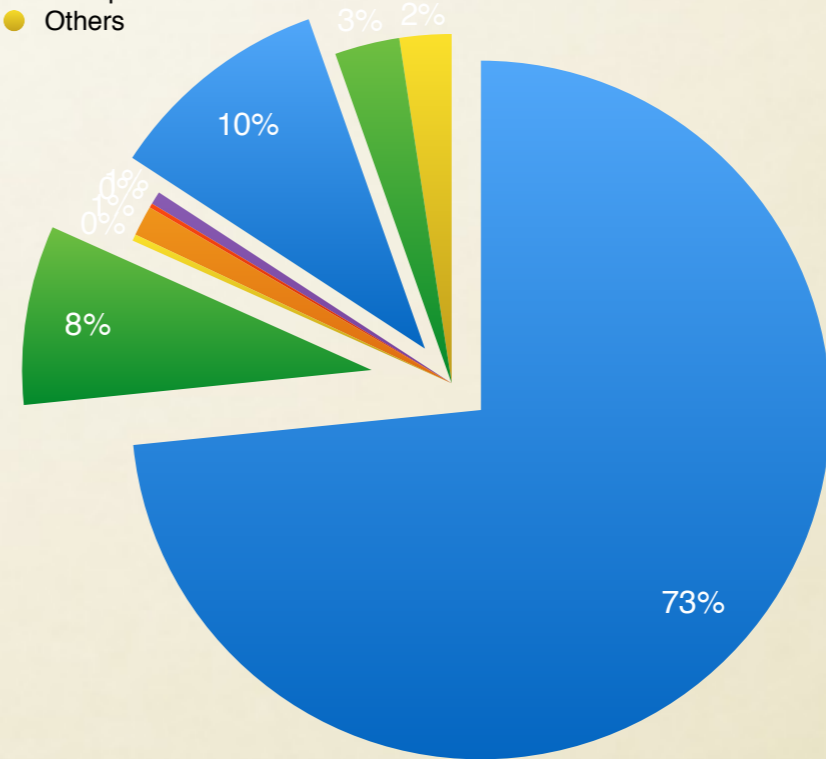


# INDUSTRIAL DISTRIBUTION (WOMEN: 1990-2010)

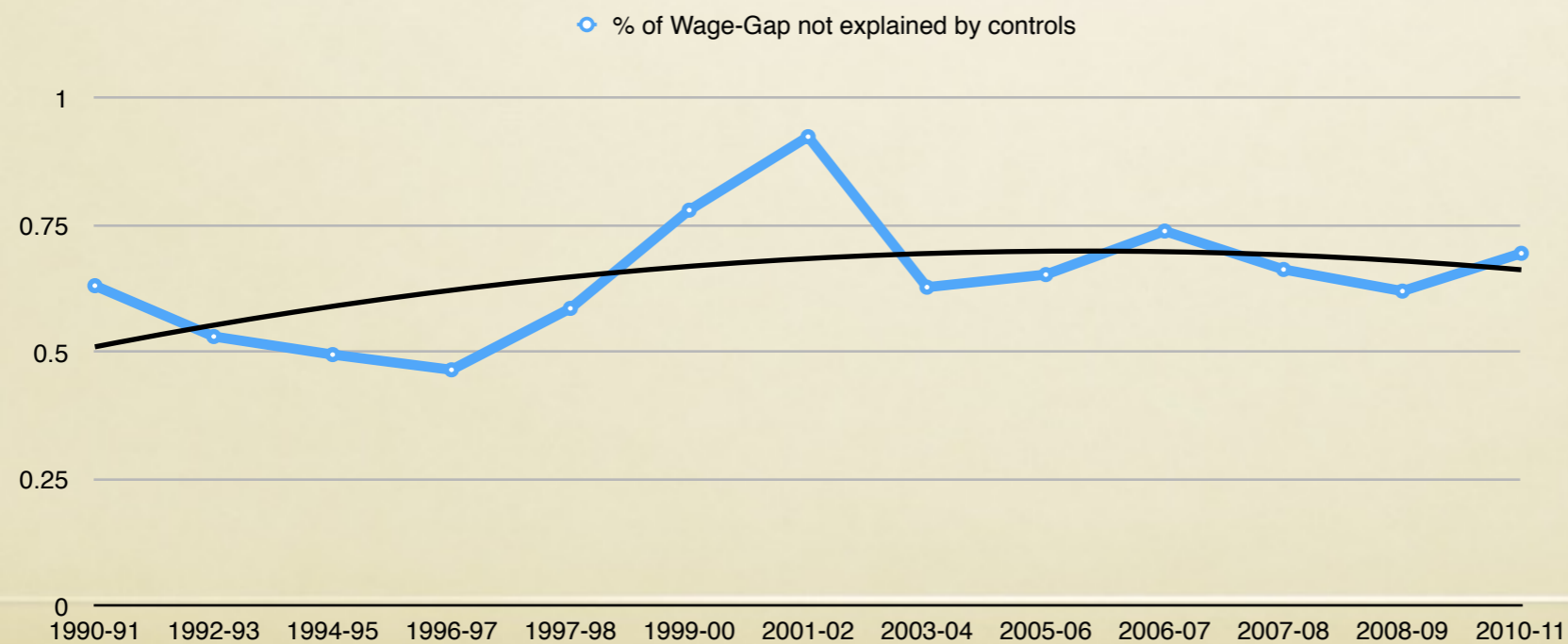
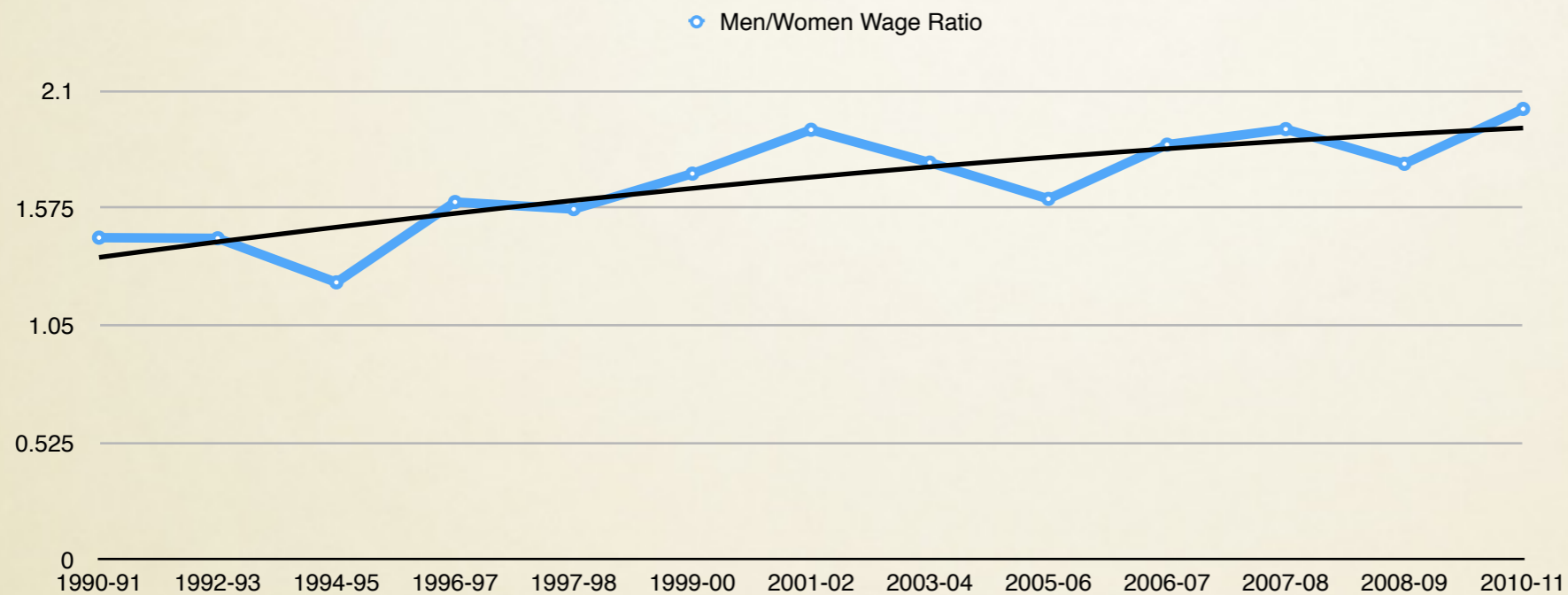
