



INSTITUTO NACIONAL DE ESTATÍSTICA
STATISTICS PORTUGAL

» Operação Estatística - IUT

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DMSI / ME



Janeiro de 2023



OE



» Fases da Operação Estatística

- **Concepção**
- **Operação**
- **Difusão**



OE/Concepção



» Concepção

Objectivo Compreender a realidade a partir de dados.

Tipo Recenseamento, Amostragem, Estudo estatístico.

Fonte Questionários, Dados administrativos.

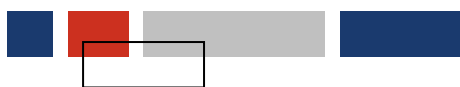


OE/Operação



» Operação

- **Recolha:** Directa (Presencial, Telefónica, Web) ou Indirecta.
- **Tratamento:** Formatação, Validação, *Outliers*, Imputação.
- **Análise:** Gráficos, Medidas descritivas, Modelos.



OE/Operação/Análise



» Análise

Gráficos *Pie chart, Barplot, Boxplot, Histogram, Countplot.*

Medidas descritivas Tendência central, Dispersão.

Modelos Regressão linear, Regressão logística.



» Difusão

Indicadores Resultados dos inquéritos, para público em geral.

Microdados Base de dados dos inquéritos, para investigadores.

Destaques *Press release* curta, harmonizada, calendarizada.

Publicações/Boletins Documento longo, calendarizado.

Estudos Documento longo, não-calendarizado.



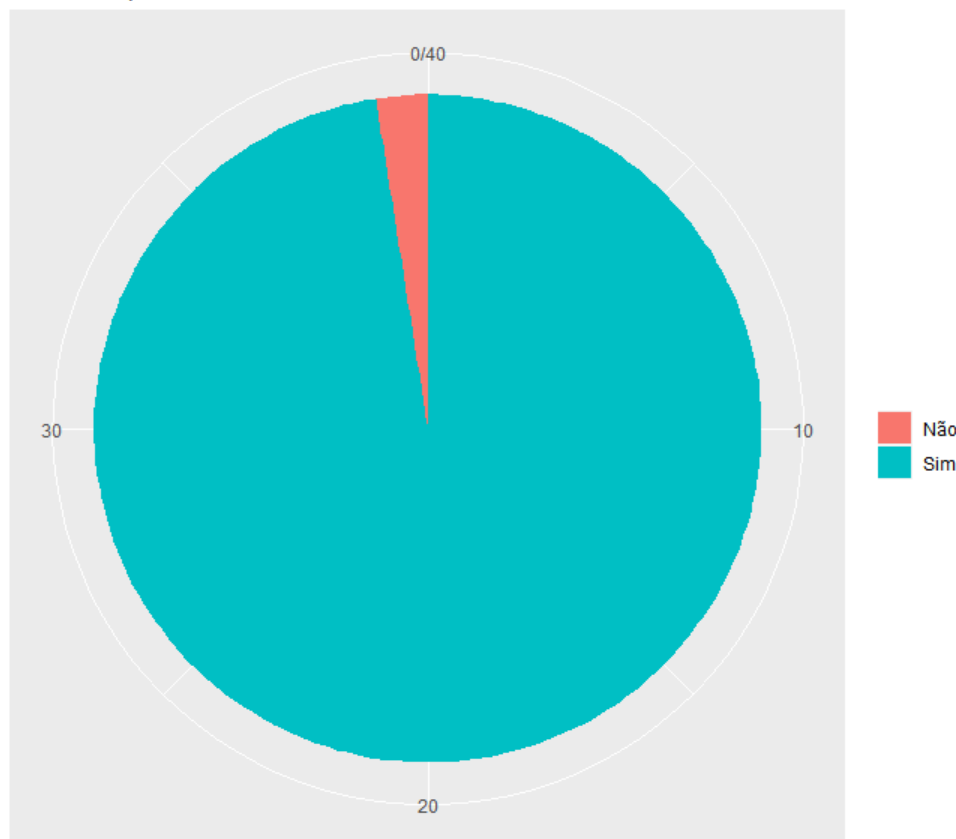
» Inquérito à Utilização do Telemóvel

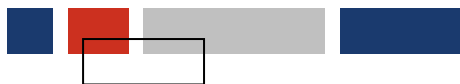
- Vídeo: ..\media\OE-IUT_20180411.mp4
- Questionário: <https://docs.google.com/forms/.../viewform>
- Análise: <https://r2.ine.pt/>

