

# Stylized facts on financial capabilities of university students: Evidence of survey at UdeC Chillan Campus

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# Introduction

- Over the last two decades Financial literacy has been acquiring an increased importance. As an example the World Bank, the IDB, the OECD among other international entities have done some research on the economic importance of this topic.
- *Lusardi & Mitchell (2011)* show the negative impact of poor financial literacy on nations budget, specifically related to pension decisions.
- *Xu & Zia (2012)* y *Lusardi & Mitchel (2013)* give a panoramic view of financial literacy around the world, stressing that the major unresolved issue is how to measure the impact of financial literacy programs and strategies.

# Survey design

- The idea of the survey is to enable us to have an assesment of the financial capabilities (knowledge, attitudes and behavior) of the university students.
- A brief version of the OECD survey on financial capabilities was used giving us comparability with a set of national surveys.
- UdeC decided to apply the survey to all the students in their 1st, 3rd and 5th year. The survey was taken by monitors using a digital platform.

# Data

- The survey was given between May and June 2017 to 651 students of UdeC Chillan Campus with some demographic questions in three areas: Knowledge, Attitudes and Behavior.

# Descriptive Statistics

Male	Female	Total
307	344	651

Table: Summary surveyed by sex

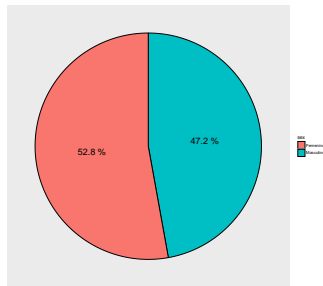


Figure: Percent surveyed by sex

# Descriptive Statistics

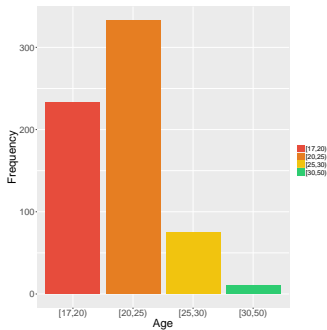


Figure: Distribution surveyed by range age.

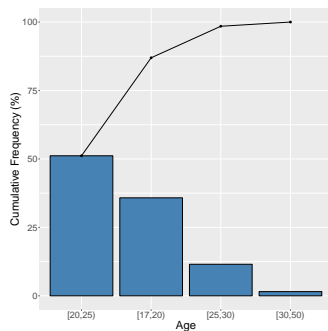


Figure: Pareto chart by range age.

# Results

Concept	Mín	1er.Q	Med	Av	3er.Q	Máx	Std
Knowledge	0	5	6	5.8	7	8	1.33
Attitudes	0	2	2	2.3	3	5	1.12
Behavior	0	3	6	5.1	6	8	1.65
Total	0	12	14	13.2	15	20	2.83

Table: Summary statistics about scores



# Results

Concept	UDEEC	SBIF-CAF	
		Nacional	18-29
Knowledge	5.8	5.12	5.1
Attitudes	2.3	3.03	3.21
Behavior	5.1	5.83	5.62
Total	13.2	13.98	13.93

