

*Segregation or Homologation?
A Bibliometric Analysis of Gender
Differences in the Scientific
Production of Economists in Italy*

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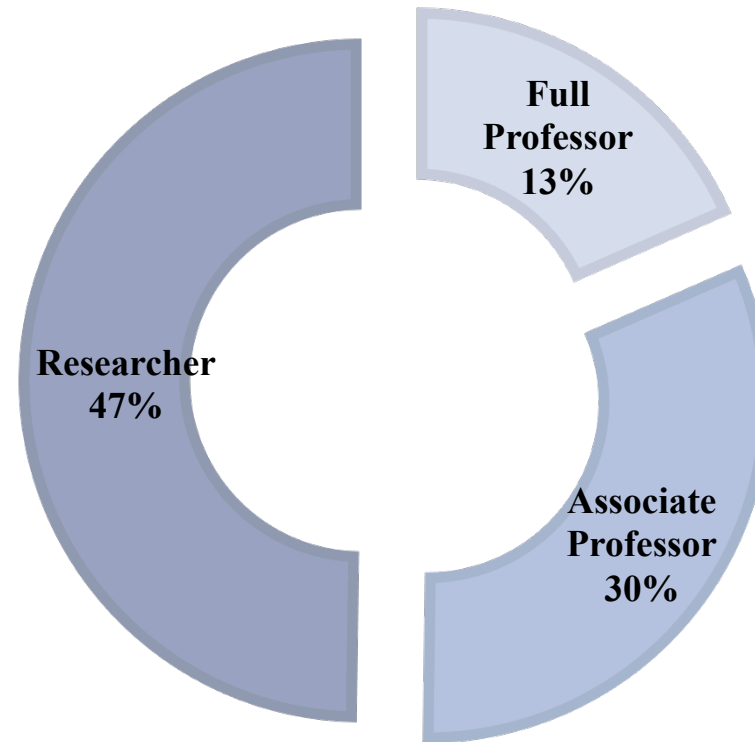
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Under-representation of women in Italian universities

30% of academic economists



Evelyn Forget (1995) identifies 4 individual survival strategies for women economists. We focus on two:

-segregation, the specialization in those areas of research less practiced by male colleagues, focusing on the so called women studies;

-homologation, a convergence of interests on the same fields of male colleagues, more visible and therefore more easily measurable by bibliometric indexes.

We test them for economists in Italian universities in the recent past.


1- **Generational effect** of gender differences in research fields

Ph.D theses 2003-2006 (Opac)
SECS P01- P06
536: 43.5% women
REPEC/Google Scholar JEL-code

Full prof and associate prof
Econlit 2003-2006
654: 17.9% women
2263 records (articles and WP)
14.7% women authors

Segregation  Duncan Segregation Index (1955)

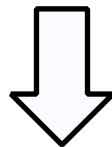
$$I = \frac{1}{2} \sum_{i=1}^n |M_i - W_i|$$

Research fields  JEL codes (19)

