

# Entrepreneurship gender gaps in Chile

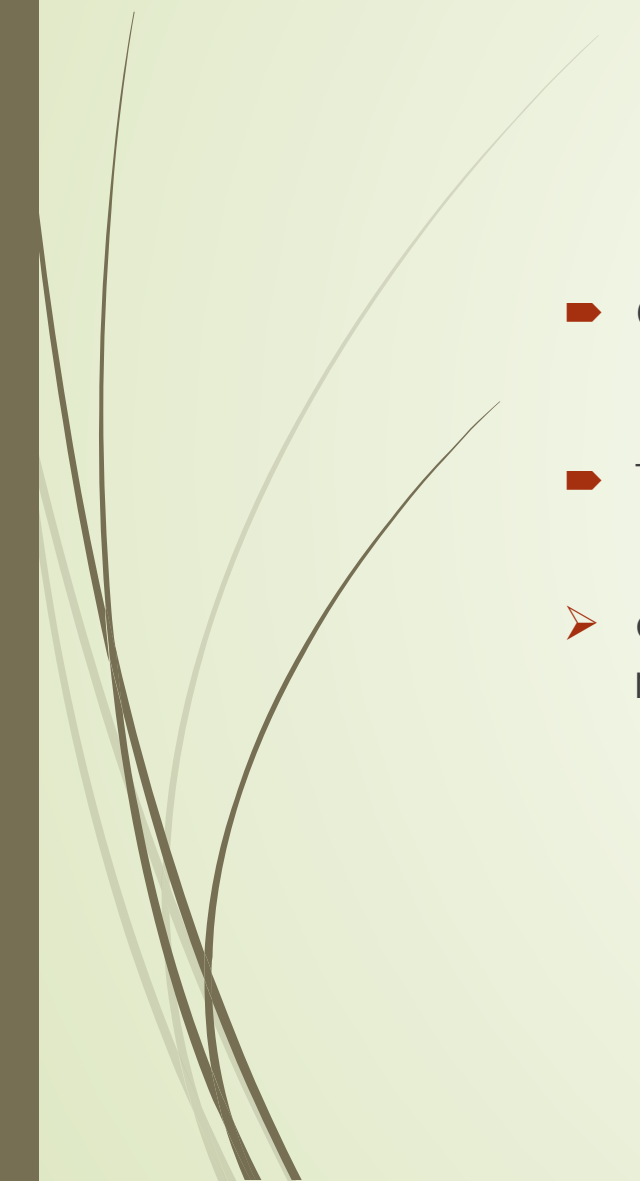
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Gender Summit, Mexico City  
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# Introduction

- ▶ Gender inequality is a pervasive feature in many countries
  - ▶ These gaps are present in several dimensions:
    - education, earnings, occupation, access to productive inputs, political representation, or bargaining power inside the household
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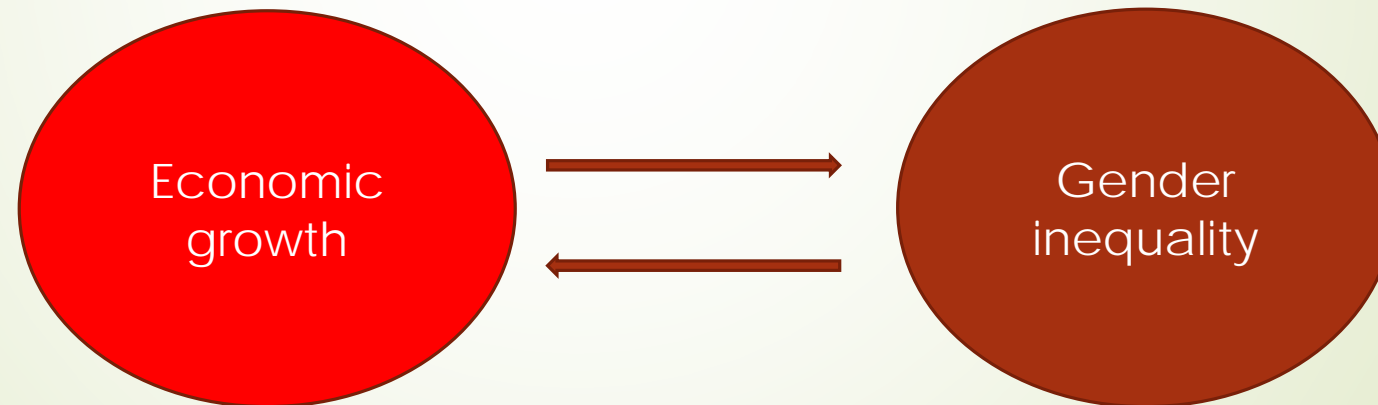
# Introduction

