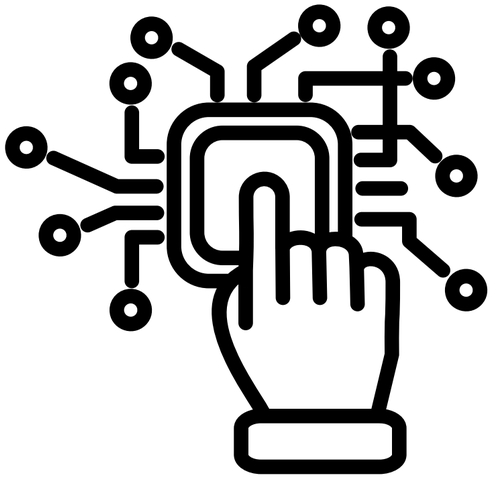
# Understanding the Gender Gap in Internet Access within Companies: The Role of ICT Investment

Dámaris Asanza & Pedro Luzuruaga

# Introduction

In today's digital workplace, Internet access is essential for productivity, skills development and career advancement. However, a significant gender gap in digital access persists in many companies, influenced by a variety of organizational and social factors.

Investigating these contributing factors and exploring how greater investment in Information and Communication Technologies (ICT) can help close this gap, allows for a more inclusive and equitable work environment. Thus, what factors influence the gender gap in Internet access within companies, and what role does ICT investment play in mitigating this gap?



# ▶ Objectives

- To analyze the factors contributing to the gender gap in internet access within companies and assess the potential of ICT investment to reduce these disparities and promote equal digital access for all employees.

**Specific objectives**

**Identify** the main factors contributing to the gender gap in internet access within companies.

**Examine** the relationship between company investment in ICT and equitable internet access across genders.

**Evaluate** how ICT investment can help mitigate gender disparities in digital access

# Methodology

To analyze the influence of economic sectors on investment in computer technologies, the following methodology was applied:

- Data Source: We utilized data from the Ecuadorian National Employment, Unemployment, and Underemployment Survey (ENEMDU), providing a reliable basis for understanding sectoral differences in technology investment. The National Survey on Science, Technology and Innovation from 2015 was used.

# Methodology

- Key Variables:
  - Number of Computers within each company.
  - Investment in Technology by each company.
  - Company Size, classified to account for scale and resources.
  - Number of employes
- Statistical Analysis: We conducted a linear regression analysis to explore the relationships between company size, the number of computers, and investment levels, aiming to quantify the impact of economic sector characteristics on technology spending.

