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How employee churn drives the labor market dynamics: an initial descriptive investigation using firm-level evidence from Costa Rica

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Leaders in attracting new foreign investment (Greenfield FDI)

Costa Rica attracts near 13 times the amount of new FDI that could be expected given the size of its economy

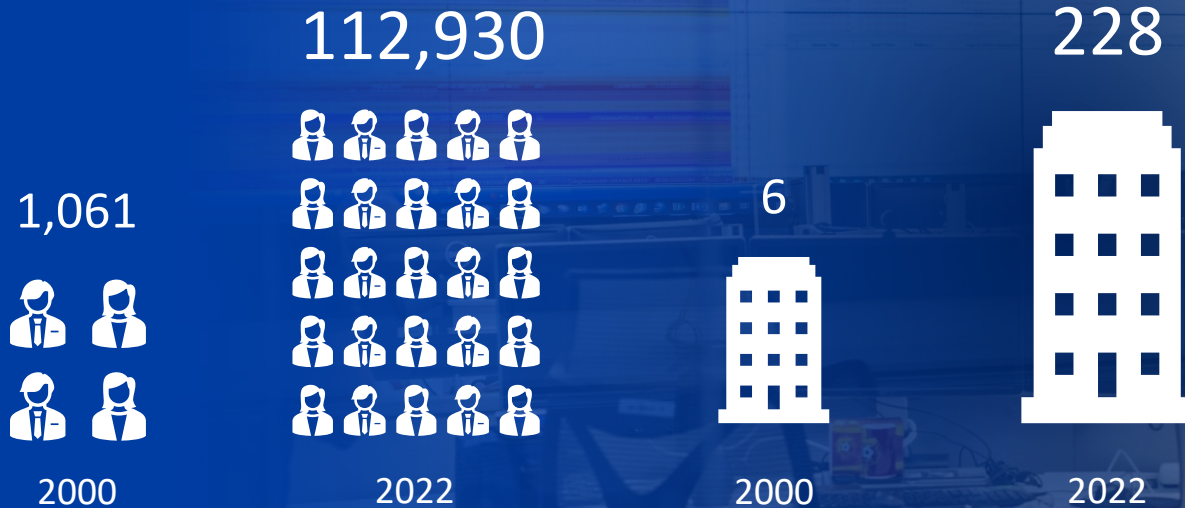
GREENFIELD FDI PERFORMANCE INDEX – BEST PERFORMERS

#1 Costa Rica 12.7	#2 North Macedonia 11.9	#6 Armenia 6.9	#8 Lithuania 5.5		
		#7 Portugal 6.2	#9 Malta 5.4		
#3 UAE 11.1	#4 Serbia 7.8		#10 Singapore 4.9	#12 Bulgaria 4.8	
	#5 Georgia 7.3		#11 Cyprus 4.9	#13 Namibia 4.6	#14 Rwanda 4.4

Source: FDI Markets, en FDI Intelligence, "Greenfield Performance Index 2023"

A thriving sector

Growth in employment level & number of companies
evidence a highly dynamic sector



Compared to 2000, employment level has grown 106 times and the number of companies has grown 38 times



6.4% OF GDP IN EDUCATION

In 2019, Costa Rica committed 12.8% of total government expenditure to Elementary, high school and post-high school education. Compared to the average 10.6% of OECD countries
(Source: OECD, 2022)

#1 Human Capital, Workforce Skills and Quality of Education in Latin America *(Global Competitiveness Report, WEF, 2019)*

#1 Digital skills of the population in Latin America, we are digitally savvy *(Global Competitiveness Report, WEF, 2019)*

#1 Skills of current and future workforce in Latin America *(Global Competitiveness Report, WEF, 2019)*

#1 English skills as proven by highest scoring in TOEIC in Latin America *(ETS, 2022)*





Are the separations due to deficient skills the norm of the industry?

How much of the employment corresponds to replacement hires?