- Gender gaps in entrepreneurship are important and have been understudied:

	Female to male ratio	
	Employers	Self-employed
Central Asia	0.3	0.81
East Asia and Pacific	0.35	0.45
Europe	0.36	0.55
<b>Latin America and Caribbean</b>	<b>0.33</b>	<b>0.6</b>
Middle East and Northern Africa	0.11	0.25
South Asia	0.28	0.59
Sub-Saharan Africa	0.41	0.92

# Introduction

- ▶ We now know that, as countries get richer, many of their gender gaps get smaller
- ▶ But recent studies show clear evidence that also, a reduction in gender gaps makes countries richer

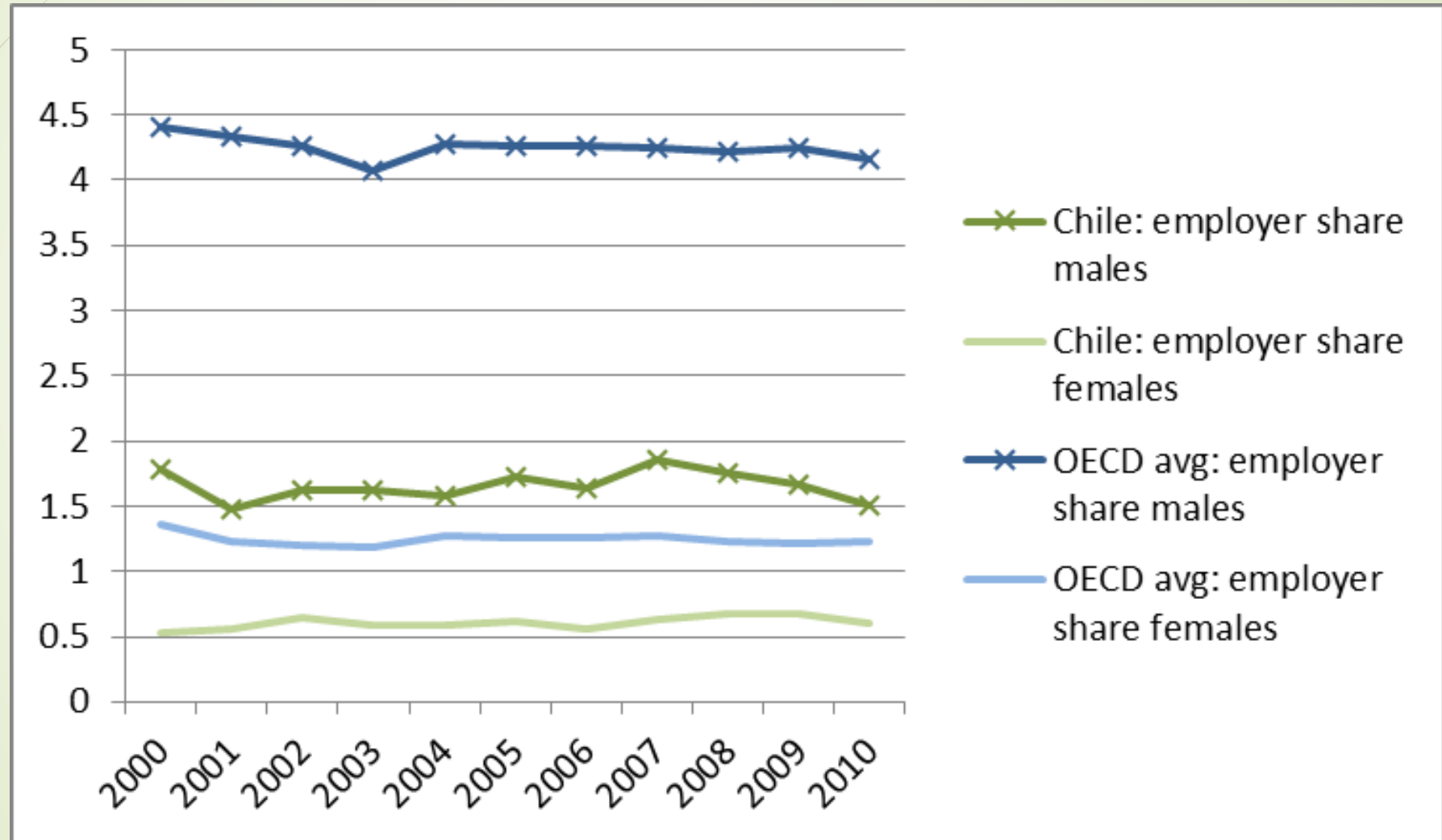




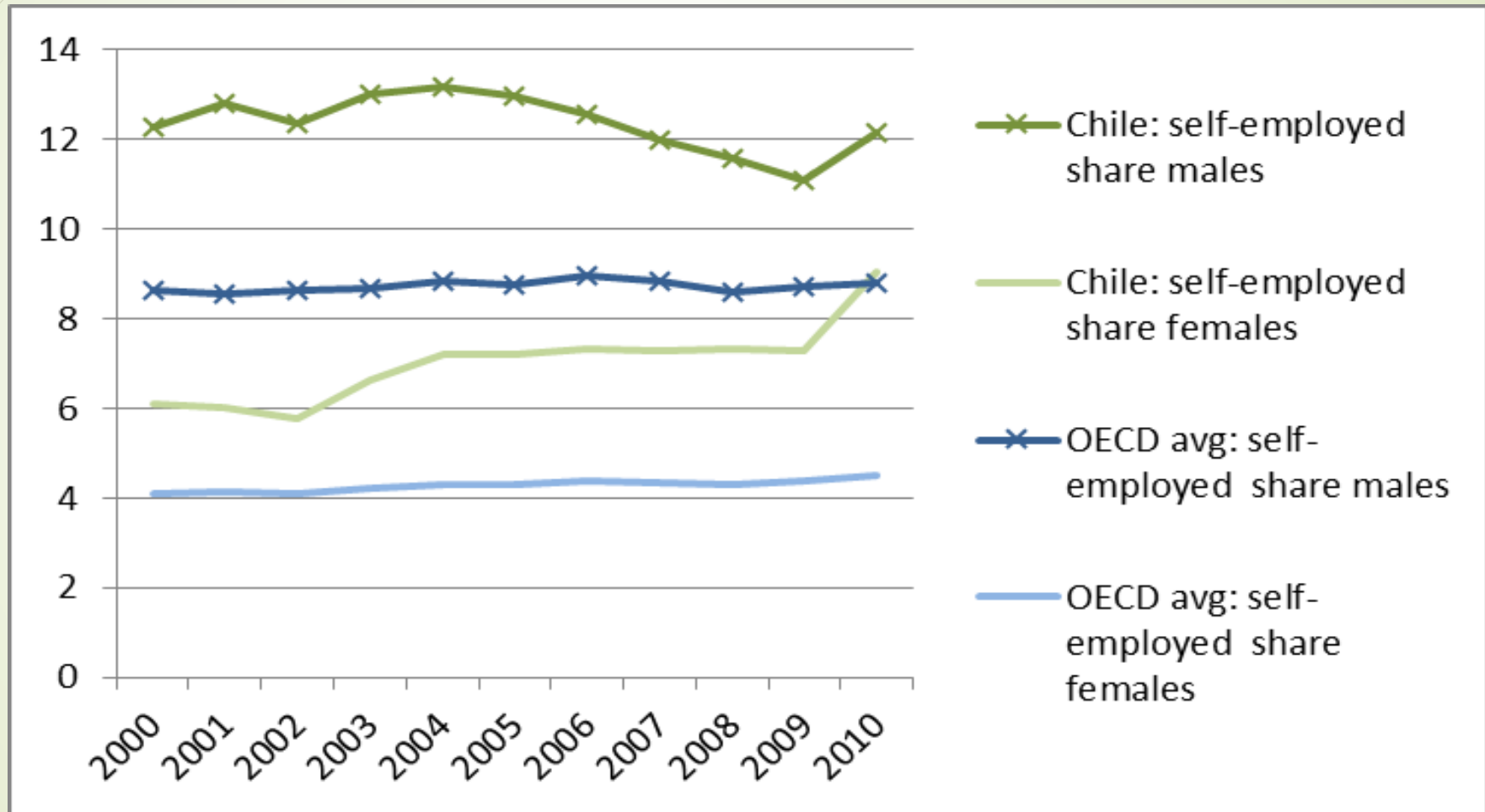
# This paper

- In this paper we document gender gaps in entrepreneurship in Chile and quantify the loss of efficiency associated with them
- We use data from the first wave of the Encuestas Longitudinales de Empresas (2007)
  - Detailed data on firms characteristics by gender
  - Data available for other years: ... (*in progress*)