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● Transport    ● Government Service    ● Education    ● Services



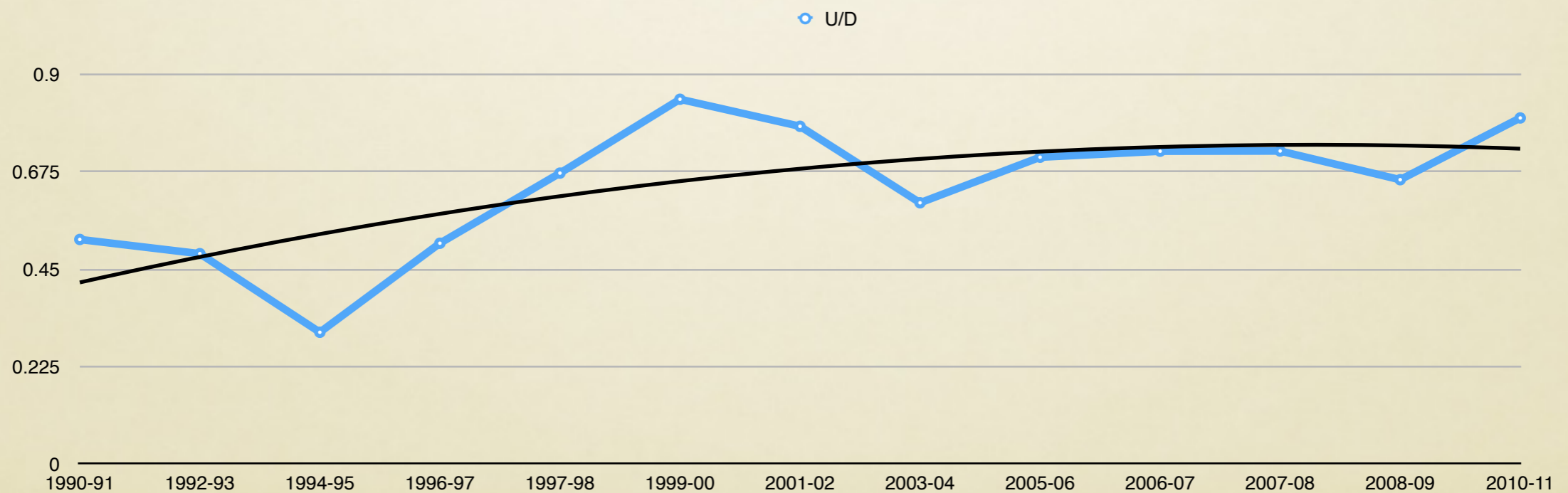
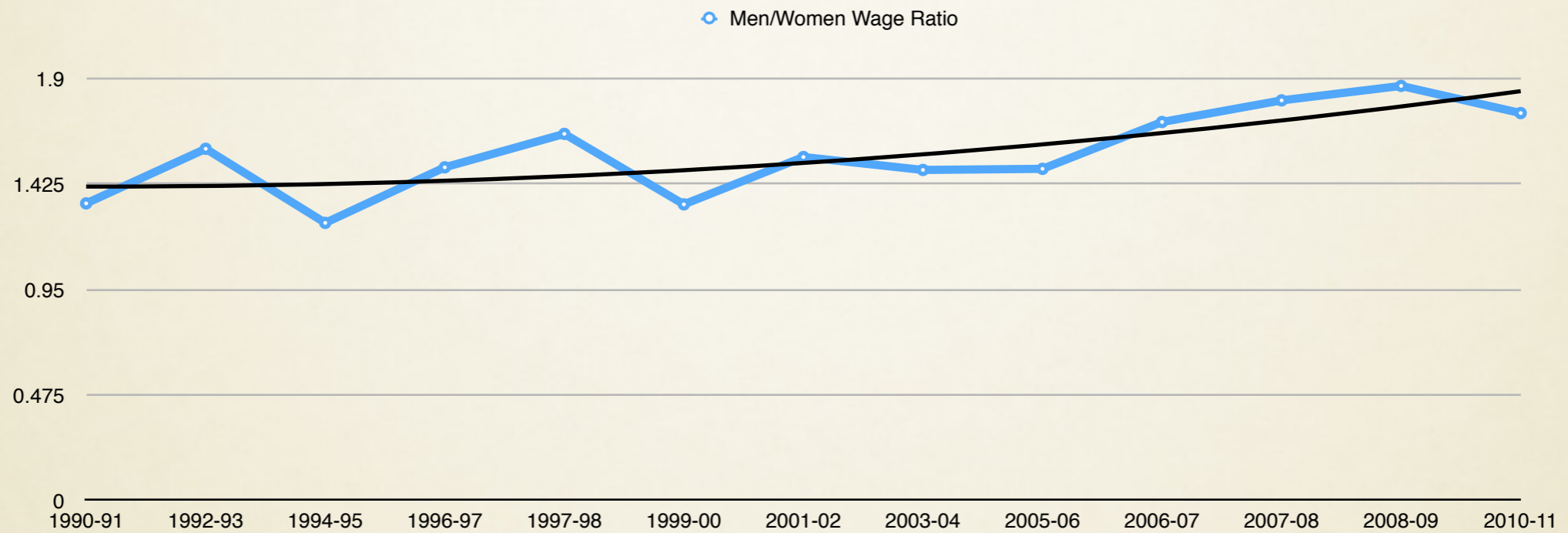