Our Database

- Data collected by the Social Security Fund (CCSS) on reported salaries and employment per company for all those who comply with the mandatory social charges.
- Anonymized at the employee and company level.
- +400 CINDE-supported foreign companies (57% come from the services sector) with a total of more than 179,000 employees (63% from the services sector) for 2022.
- Labor force considered according to different categories such as age group (classified as 18-29, 30-39, and 40+), gender, company ISIC, and degree of specialization.



Are the separations due to deficient skills
the norm of the industry?



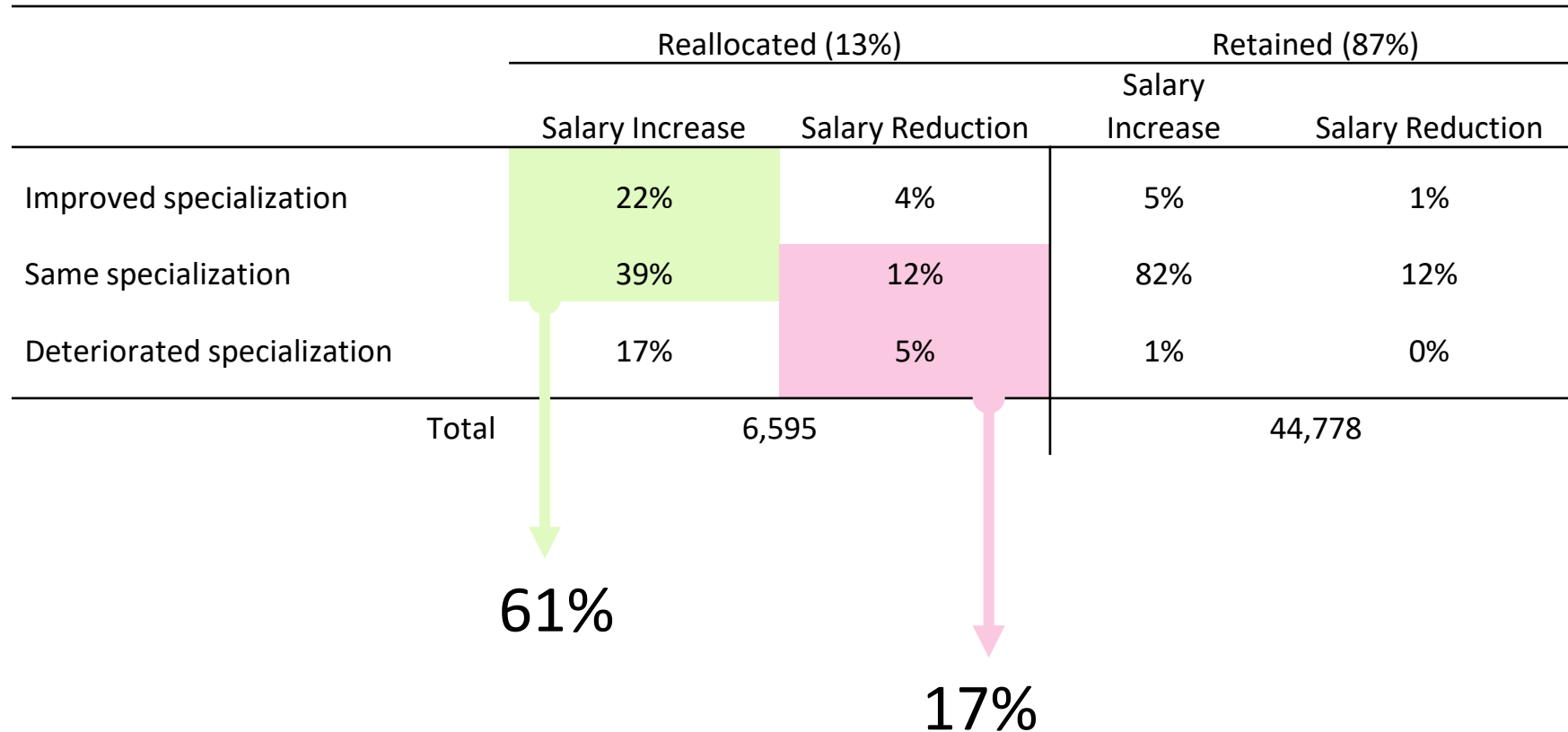
Description and Delimitations

- Evaluation of the change of salary and specialization of workers who moved from one company to another in the specific period. Considering only:
 - ✓ Workers with one job per period
 - ✓ In CINDE-supported companies
 - ✓ Wages between ₡352,165 (minimum legal wage) and ₡6,000,000.

	Reallocated		Retained	
	Salary Increase	Salary Reduction	Salary Increase	Salary Reduction
Improved specialization	Promoted	Atypical	Promoted	Uncompensated
Same specialization	Salary increase	Deterioration	Salary increase	Uncompensated
Deteriorated specialization	Atypical	Deterioration	Atypical	Deterioration

