

The student loan reform in Chile: Simulating Users and Repayment Dynamics of the New Higher Education Financing Instrument (FES)

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# The research team



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# The UCL Knowledge Exchange Initiative: Evaluating Chile's Student Loan Reform

UCL Knowledge Exchange Initiative, is a project co-funded by University College London and the Undersecretary of Higher Education of Chile. This collaborative effort aims to evaluate the design of Chile's student loan reform, leveraging international expertise, comparative perspectives, and economic simulations of student funding policy. Our project, spanning from June 2024 to July 2025, represents a unique opportunity to connect with partners beyond the university and exchange ideas, evidence, and expertise in the realm of higher education finance.



# How to evaluate a good loan design?

Access	<ul><li>How many people can access financial aid?</li><li>Are the benefits big enough to cover education costs?</li></ul>			
Affordability	<ul><li>Can people pay back to loan without financial stress? (RBs)</li><li>What happens if beneficiaries cannot repay?</li></ul>			
Sustainability	•Can the system be delivered in a sustainable and affordable way for government?			
Efficiency vs Equity	• Can the government recover sufficient resources in a fair way?			

### What do we evaluate?

**Recovery rate (RR):** the proportion of the loan that is repaid by each student over time. When it is aggregated, it provides a measure of the overall sustainability of the loan system.

**Repaymen Burden (RB):** measure the share of a borrower's income allocated to loan repayment in a given period ( key indicator of affordability/repayment hardship )

**Repayment stream (RS):** Total amount student pays over the course of the loan.

Government Subsidy (GS) represents costs for government. It measures the proportion of government costs that will not be recovered.

# Methods: building the data set



SIES Data

2017 new enrollments tracked until graduation or dropout

Projections for students still enrolled between 2024-2029



Financial Support Records

Student with CAE, FSCU, scholarships, and free education information



Tuition and Degree Data

2025 regulated tuition rates and fees by institution and carrera (*código único*)



Income Data (2022-2023)

Baseline income levels from AFP and AFC records

### What do we simulate?

Graduate's income projections linked to loan history using best available Chilean administrative data and advanced statistical techniques

Simulations of FES implications and comparison of FES vs CAE

Sensitivity analysis: simulations of different parameters of FES under different economic scenarios

What we do not simulate:

1) The adequacy of regulated rates and how these affect the sustainability of HE institutions.

2) Institutional behaviour: inclusion of new institutions in FES or the Free-Tuition policy.

# Median Income profiles (\$2025 prices)



Graduate income projections show that median net incomes for graduates are high, but we also see there is **huge variation in net income around that median**.

Net incomes are higher for men than women, and this is particularly true at the top of the income distribution.

There is also significant variation by degree type, with dropouts earning significantly less than those who complete their qualification

# Distribution important to understand repayment stress



University Graduates

### Assumptions of simulations

- Follow legislation parameters exactly
- Assume all institutions accessing CAE and FREE in 2025 will participate in FES
- Real wage growth? Assume 2% real on average per year consistent with real earnings growth of higher education graduates since 2017.
- Which cohort are we simulating for? 2027 in our illustration.
- What are the number of enrolments in different universities (use MINEDUC projections) and dropout rate (assume same as for 2017 cohort of students)
- Assume payments to universities by *código único* are same as in 2025 and will be uprated by inflation
  - o Report includes lots of sensitivity analysis (e.g. 5 other wage growth assumptions)

# Overall findings

- Government will recover around 94% of its outlays in our baseline scenario for FES (this is also close to the mean outcome in our sensitivity analysis)
- The reform is progressive, with higher earning graduates contributing more than lower earning graduates - there is built in insurance
- Revenue streams will accrue more quickly, on average, compared to CAE
- Students will be required to pay slightly less on average under FES than CAE (though certain groups will pay significantly more and this ignores CAE default)
- No student will face repayment hardship unlike with CAE

#### Recovery rates (RRs)



--- Decil al que pertenece el egresado dado sus ingresos

Repayment by the decile of origin appear relatively similar across all groups. Potentially explained because students from lower-income backgrounds will only access FES after their free-tuition entitlement is exhausted, taking FES for one or two years.

Analysing repayment by the decile based on their labour market income, we see the policy is highly progressive: individuals in higher-income deciles (based on 20 years of earnings when they first enter the labour market) repay a greater share of their loans, and full loan recovery is achieved for those in the sixth decile and

### Recovery rates (RRs)

Promedio por grupo de la proporción del FES pagado



#### Hombres 160 153.56 140-130.37 120 116.34 100-93.79 80-73.02 62.29 60 48.18 40 20 0 Universitario graduado Profesional graduado Universitatio desertor Profesional desertor Techico graduado Techico desentor

The overall recovery under the simulated scenario is 93.8%. This suggests that, under the currently proposed parameters, the new system would be almost selfsustaining in the long run.

On average, graduates from all institution types repay approximately the full cost of their degree.

Nevertheless, there are a minority group of individuals who repay more than 2 times the cost of their degrees, particularly among university graduates.