IUT/Análise/Exploração

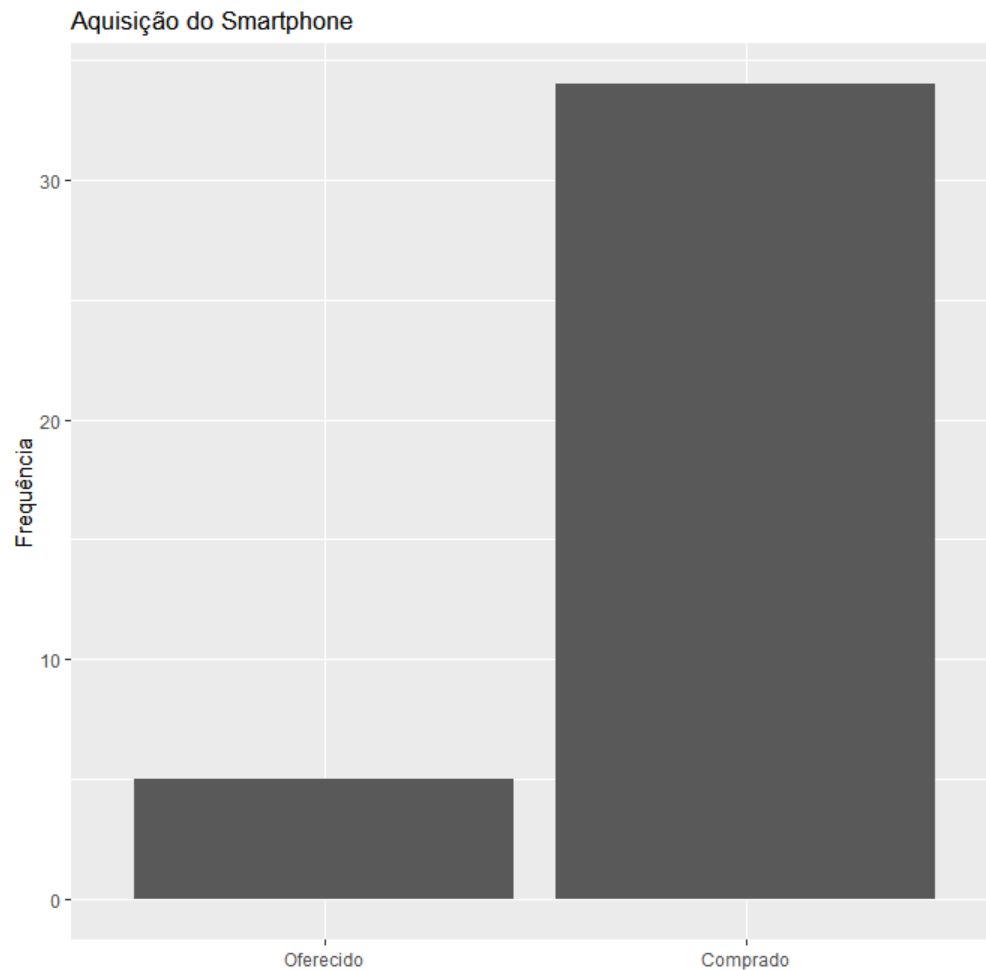


Tem Smartphone?