Ph.Ds **Segregation Index** **15%**

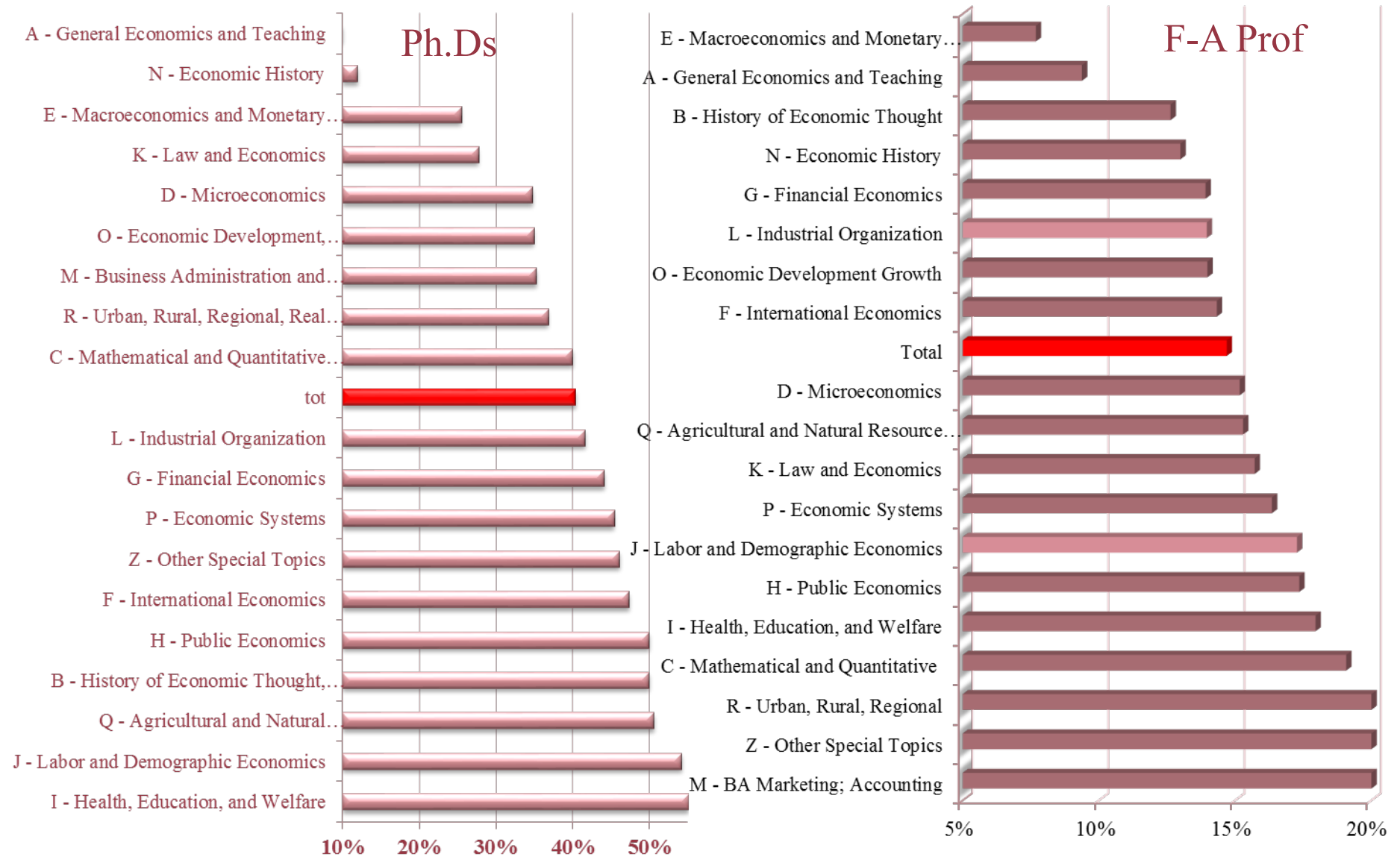
Full/Ass. Prof. **Segregation Index** **8.4%**

Survival strategies



Segregation in the first stage of career, then homologation to compete.

Differences in the choice of research field by women economists



Generational differences in the choice of research field by gender

Ph.Ds	(W-M) %	Full/Associate Prof	(W-M) %
Q - Agricultural and Natural Resource Economics	1.3	H - Public Economics	1.1
G - Financial Economics	1.4	J - Labor and Demographic Economics	1.6
H - Public Economics	1.5	R - Urban, Rural, Regional	2.4
O - Economic Development Growth	-2.9	E - Macroeconomics and Monetary Economics	-5.5
E - Macroeconomics and Monetary Economics	-1.5	B - History of Economic Thought	-1
A - General Economics and Teaching	-1	L - Industrial Organization	-0.6