# Results and discussion

```
Call:
lm(formula = (tic41_personal_comp_m + tic42_personal_comp_h) ~
    inversion_total, data = data_filtrada)

Residuals:
   Min     1Q Median     3Q    Max
 -86.6  -68.6  -19.6   -5.6 6647.4

Coefficients:
                Estimate Std. Error t value Pr(>|t|)
(Intercept)      155.814     13.310  11.707  < 2e-16 ***
inversion_total  -69.259      9.413  -7.358 2.36e-13 ***
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Signif. codes:  0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Residual standard error: 252.7 on 3243 degrees of freedom
Multiple R-squared:  0.01642,   Adjusted R-squared:  0.01612
F-statistic: 54.14 on 1 and 3243 DF,  p-value: 2.357e-13
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Call:
lm(formula = (tic61_personal_int_m + tic62_personal_int_h) ~
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Residuals:
   Min     1Q Median     3Q    Max
 -78.1  -62.1  -17.1   -5.1 6655.9

Coefficients:
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(Intercept)      140.342     12.871  10.903  < 2e-16 ***
inversion_total  -62.239      9.103  -6.837  9.6e-12 ***
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Residual standard error: 244.4 on 3243 degrees of freedom
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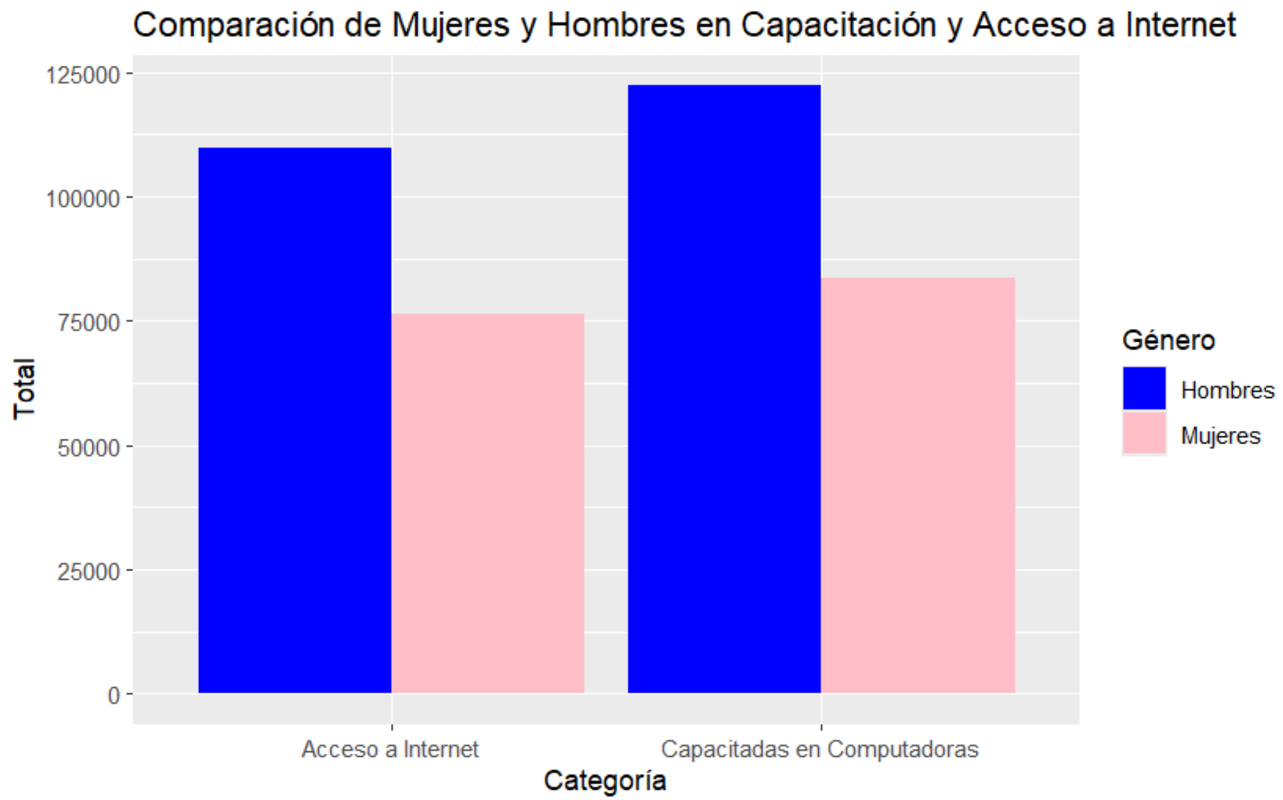
# Results and discussion



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# ▶ Results and discussion

- **Intercept:** Predicts ~156 employees trained without any IT investment.
- **Investment Coefficient:** Indicates an inverse relationship; for each unit increase in investment, the model predicts ~69 fewer trained employees. This may suggest a reallocation of resources or competing priorities affecting training availability.
- **Fit & Significance:** With an R-squared of 1.6% and a highly significant p-value, the model shows statistical significance but weak explanatory power.

- **Intercept:** Predicts ~140 employees with internet access without any IT investment.
- **Investment Coefficient:** Similarly shows an inverse effect, with ~62 fewer employees gaining internet access per unit of investment increase. This might indicate investment going towards non-access initiatives or other influencing factors.
- **Fit & Significance:** With an R-squared of 1.4% and a highly significant p-value, this model also indicates a weak but statistically significant relationship.

# Results and discussion

- Key Variables:
  - Number of Computers within each company.
  - Investment in Technology by each company.
  - Company Size, classified to account for scale and resources.
- Statistical Analysis: We conducted a linear regression analysis to explore the relationships between company size, the number of computers, and investment levels, aiming to quantify the impact of economic sector characteristics on technology spending.

# Conclusions

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# References

SIES. (2015). Banco de Información. Gob.ec. Recuperado el 29 de octubre de 2024, de https://aplicaciones3.ecuadorencifras.gob.ec/BIINEC-war/index.xhtml