IUT/Análise/Exploração



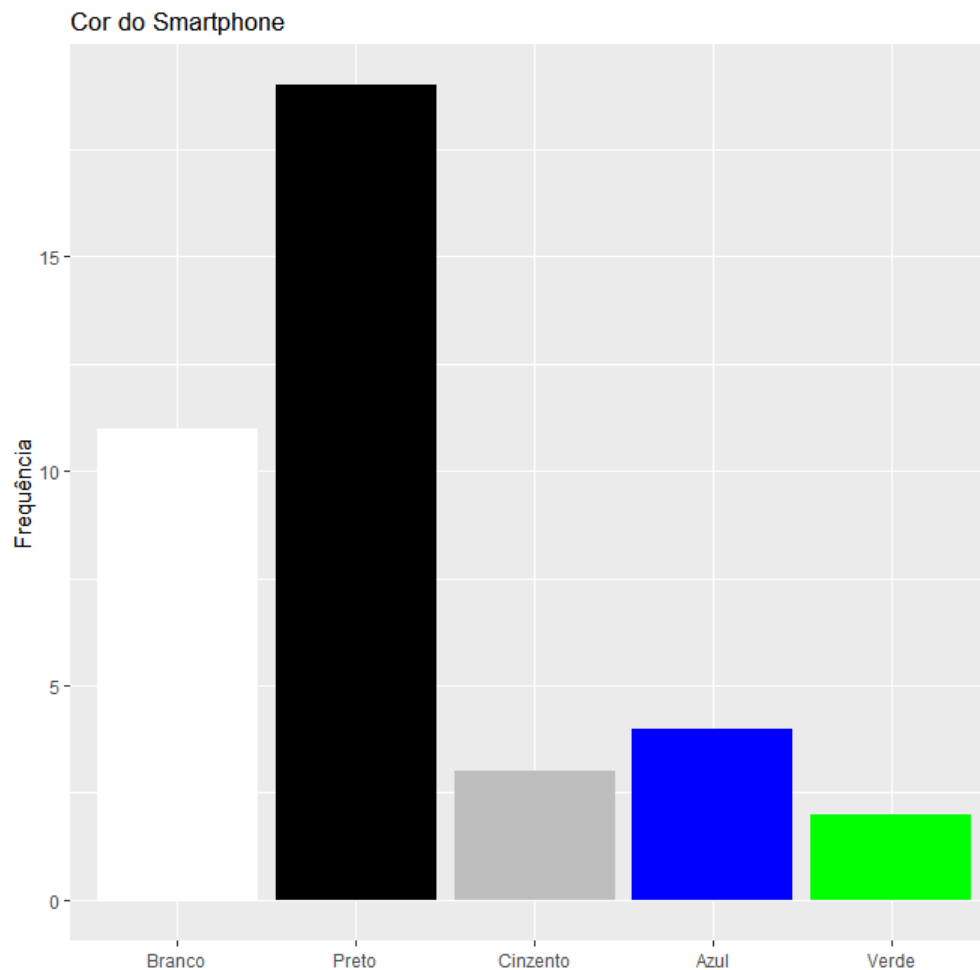


IUT/Analise/Exploração

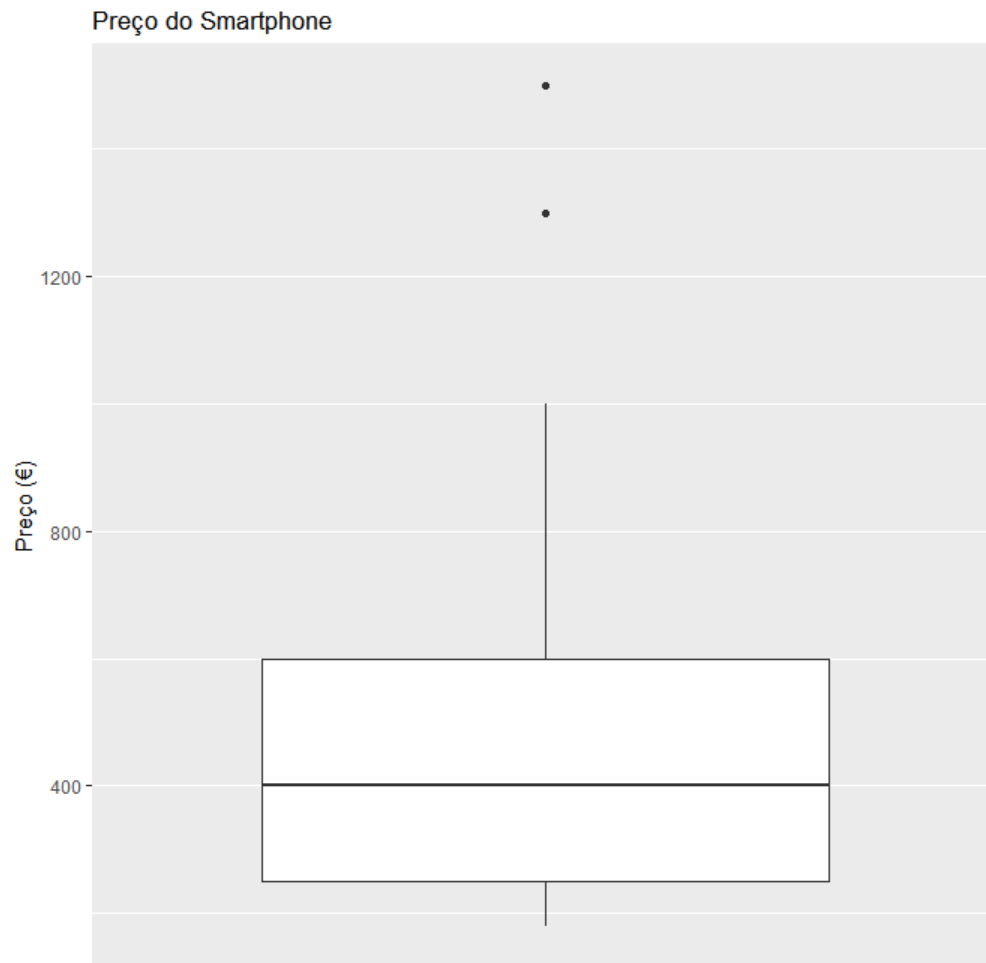


AGE_FIRST	Freq	Cumul	Rel	RelCumul
8	2	2	0.07	0.07
9	2	4	0.07	0.14
10	10	14	0.36	0.50
11	6	20	0.21	0.71
12	6	26	0.21	0.93
13	2	28	0.07	1.00