# Employers gender gaps over time



# Self-employed gender gaps over time



# Employers gender gaps by education

	Ratio women/men	Gender gaps (%)
No formal education	0.81	19
Basic education	1.03	3
Average education in humanities	1.33	33
Average technical education	1.01	1
Technical education	1.23	23
Professional high school education	1.24	24
<b>College education</b>	<b>0.6</b>	<b>40</b>
<b>Postgraduate college education</b>	<b>0.39</b>	<b>61</b>



# Gender gaps in firms' size

- ▶ The data clearly shows that women run smaller firms than men

	Men (%)	Women (%)
Micro 1	61.5	76.8
Micro 2	16.2	14.2
Small 1	8.2	4.6
Small 2	9.7	3.6
Medium	2.8	0.6
Large	1.5	0.1

# Gender gaps in firms' size

	(1)	(2)	(3)	(4)	(5)
Sex	0.43*** (0.02)	0.37*** (0.03)	0.31*** (0.03)	0.27*** (0.02)	0.27*** (0.02)
Education		0.14*** (0.008)	0.15*** (0.008)	0.17*** (0.008)	0.16*** (0.008)
Age			-0.001 (0.001)	-0.001 (0.001)	-0.001 (0.001)
Experience			0.009*** (0.001)	0.007*** (0.001)	0.007*** (0.001)
Sector				-0.06*** (0.005)	-0.06*** (0.005)