Table: Average score

## Results

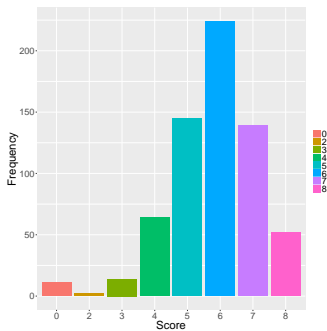


Figure: Score about knowledge financial

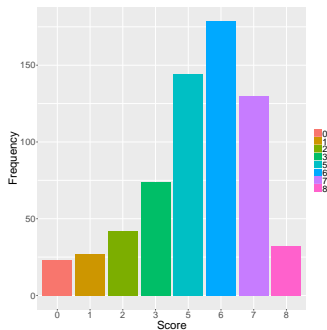


Figure: Score about behavior inancial

# Results

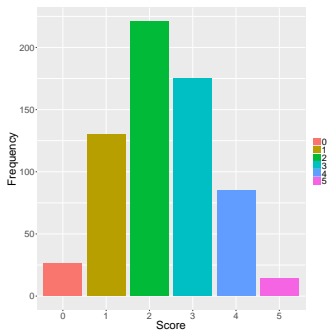


Figure: Score about attitudes financial

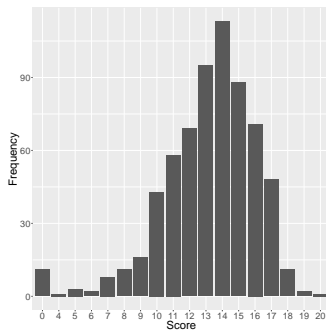


Figure: Score final

## Results

	Edad	Sexo_Masc	Sexo_Fem	Casado	Conviviente	Soltero	Periodo	Ingreso_1	Ingreso_2	Ingreso_3	Ingreso_4	Ingreso_5	Ingreso_6	Ingreso_7	Trabaja_Si	Trabaja_No	Agronomia	Enfermeria	Ing_Agro_Ind	Ing_Amb	Ing_Agr	Ing_Com	Ing_Alim	Veterinaria	PUN_CON	PUN_COM	PUN_ACT	PUN_TOTAL			
Edad	100	-6	6	22	18	33	-24	68	-8	2	3	6	3	-1	-7	26	-26	22	-13	-11	1	-15	-14	-2	6	17	10	8	-3	-9	
Sexo_Masc	-6	100	100	-3	-1	-4	1	-10	-4	-3	5	4	-5	8	-1	12	-12	10	-7	20	4	4	13	8	-3	-9	14	0	1	7	
Sexo_Fem	6	100	100	3	1	4	-1	10	4	3	-5	-4	5	-8	1	-12	-12	7	20	-4	-13	-8	-3	-9	14	0	-1	-7			
Casado	22	-3	3	100	-1	0	-35	-3	1	-1	6	-3	-2	-2	4	-4	4	3	-3	-1	-2	-2	6	-1	2	-4	-2	8	0		
Conviviente	18	-1	-1	100	-1	0	-66	15	-2	2	4	-2	-1	2	-4	8	-8	5	-6	0	5	-5	-4	-1	-1	5	7	-6	5		
Separado	33	-4	4	0	-1	100	-18	3	8	-3	-2	-1	-1	-1	-1	2	-2	-2	-1	-2	-1	-1	-2	0	9	3	-6	-1	-3		
Soltero	-24	1	-1	-35	-66	-18	100	-9	1	-1	6	5	2	1	0	-9	9	-4	4	2	6	4	2	6	-2	5	-6	-3	-7		
Periodo	68	-10	10	-3	15	3	-9	100	-15	-1	3	10	7	0	-2	22	-21	21	-20	-10	4	-18	-18	11	2	15	13	6	-8	7	
Ingreso_1	-8	-4	4	1	-2	8	1	-15	100	-32	-23	-16	-16	-10	-13	5	-5	-1	1	-2	1	-3	-5	-3	-10	-3	3	3	2		
Ingreso_2	2	-3	3	-1	-2	-3	-1	-1	-32	100	-32	-22	-22	-14	-18	0	0	-2	-2	2	3	4	10	-5	0	-3	-1	5	-2	2	
Ingreso_3	3	5	-5	6	4	-2	-6	3	-23	-32	100	-16	-16	-10	-13	-2	2	5	1	-2	-2	4	-6	2	3	-4	1	5	2	5	
Ingreso_4	6	4	-4	-3	-2	-1	5	10	-16	-23	-16	100	-11	-7	-9	4	-4	-5	-4	-2	8	-2	0	7	-2	2	5	-1	-5	1	
Ingreso_5	3	-5	-3	-1	-1	2	7	-16	-22	-16	-11	100	-7	-9	2	-2	-2	0	4	-5	-6	-3	1	6	5	-3	-11	-6	-13		
Ingreso_6	-1	8	-8	-2	-1	1	0	-10	-14	-10	-7	-7	100	-5	-3	5	4	-1	-3	-4	-2	2	-1	-5	4	-7	0	-2			
Ingreso_7	-7	-1	1	-2	-4	0	0	-2	-13	-18	-13	-9	-9	-5	100	-10	10	-1	5	1	-4	-1	1	-5	-2	-6	-2	-3	-1	-2	
Trabaja_Si	26	12	-12	4	8	2	-9	22	5	0	-2	4	3	-10	100	-100	17	-17	-13	4	-6	1	6	-7	5	4	11	-3	8		
Trabaja_No	-26	-12	12	-4	-8	-2	9	-21	-5	0	2	-4	-2	3	10	100	100	-17	17	14	-6	6	-1	-6	7	-5	-4	-11	3	-8	
Agronomia	22	10	-10	-4	5	-2	-4	21	-1	-2	5	-5	-2	5	-1	17	-17	100	-20	-21	-8	-16	-13	-26	-4	-23	9	7	0	9	
Derecho	-13	-7	7	3	-6	-1	4	-20	1	-2	1	-4	0	4	5	-17	17	-20	100	-15	-6	-12	-9	-19	-3	-16	3	3	4	2	
Enfermeria	-11	-20	20	-3	0	-2	2	-10	-1	2	-2	-2	4	-1	1	-13	14	-21	-15	100	-6	-12	-9	-19	-3	-17	-10	-8	-11	-14	
Ing_Agro_Ind	1	4	-4	-1	5	-1	-6	4	-2	3	-2	8	-5	-3	-4	4	-6	-8	-6	-6	100	-5	-4	-7	-1	-7	-3	3	1	6	
Ing_Amb	15	4	-4	-2	-5	-1	4	-18	1	4	4	-2	-6	-4	-1	-6	6	-16	-12	-12	-5	100	-7	-15	-2	-13	-10	-5	5	1	
Ing_Agr	-14	-13	-2	-4	-1	2	-18	-3	10	-6	0	-3	-2	-1	1	-13	-9	-9	-4	-7	100	-12	-2	-10	-1	-5	-3	-5			
Ing_Com	-2	8	-8	6	4	-2	-6	11	-5	-5	2	7	1	2	5	6	-6	-25	-19	-19	-7	-15	-12	100	-3	-21	17	8	2	14	
Ing_Alim	6	3	-3	-1	0	2	2	-3	0	3	-2	6	-1	-2	-7	7	-4	-3	-3	-1	-2	-2	-3	100	-3	3	2	2	2		
Veterinaria	17	-9	9	2	-1	9	2	15	10	-3	-4	2	5	-5	-6	5	-5	-23	-16	-17	-7	-13	-10	-21	-3	100	-8	-7	2	7	
PUN_CON	10	14	-14	-4	5	3	-13	-3	-1	1	5	-3	4	2	4	-4	9	-3	-10	-3	-10	-1	17	3	-8	100	23	14	6	7	
PUN_COM	8	0	0	-2	7	-6	-6	3	5	5	-1	-11	-7	-3	11	-11	7	3	-8	3	-5	-5	8	2	-7	23	100	4	79		
PUN_ACT	-3	-1	1	8	-6	-1	-3	-8	3	-2	2	5	-6	0	-1	-3	0	4	-11	1	5	-3	-2	-2	2	14	4	100	46		
PUN_TOTAL	9	7	-7	0	5	-3	-7	7	2	2	5	3	-11	-2	-2	8	-8	9	2	-14	1	-6	-5	14	2	-7	67	79	46	100	