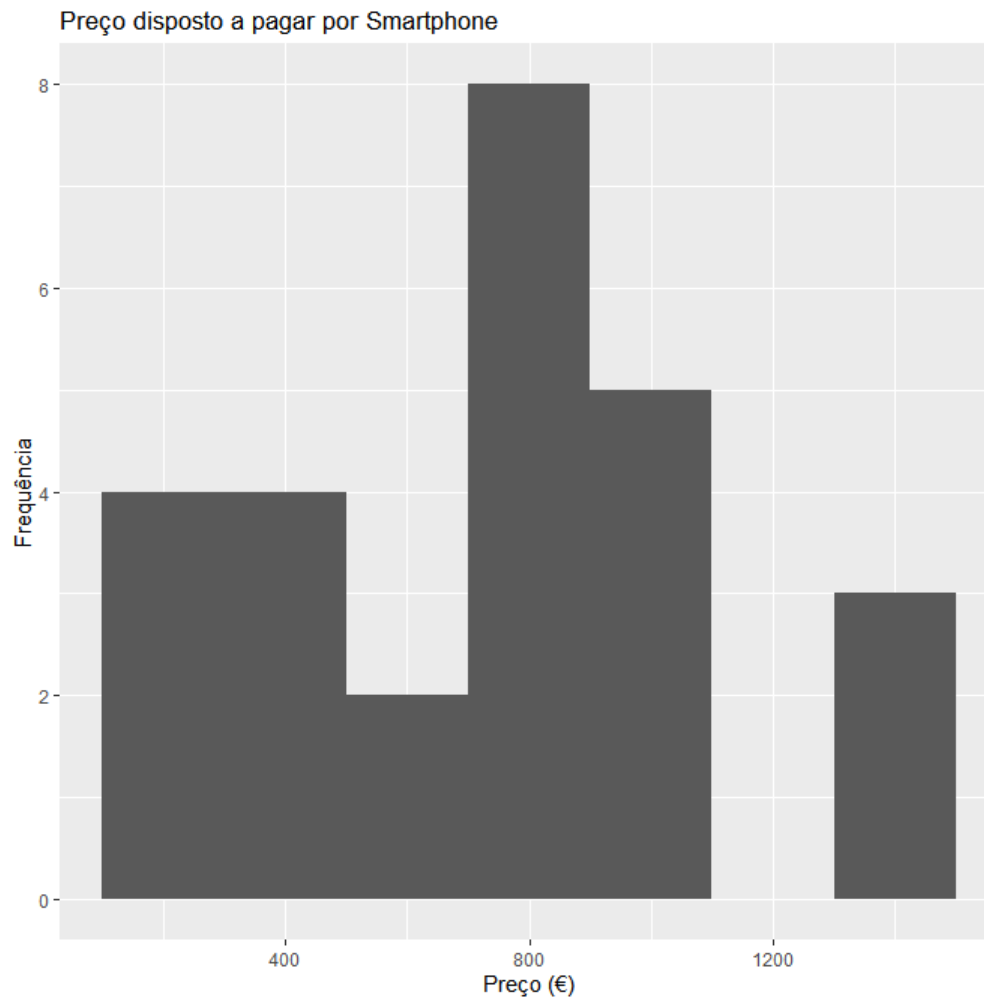
IUT/Análise/Exploração



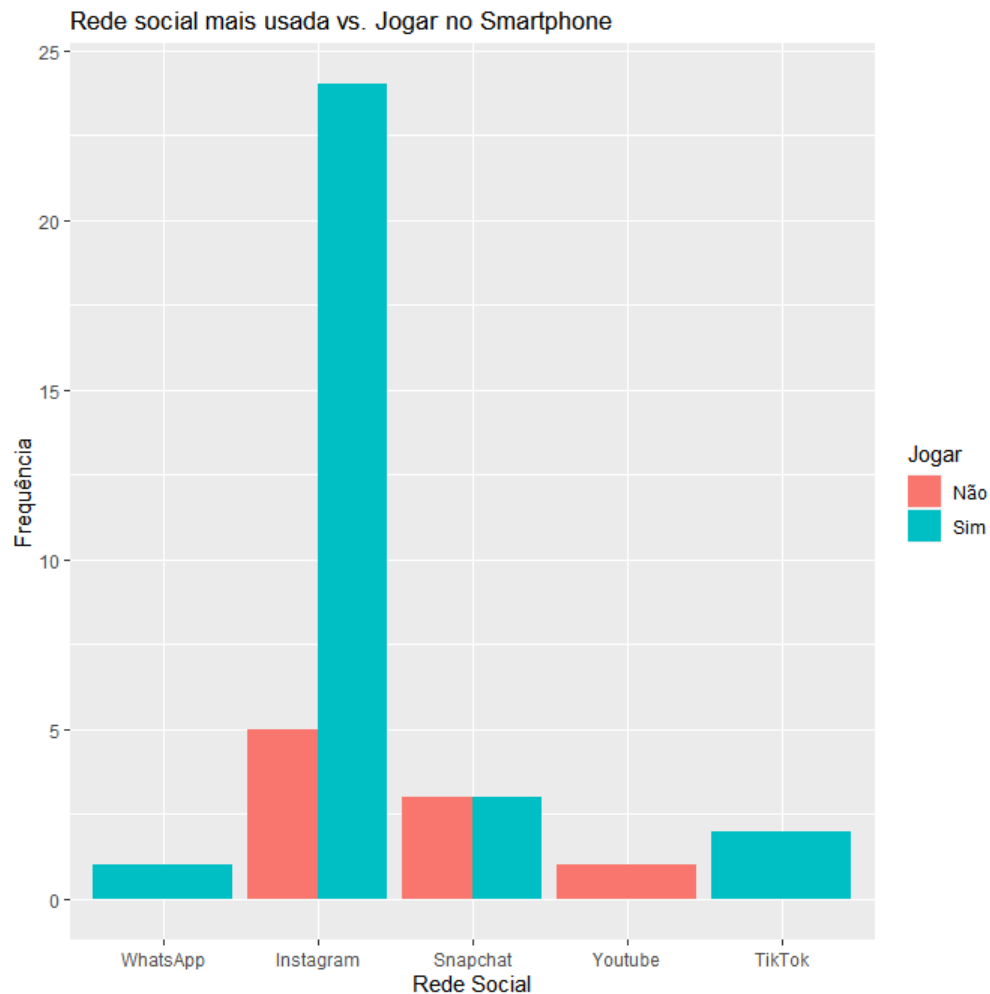
IUT/Análise/Exploração



IUT/Análise/Exploração

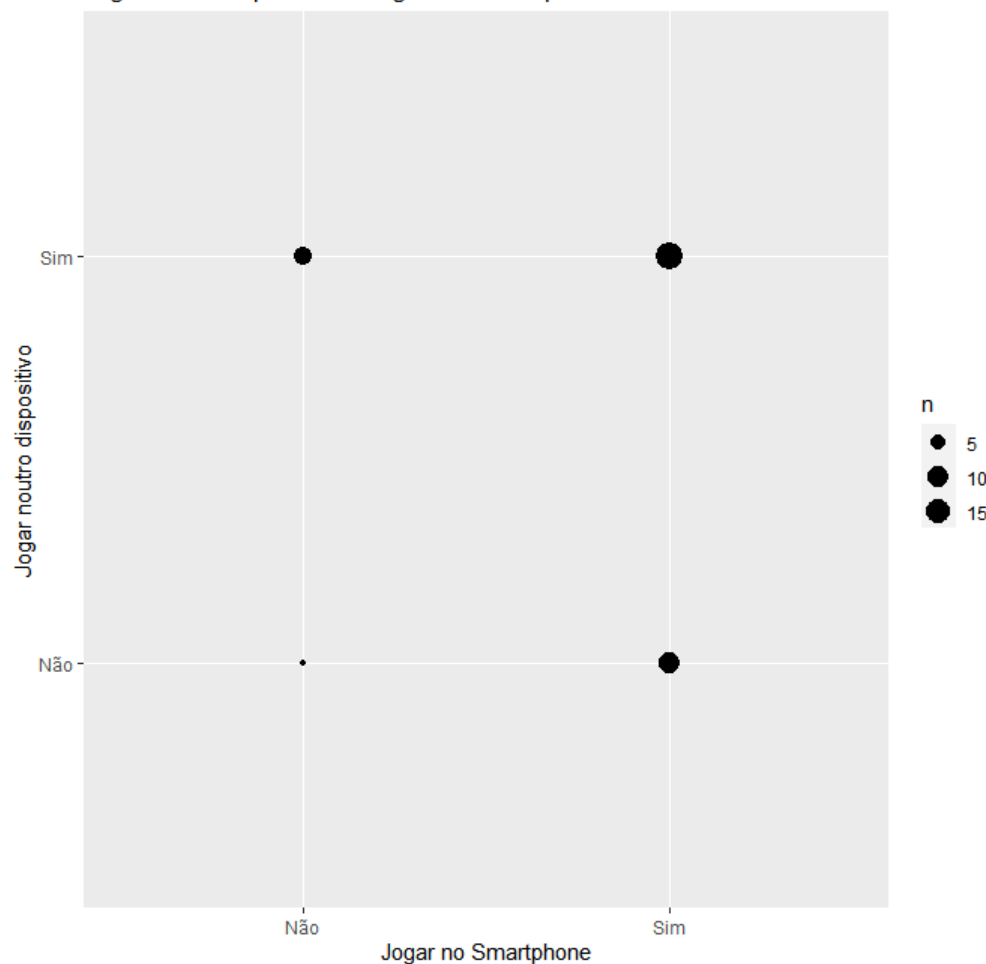


IUT/Análise/Exploração