Path dependance effect

Higher % of Women Full /Associate Prof.		Women Ph.Ds main field preferences	
M - BA Marketing; Accounting	26.0%	O - Economic Development Growth	11.4%
R - Urban, Rural, Regional	21.9%	L - Industrial Organization	11.2%
C - Mathematical and Quantitative	19.1%	F - International Economics	9.1%
I - Health, Education, and Welfare	17.9%	Q - Agricultural and Natural Resource Economics	8.5%
H - Public Economics	17.4%	D - Microeconomics	7.9%

Gender mentoring effect

Productivity 5 years after Ph.D – 34.7% employed in Italian Universities

		Ph.Ds in Italian Universities	
		Median no. of publications	Median h index
Supervisors: 2 women	W	10	2
	M	2	2
Supervisors: 1 men and 1 women	W	8.5	2
	M	5.5	1
Supervisors: 2 men	W	8	3
	M	14	3

2. Evolution of scientific productivity of academic women economists in the last two decades (1991-2012)

795 associate and full professors (23.3% women)

14,217 publications (16.8% women)

	1991-1995	1996-2000	2001-2005	2006-2010	2011-2012
% publications by women	12.4	15.8	18.8	19.4	20.0

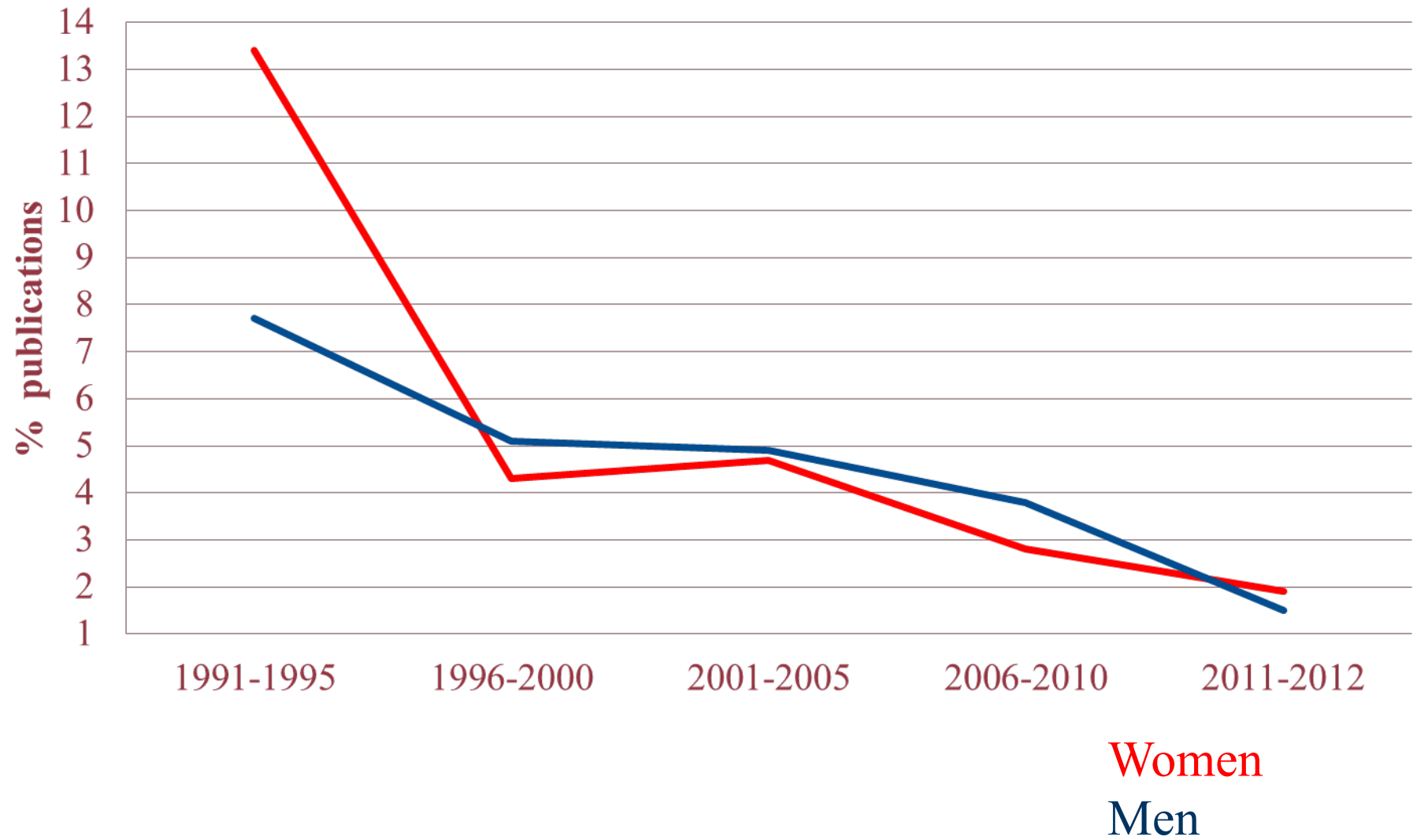
Research fields preferences

%	W			M		
	1991-1995	2001-2005	2011-2012	1991-1996	2001-2006	2011-2012
A - General Economics and Teaching	1.3	0.3	0.7	1.4	0.7	0.5
B - History of Economic Thought, Methodology, and Heterodox Approaches	16.1	5.3	2.5	8.6	5.8	1.9
C - Mathematical and Quantitative Methods	1.1	2.1	4.5	2.5	2.3	4.4
D - Microeconomics	10.7	9.9	12.8	11.7	12.1	12.8
E - Macroeconomics and Monetary Economics	7.5	8.5	6.9	18.8	13.5	14
F - International Economics	7.5	8.5	5.3	9.9	8.4	6.2
G - Financial Economics	6.7	5.8	8.7	4.4	6.4	7