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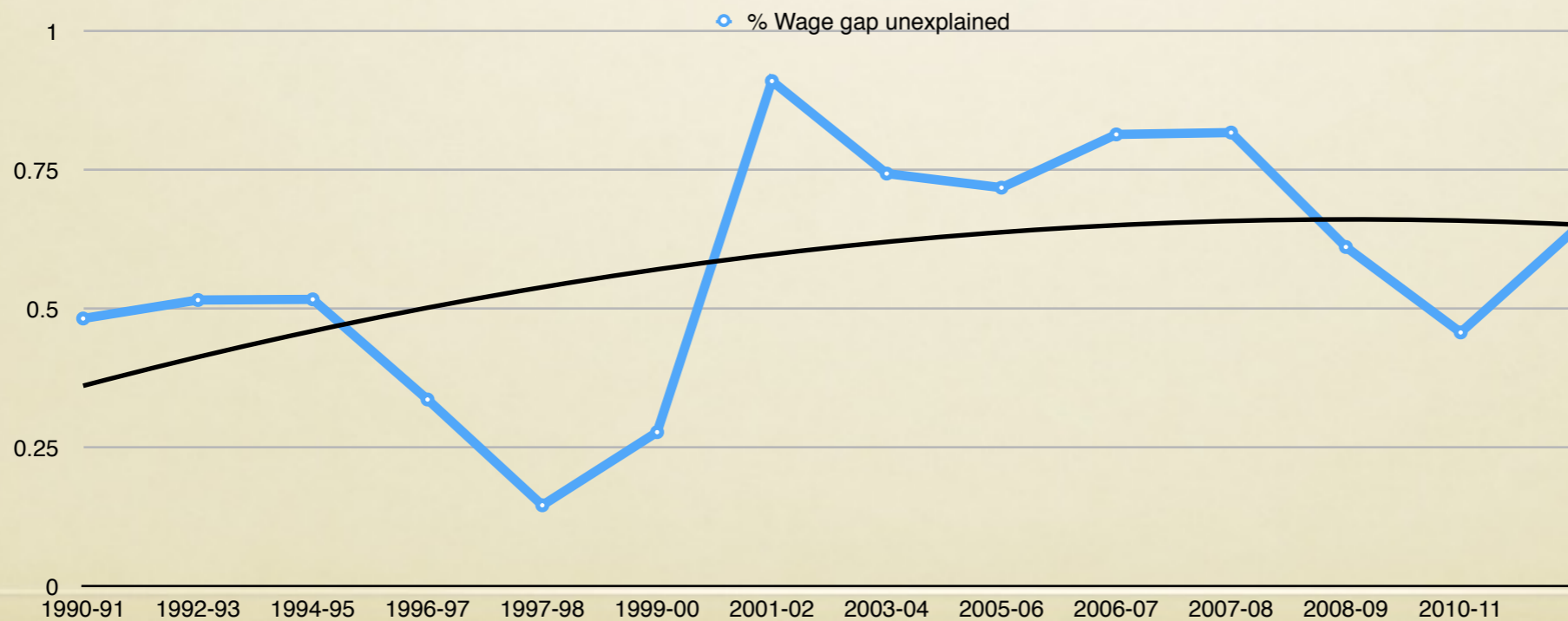
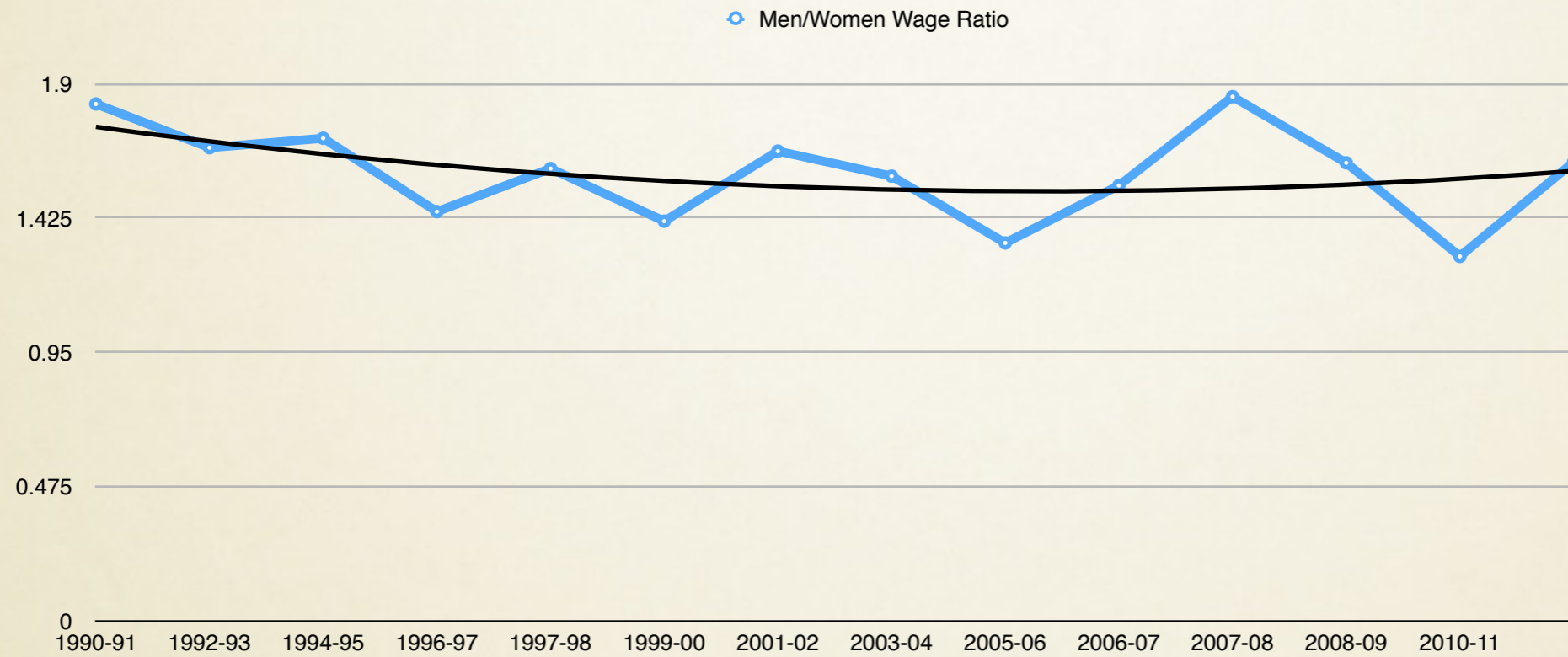
# WAGE RATIO & 'DISCRIMINATION' IN THE