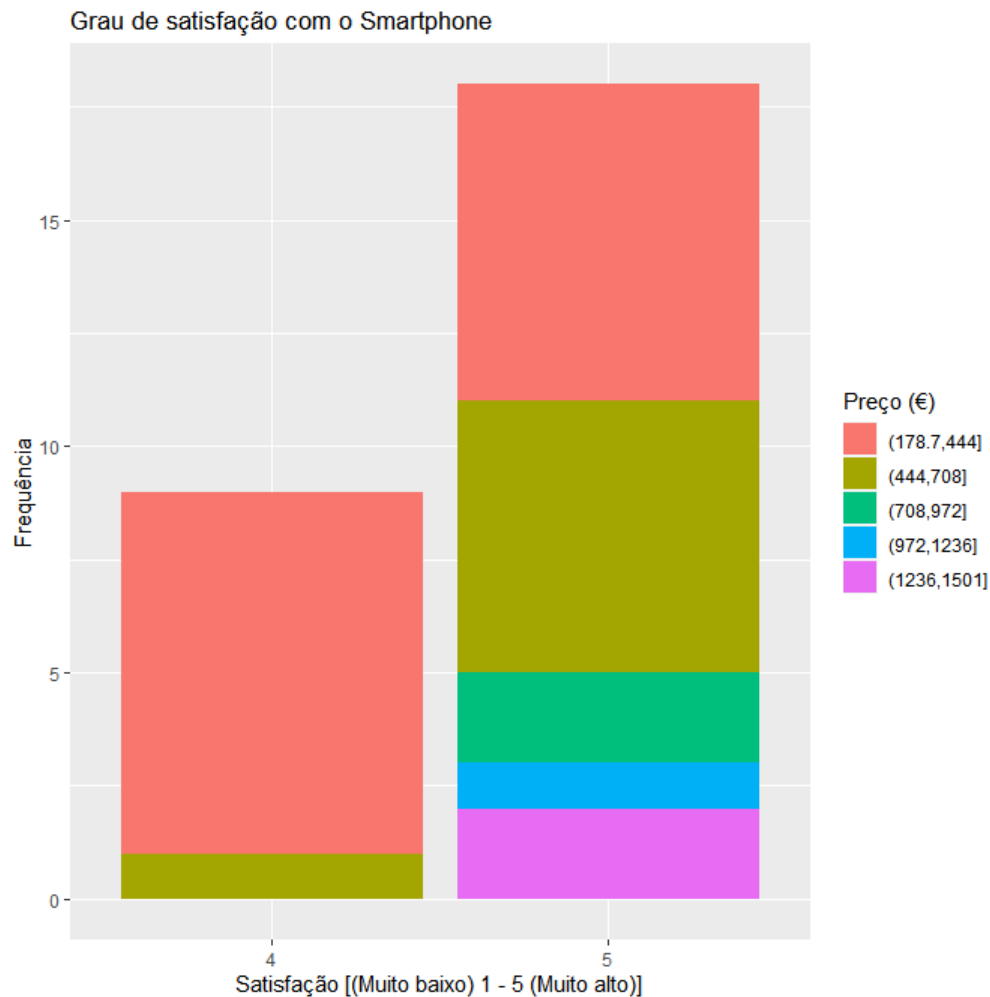


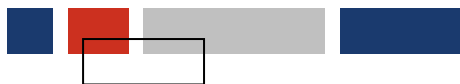
IUT/Análise/Exploração

Jogar no Smartphone vs. Jogar noutro dispositivo



IUT/Análise/Exploração





IUT/Analise/Exploração



	AGE_FIRST	PRICE	PRICE_NEW
Mean	10.64	511.89	775.00
Median	10.50	400.00	800.00
Mode	10.00	600.00	800.00
	AGE_FIRST	PRICE	PRICE_NEW
StDev	1.31	342.01	373.43
IQR	2.00	350.00	575.00
Range	5.00	1320.00	1300.00