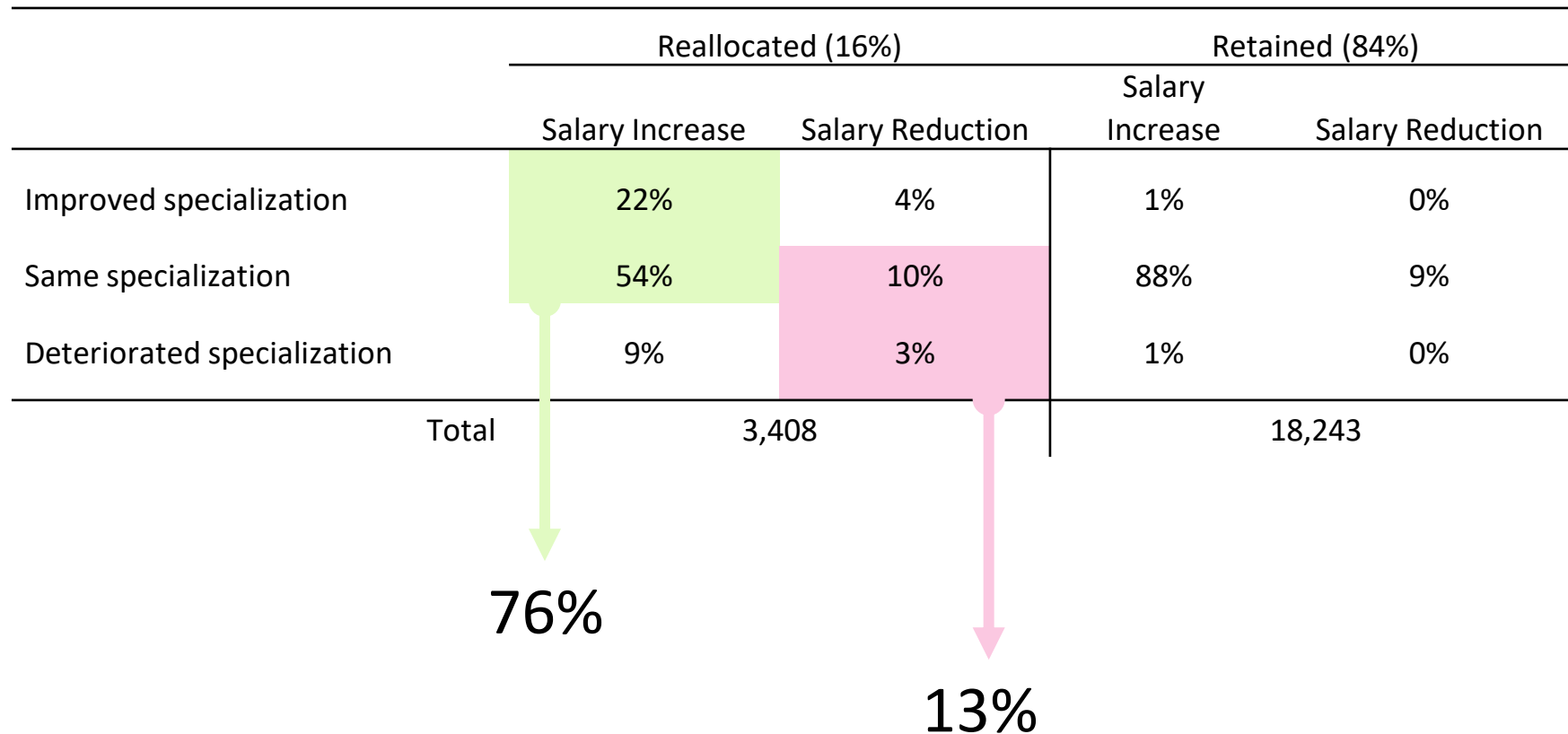


Reallocations in the Corporate Services Sector, 2022





Reallocations in the Digital Technologies Sector, 2022



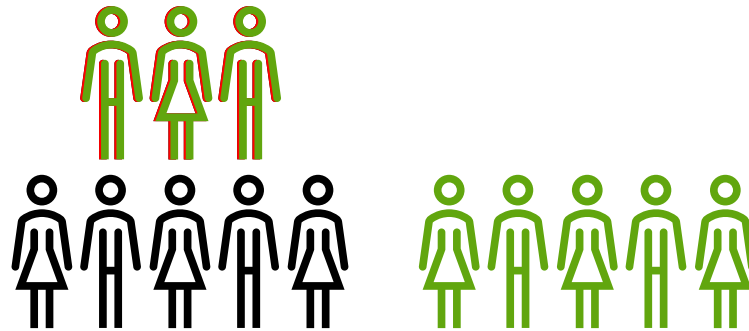


How much of the employment corresponds to replacement hires?



How to analyze replacement hires?

- Hires occur for two reasons—to grow a business and to replace those who have left. What is not expansion, is churn.



Separations: 3

Hirings: 8

- Churn is defined as the hires and separations that offset each other within a business. Thus, churn is defined formally as the minimum of hires and separations by the employer i in a given time period t (Lazear and McCue, 2018).



Why analyze churn?

- It allows workers to move to their more productive use.
- Includes mobility of non-expanding/non-decreasing companies.
- Although churn has no direct effect on employment growth, understanding churn helps provide a clearer picture of what happens to the labor market when the economy slows and when it recovers.

For this analysis we use the churn rate

$$\frac{\text{Min}(H_{it}, S_{it})}{2021, 2022 \text{ AVG Employment}}$$



Churn Rates

Corporate Services

- Higher for less specialized jobs (avg of 15.5% vs 11.5%).
- Tends to be smaller for women.
- Tends to be higher for age groups <40.

Digital Technologies

- Higher for less specialized jobs but reallocation varied less (avg of 13.4% vs 12.1%).
- A pattern between sexes is less discernible for age groups <40.
- Tends to be higher for age groups <40.



Services and Manufacturing Comparison

Mobility

- Labor force in services (CS 13%, DT 16%) mobilized more than in manufacturing (MA 3%, LS 8%).

Churn Rate

General

- Corporate Services had a seemingly COVID-19 (2020) pandemic-induced decrease in churn.

Characterization

- Older age groups tend to reallocate less in all sectors. Age group of <30 in less specialized positions tend to have higher churn rates in manufacturing and life sciences.
- No discernible pattern between sexes for manufacturing subsectors.



Key Remarks

1

For 2022, mobilization occurred primarily in services

2

Separations in services mostly obeyed to allocation for more productive uses

3

Due to 2, less specialized positions had the biggest churn

4

More information is needed to confirm patterns between churn and sex

5

Younger age groups tend to have higher churn rates



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