AGGREGATE MARKET



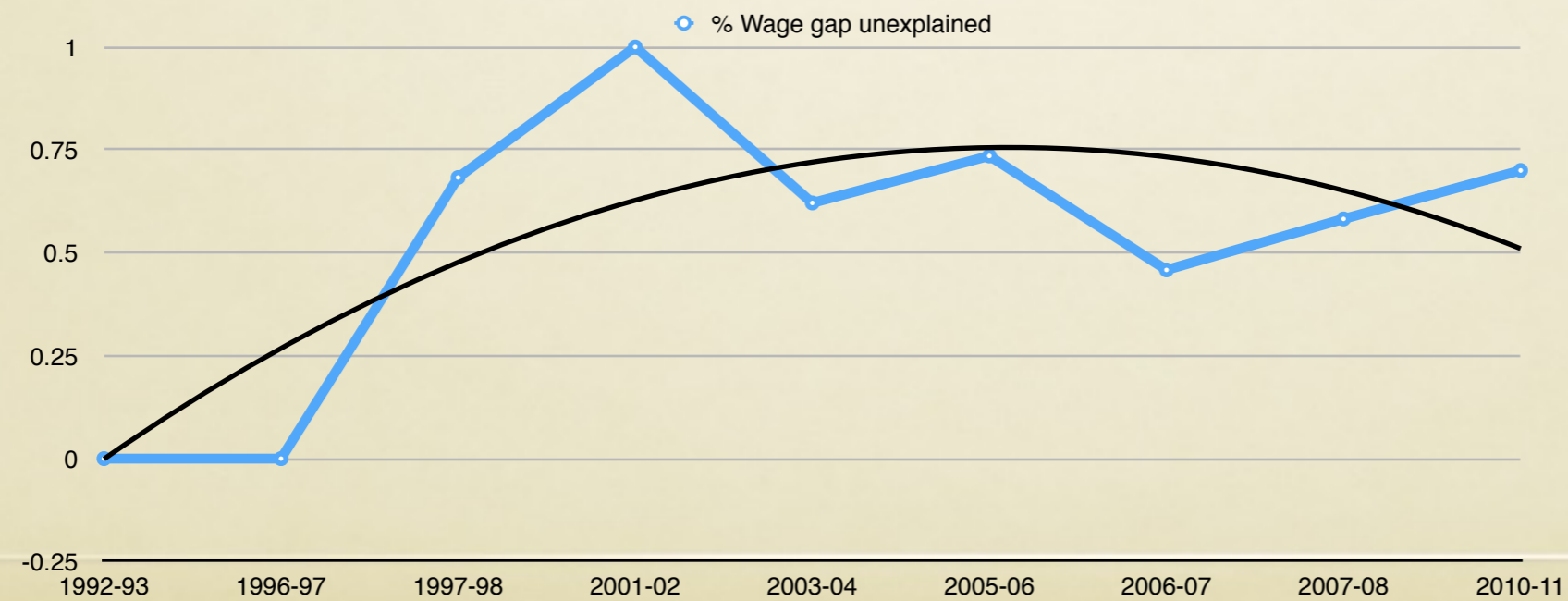
# WAGE RATIO & 'DISCRIMINATION' IN TEXTILE MANUFACTURING



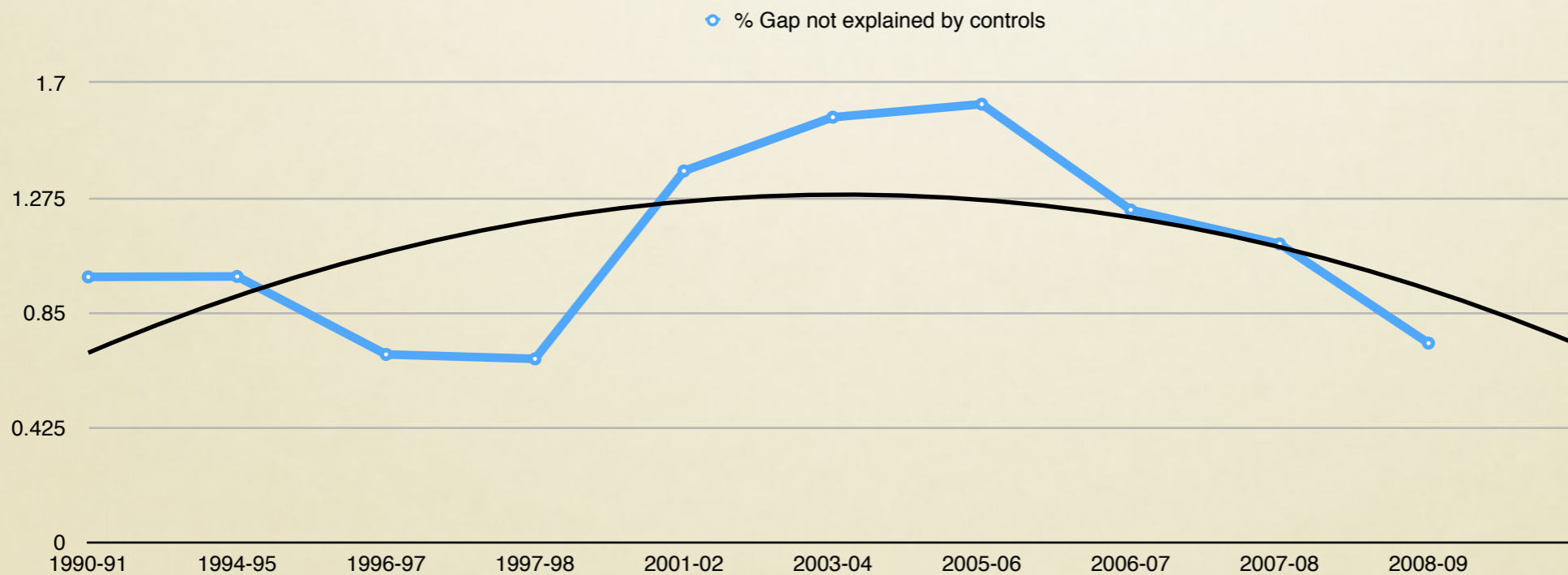