IUT/Analise/Modelos



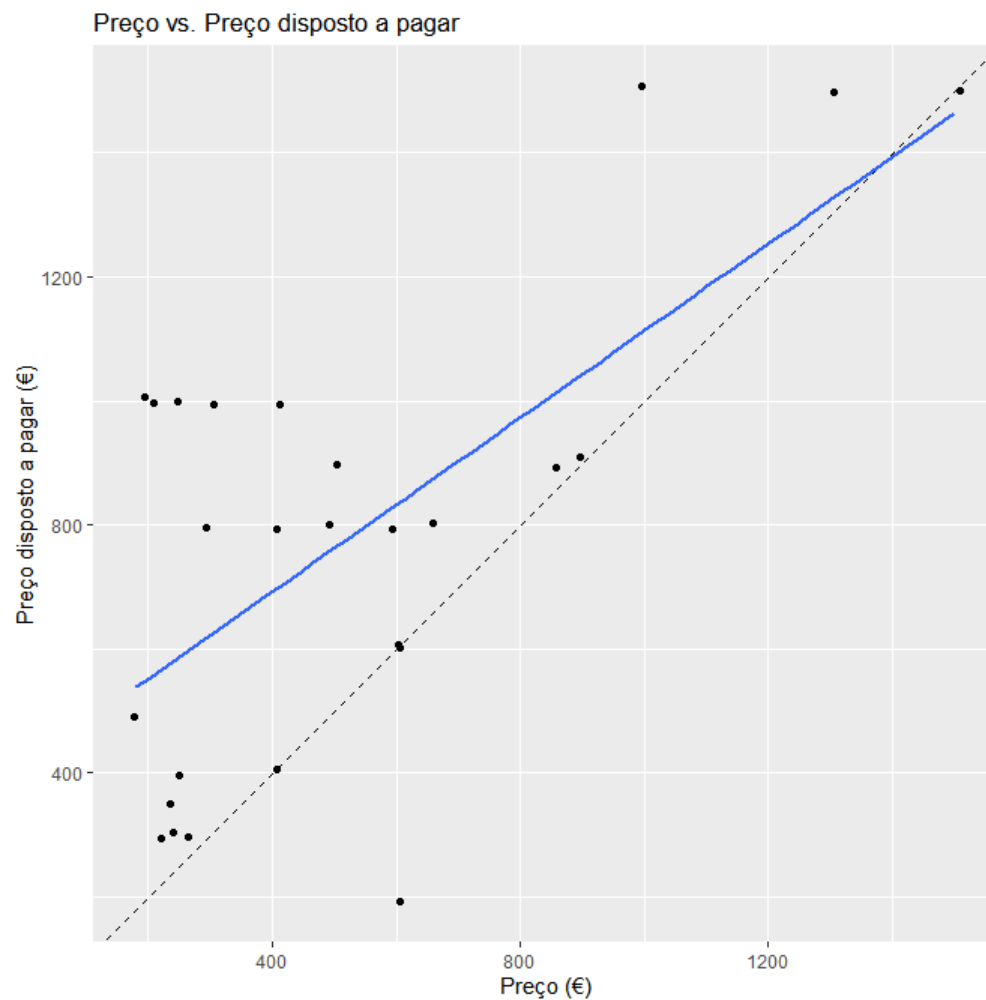
```
lm(formula = PRICE_NEW ~ PRICE, data = d5)
```

	Estimate	Std. Error	t value	Pr(> t)	
(Intercept)	411.6767	103.1938	3.989	0.000541	***
PRICE	0.7012	0.1664	4.213	0.000307	***

Multiple R-squared: 0.4251, Adjusted R-squared: 0.4012



IUT/Analise/Modelos





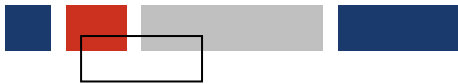
IUT/Analise/Modelos



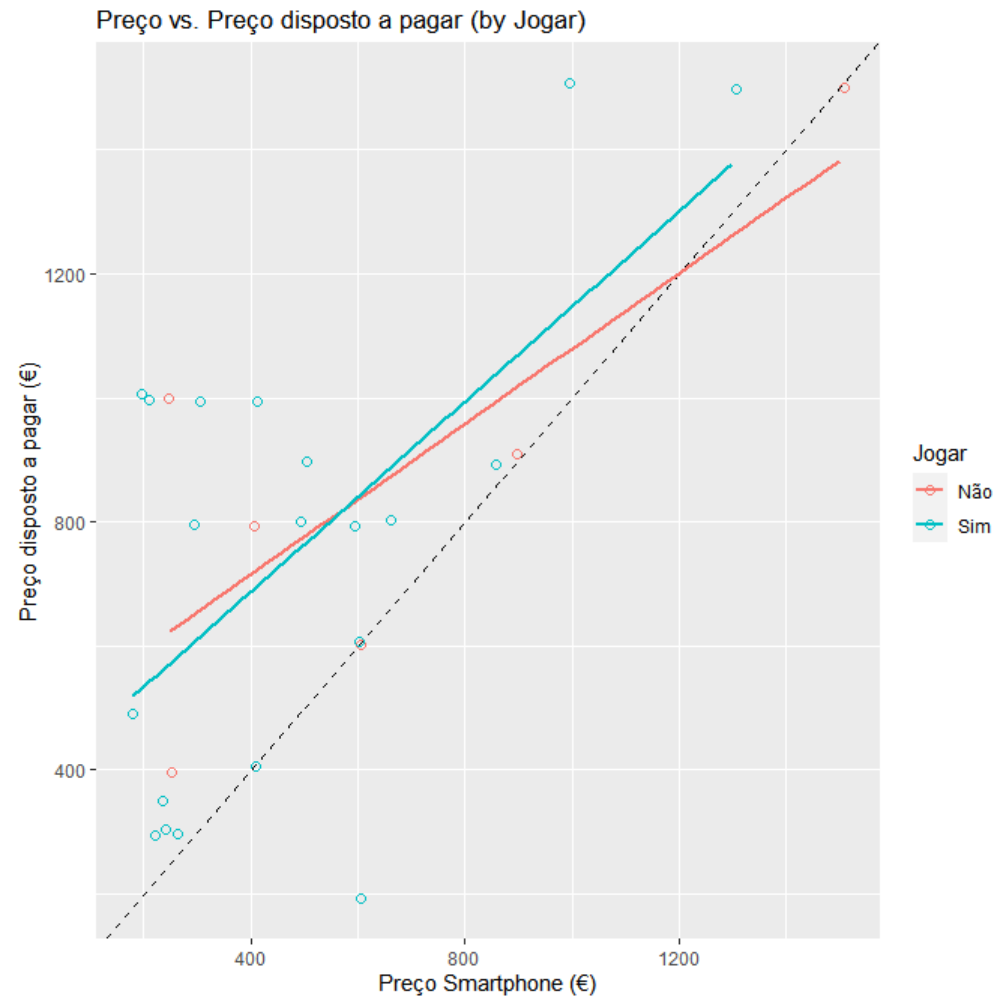
```
lm(formula = PRICE_NEW ~ PRICE + PLAY_PHONE, data = d5)
```