Private national					-0.29 (0.64)
Private foreign					1.58*** (0.56)
Public					-0.03 (0.51)
Constant	1.37*** (0.02)	0.81*** (0.03)	0.72*** (0.007)	1.09*** (0.07)	1.39** (0.63)
Observations	9554	9554	9544	9544	9544
R <sup>2</sup>	0.03	0.1	0.1	0.13	0.14


# Gender gaps in firms' productivity

Sales per worker	(1)	(2)	(3)	(4)	(5)
Sex	0.41*** (0.13)	0.42*** (0.14)	0.35*** (0.15)	0.34** (0.15)	0.33** (0.14)
Education		0.14** (0.03)	0.15*** (0.03)	0.15*** (0.03)	0.14*** (0.03)
Age			-0.006 (0.006)	-0.007 (0.006)	-0.006 (0.006)
Experience			0.01* (0.007)	0.01* (0.007)	0.01* (0.007)
Sector				-0.02 (0.03)	-0.02 (0.03)
Private national					0.43 (1.2)
Private foreign					1.73*** (0.37)
Public					2.03*** (0.63)
Constant	9.26*** (0.11)	8.56*** (0.16)	8.61*** (0.32)	8.76*** (0.37)	8.35*** (1.18)
Observations	4715	4715	4711	4711	4711
R <sup>2</sup>	0.001	0.03	0.07	0.04	0.05




# Gender gaps in innovation

	Men (%)	Women (%)
Products	10.7	14.9
Services	11.1	9.6
Management	5.6	3.8
Processes	8.5	5.5
Marketing	5	5.1