H - Public Economics	10.5	7.5	4.7	5.6	7.2	8.1
I - Health, Education, and Welfare	0.8	2.3	6.3	0.7	2.2	2.9
J - Labor and Demographic Economics	14.2	13.3	11.9	8.4	9	8.2
K - Law and Economics	0.8	1	1.3	0.4	1.5	1.6
L - Industrial Organization	8.3	10.8	10.6	7.7	11.2	11.6
M - Business Administration and Business Economics; Marketing; Accounting	0.3	1.7	1.9	0.7	0.9	1
N - Economic History	0.8	0.4	1.8	1.2	0.8	0.7
O - Economic Development, Technological Change, and Growth	5.9	9.3	8.2	9.9	8.6	9.2
P - Economic Systems	2.9	3.5	0.9	4.4	2.3	1
Q - Agricultural and Natural Resource Economics; Environmental and Ecological Economics	1.3	2.4	2.8	1.6	2	4.5
R - Urban, Rural, Regional, Real Estate, and Transportation Economics	3.2	6.4	6.5	1.4	4.3	3.2
Z - Other Special Topics	0	0.9	1.9	0.5	0.7	1.3
χ^2 (72)	429***			866***		
χ^2 (18)	93.6***			148.4***	84.9***	

Main research field change by sex 1991-1995 2011-2012

Women		Men	
B - History of Economic Thought	-13.6	B - History of Economic Thought	-6.7
H - Public Economics	-5.8	E - Macroeconomics and Monetary Economics	-4.8
J - Labor and Demographic Economics	-2.3	F - International Economics	-3.7
F - International Economics	-2.2	P - Economic Systems	-3.4
P - Economic Systems	-2	A - General Economics and Teaching	-0.9
I - Health, Education, and Welfare	5.5	L - Industrial Organization	3.9
C - Mathematical and Quantitative	3.4	Q - Agricultural and Natural Resource Economics	2.9
R - Urban, Rural, Regional	3.3	G - Financial Economics	2.6
L - Industrial Organization	2.3	H - Public Economics	2.5
O - Economic Development Growth	2.3	I - Health, Education, and Welfare	2.2