# Recovery rates (RRs)

Proportion of the degree that paid by students

Proporción de la carrera pagada	Porcentaje de estudiantes	N de estudiantes (N:121,452)
1.5	16.6%	20,165
2.0	7.1%	8,654
2.5	3.2%	3,929
3.0	1.6%	1,909
3.5	0.8%	945
4.0	0.4%	469
4.5	0.2%	248
5.0	0.1%	136
5.5	0.1%	73
6.0	0.0%	40
6.5	0.0%	25
7.0	0.0%	10

The table presents the proportion and number of students who repay at least 1.5 times the cost of their degree.

16.6% of students are expected to repay 1.5 times or more of the degree cost (based on the regulated fee rate). This share drops sharply when considering those who repay two times or more, showing that less than 1% of the debtors pay 3.5 times of the cost of their degree.

These results suggest that introducing a cap on total

### Repayment streams

Pago promedio por estudiante bajo el FES por grupo y género



On average, students repay CLP 12,642,000. University graduates have the highest average repayments.

Among professional and technical degree graduates, average repayment rates are relatively similar across genders.

12.642

Dropouts have the lowest average repayments due to lower salaries and shorter repayment periods. Technical dropouts pay the smallest amounts on average and university dropouts the highest within that group. Across all categories, males repay more on average than females.

# Government subsidies



On average both genders received a gov. subsidy of CLP 1,606,000 per student. These results are a design feature of an incomecontingent loan which aims to balance fiscal sustainability with equity by protecting low earners while relying on higher earners to contribute a greater share.

Among males, the average subsidy is negative for graduates, with the exception of dropouts (CLP 10,458,000 per student). For females, the subsidy is positive in all cases, except for professional

# Repayment burden (RBs)



The repayment burden (RB) paid by FES borrowers is 3.8% of their salary, with a min of 0% and a max of 8%.

Males have a higher repayment burden (4.2%), which is expected given their higher average salaries compared to females (3.7%).

RB is higher for males than for females across all groups.

The data supports the conclusion that the **FES is a highly progressive policy,** where individuals with higher incomes—such as males

# Repayment years (RYs)



On average debtors will contribute 12.8 years to FES with a max of 20 years

Technical graduates will repay their loans in 11.4 years on average, 3 years longer than dropouts (8.3).

Professional graduates, on average, will repay in 12.5 years, 1 year more than their dropout counterparts (11.5).

Finally, university graduates repay for 15 years, 1.2 years longer than university dropouts (13.8).

#### Comparison with CAE

- Only use students that are eligible for CAE
- Borrow same amount under FES as they did with CAE o If only take 50% of available loan then adjust term of loan by 50%
- This is based on scenario 1 in report, but the comparison is based on smaller sample as excludes scholarship holders and FSCU individuals who will also get FES in scenario 1.

### Comparison findings

- FES will raise virtually the same amount as CAE (assuming everyone in CAE paid all their installments)
  o But we know around 60% of CAE are in default
  o This ignores the cost to government of the guarantee
  FES will ultimately raise more money for government
- Payments streams will come in faster with FES than CAE
- There will be no repayment hardship built in insurance for all loan holders (RB can't exceed 8% cf CAE)

# Cumulative average repayment streams: CAE vs FES



# Comparison of RBs: CAE vs FES



# Summary of sensitivity analysis (288 simulations)

Outcome	Mean	Standard deviation	Minimum	Maximum
Recovery rate (%)	93.2	10.2	75.6	117.0
Average repayment (CLP 000)	11,386	1,739	8,356	15,927
Per person cost (CLP 000)	1,320	1,235	-1,901	3,957

# Conclusions (advantages of FES)

The analysis shows that FES will substantially improve equity and efficiency of higher education funding system.

Compared to CAE, the FES reduces the average repayment burden (14.34% vs 3.97%) particularly for those from the bottom of the earnings distribution

The system ensures that no graduate pays more than 8% of income in any month, and repayments automatically adjust to earnings, providing protection against low incomes and unemployment.

Under a baseline scenario with 2% real earnings growth, the government would recover approximately 93.8% of FES expenditures, significantly higher than current CAE recovery rates.

Around 60% of debtors are expected to pay less under FES than under CAE.

FES offers a more progressive and financially sustainable model for higher education funding in Chile but....

# Remaining challenges

- Some high-income graduates may end up repaying several times the cost of their degree particularly those with high earnings who receive support for the maximum number of semesters and remain in repayment for the full 20-year period.
- Excessive overpayment might mean the system loses important graduates from the system to be sustainable and fair, the FES needs to keep future high earning graduates in the system.
- The introduction of an optimal cap, that protects high earners from excessive overpayment without reducing government revenues seems fundamental and relatively easy to do.
  - Any cap will of course bring in less revenue, but there are other small changes that could also be made to offset this revenue loss in a fair and equitable way
  - We have illustrated one option in this paper and simulated many more, but other options may achieve the same outcome in a better way.



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