# A model to calculate the costs of (some) of these gaps

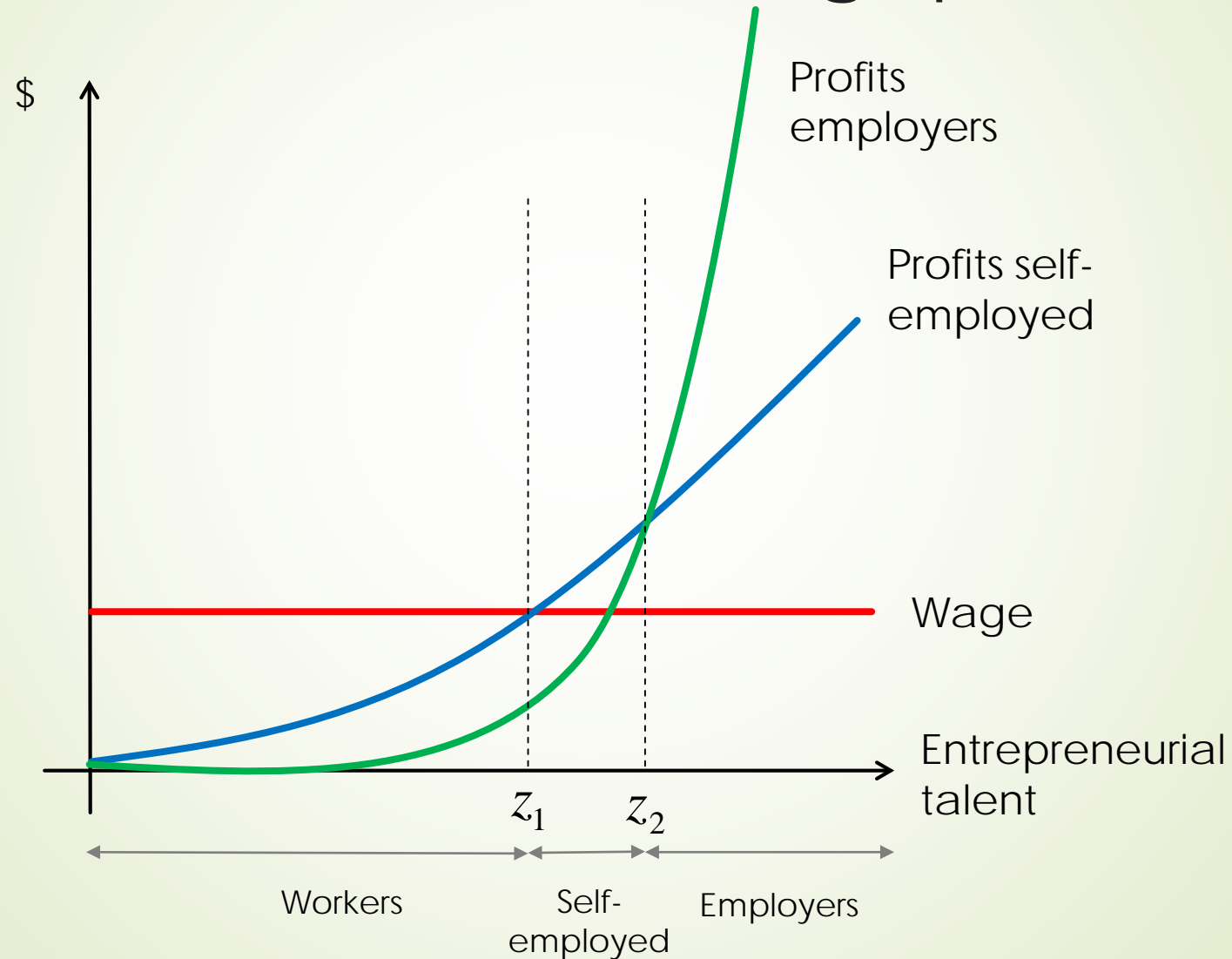
- ▶ Imagine an economy where there are men and women
- ▶ They have:
  - ❑ Some capital: machines that they can rent out to firms
  - ❑ Some time: they can use it to work
  - ❑ Some **talent** to run a firm