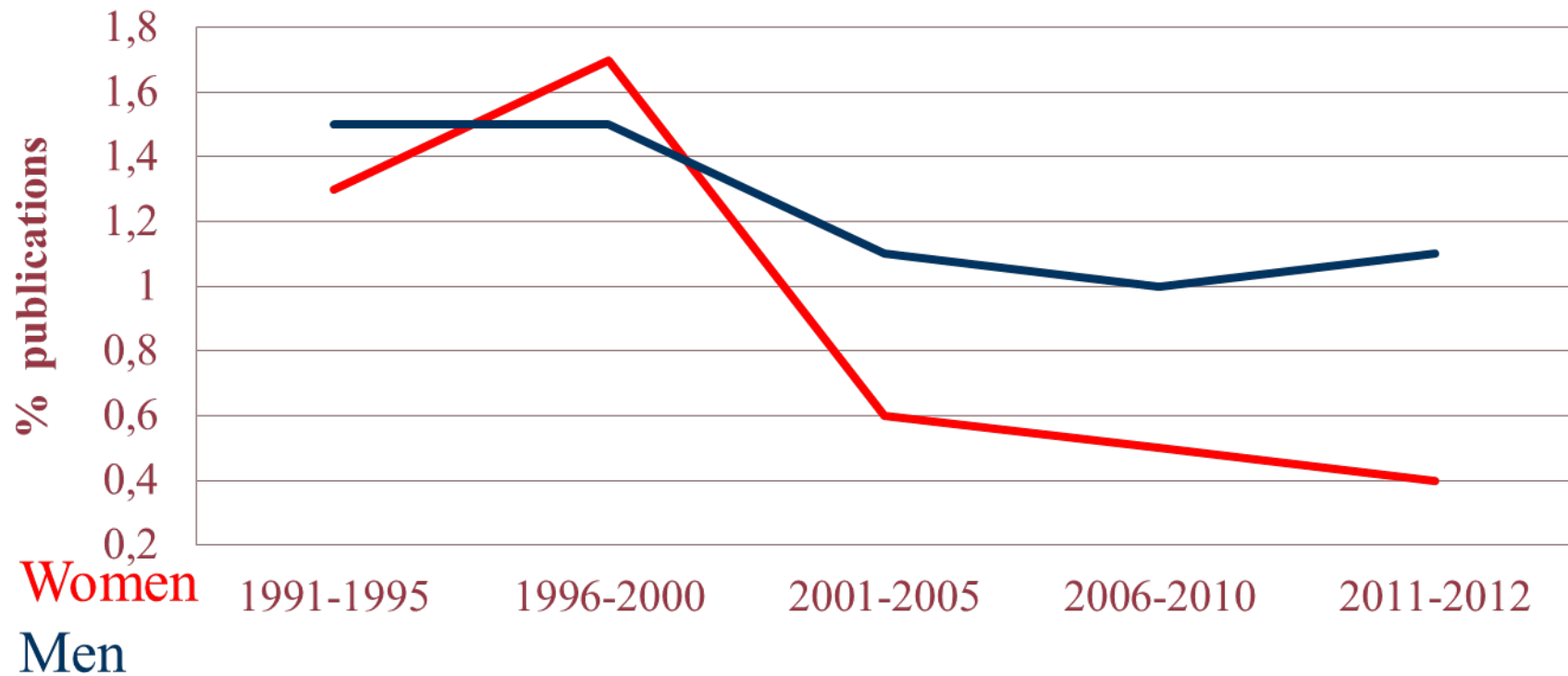
History of economic thought



Women
Men

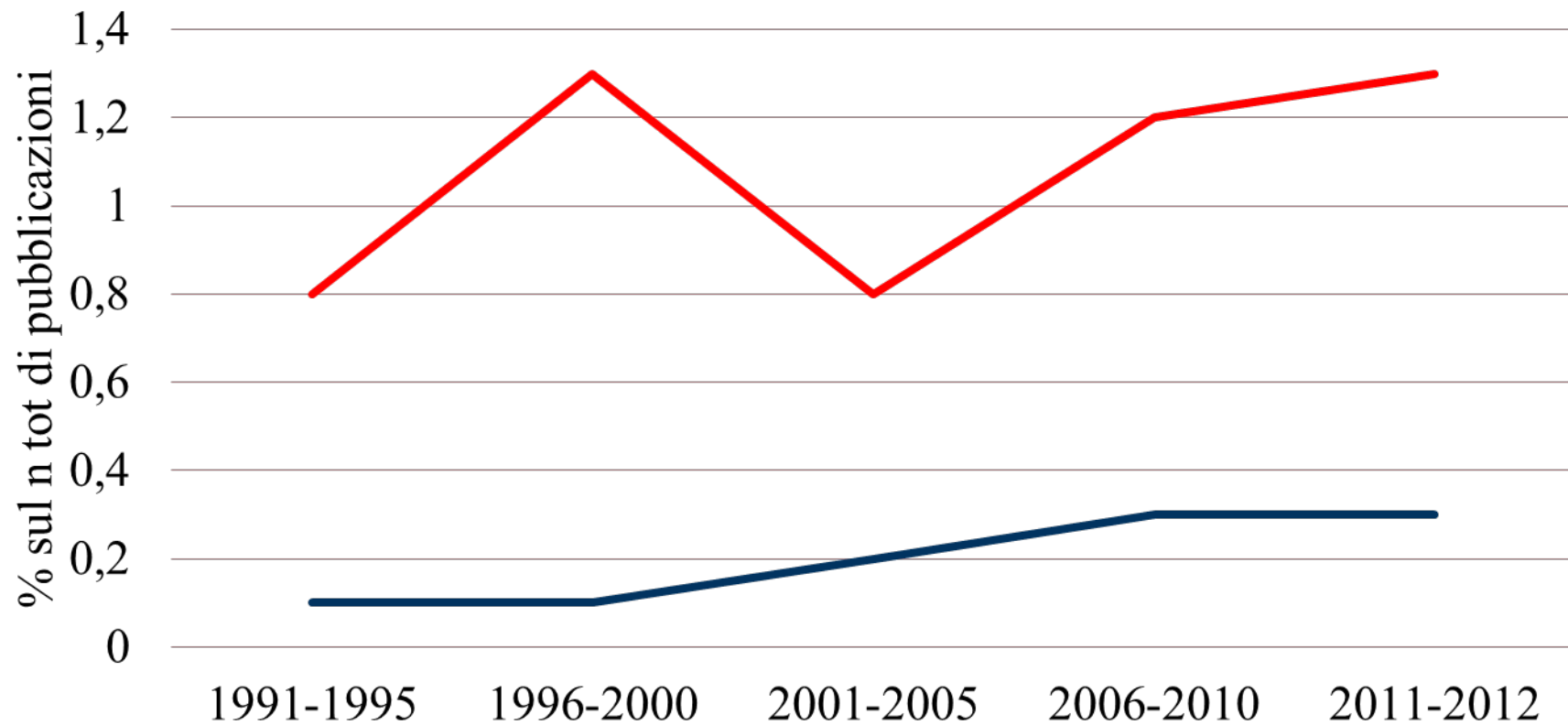
Heterodox Approaches

B5 - Current Heterodox Approaches B50 - General; B51 - Socialist; Marxian; Sraffian; B52 - Institutional; Evolutionary; B53 - Austrian; B54 – Feminist Economics; B59 - Other E1 - General Aggregative Models E11 - Marxian; Sraffian; Institutional



Gender Economics

B54 Feminist Economics + J16 Economics of gender



Women

Men

Looking forward

- Transition point: reform of Italian University System (ASN)
- Gender auditing of research evaluation outputs
- Awareness of the gender impact of defining “minimum requirements” in the context of academic careers
- Relevance of associations of women in economics to follow the homologation trend (Commissione di genere SIE)

Thank you

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