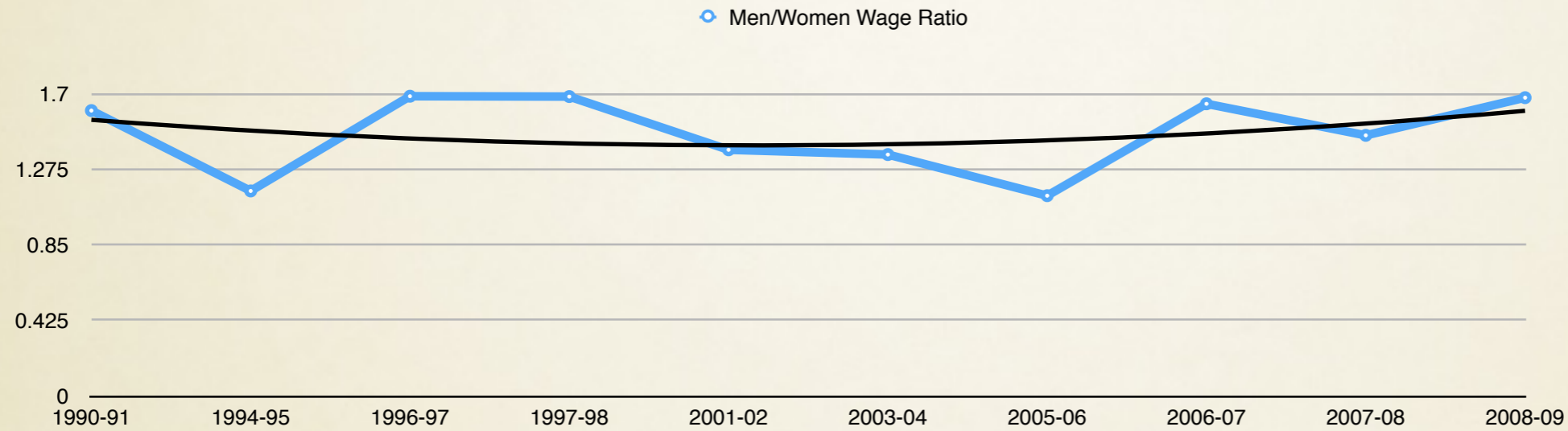
# WAGE RATIO & 'DISCRIMINATION' IN AGRICULTURE



# WAGE RATIO IN GENERAL MANUFACTURING



# WAGE RATIO & 'DISCRIMINATION' IN SERVICES (NON-TRADABLE)



# ORDINARY LEAST SQUARE ESTIMATES OF MALE-FEMALE RESIDUAL WAGE GAP BY INDUSTRY

	(1)	(2)	(3)
Tariff	-0.02**		
Exports/Output		-0.29	
Imports/Output			-0.8*
const	0.06	0.75	0.7*
N	45	42	42
R <sup>2</sup>	0.58	0.49	0.28
Sectoral Dummies	No	No	No
Time Dummies	Yes	Yes	Yes



# CONCLUSIONS

- Robustness/Specifications
- Skill correction
- Policy Implications
- Liberalize! :(