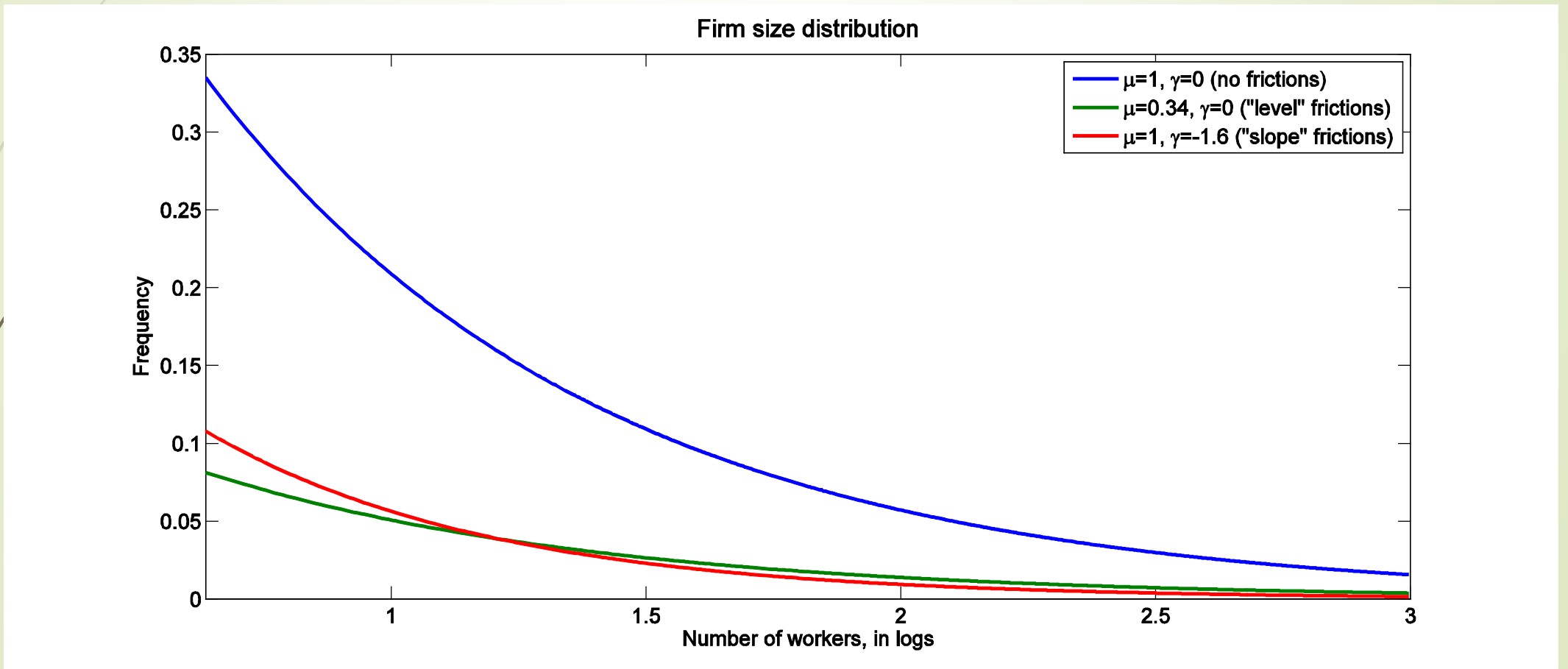
# A model to calculate the costs of (some) of these gaps

- ▶ This managerial talent is random: some people are born with more talent than others
- ▶ Technology is such that the most talented individuals run larger and more profitable firms
- ▶ This model then predicts that, if a random fraction of women face barriers to entrepreneurship, less able men will run large firms and aggregate production will be reduced


# A model to calculate the costs of (some) of these gaps



# A model to calculate the costs of (some) of these gaps







# A model to calculate the costs of (some) of these gaps

	Random exclusion	Exclusion increasing with talent
$z_1$	1.59	1.57
$z_2$	1.75	1.72
Employers earnings gap	0%	61%
Output loss	5.21%	7.53%



# Conclusions

- Using data from Chilean firms in 2007 we find evidence of:
  - Large gender gaps in the number of employers, especially so for the most educated population
  - Large gender gaps in firm's size and productivity
  - Some gender gaps in innovation
- When we quantify the costs associated with entrepreneurship gender gaps in Chile we find large losses in productivity