# Logistic regression

We tried to find if survey scores, among other variables, allow us to explain delinquency rates:

$$P(X) = \frac{1}{1 + e^{-(\beta_0 + \sum_{i=1}^K \beta_i X_i)}}$$

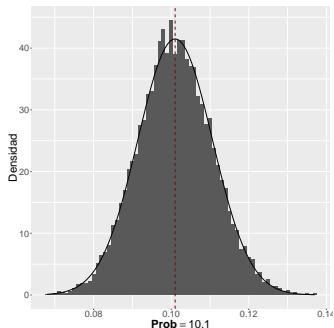


Figure: Distribution surveyed in default

# Logistic regression

	<i>Variable Dependiente:</i>		
	<i>P(Y<sub>i</sub> = x X)</i>		
	<b>Modelo 1</b>	<b>Modelo 2</b>	<b>Modelo 3</b>
Edad	1.056** (0.443)	0.402 (0.252)	0.416* (0.237)
Género	-1.190 (2.100)	-2.288 (1.945)	-2.051 (1.718)
Ingresos	0.418 (0.509)	0.041 (0.085)	0.062 (0.085)
Trabaja	-0.933 (2.155)	-3.429* (1.846)	-3.416* (1.834)
Período	-0.740 (0.731)	-0.065 (0.560)	-0.294 (0.535)
Carrera	0.258 (0.272)	0.346 (0.280)	0.360 (0.273)
Cred.Comerciales	-0.00000* (0.00000)	-0.00000 (0.00000)	-0.00000 (0.00000)
Cred.Consumo	0.00001** (0.00001)	0.00001** (0.00001)	0.00001** (0.00001)
Cred.Conting	-0.00000* (0.00000)	-0.00000* (0.00000)	-0.00000** (0.00000)
Cred.Vivienda	0.000 (0.0001)	-0.00000 (0.0001)	-0.00000 (0.0001)
Línea.Cupo	-0.00000** (0.00000)	-0.00000** (0.00000)	-0.00000*** (0.00000)
Instituciones	7.017*** (2.718)	7.532*** (2.647)	7.891*** (2.587)
P.Conoc		-1.247** (0.596)	
P.Comport		-0.545 (0.518)	
P.Act		-0.134 (0.728)	
P.Total			-0.791** (0.365)

Note:

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

# Conclusions

- Knowledge does not fully explain financial capabilities. Therefore, a policy implication is that some efforts should be focused as well on attitudes and building healthy financial habits.
- There is a negative relationship between financial knowledge and delinquency rates.
- Delinquency rates of the sample are almost 3 times higher than the national average, therefore a natural question is how banks are performing risk assessments of university students.

# Future Challenges

- To incorporate non banking information such as retail credit cards.
- Analyze fixed effects of careers, family income, banks, etc.
- Add more results to the sample from other universities around the country.