	Estimate	Std. Error	t value	Pr(> t)	
(Intercept)	410.6668	165.2657	2.485	0.020671	*
PRICE	0.7015	0.1740	4.032	0.000519	***
PLAY_PHONETRUE	1.1156	140.6031	0.008	0.993738	

Multiple R-squared: 0.4251, Adjusted R-squared: 0.3752



IUT/Análise/Modelos





IUT/Analise/Modelos

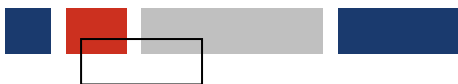


```
glm(formula = PLAY_OTHER ~ PRICE, family = "binomial", data = d5)
```

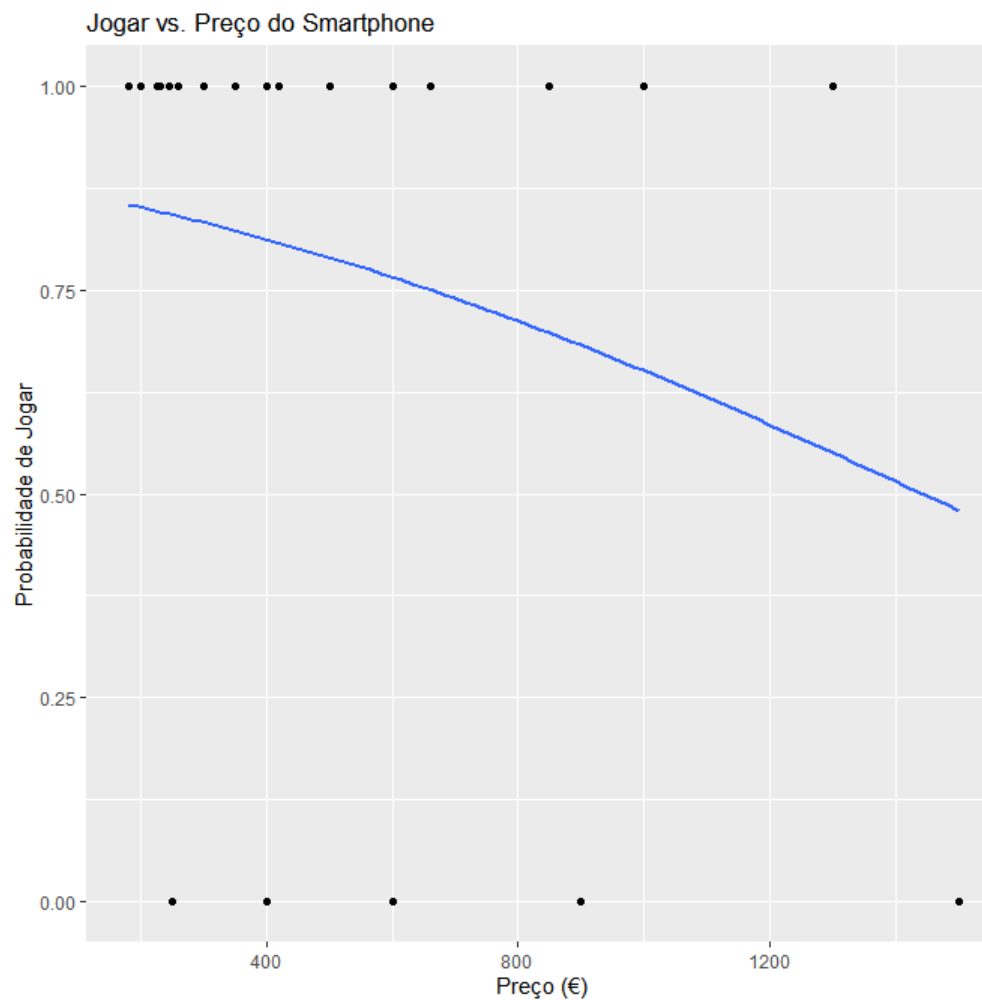
	Estimate	Std. Error	z value	Pr(> z)
(Intercept)	2.030150	0.888824	2.284	0.0224 *
PRICE	-0.001407	0.001281	-1.099	0.2718

AIC: 31.409

	OR	2.5%	97.5%
PRICE	1.00	1.00	1.00



IUT/Analise/Modelos





IUT/Analise/Modelos



```
glm(formula = PLAY_OTHER ~ PRICE + SOCIALNET, family = "binomial", data = d5)
```

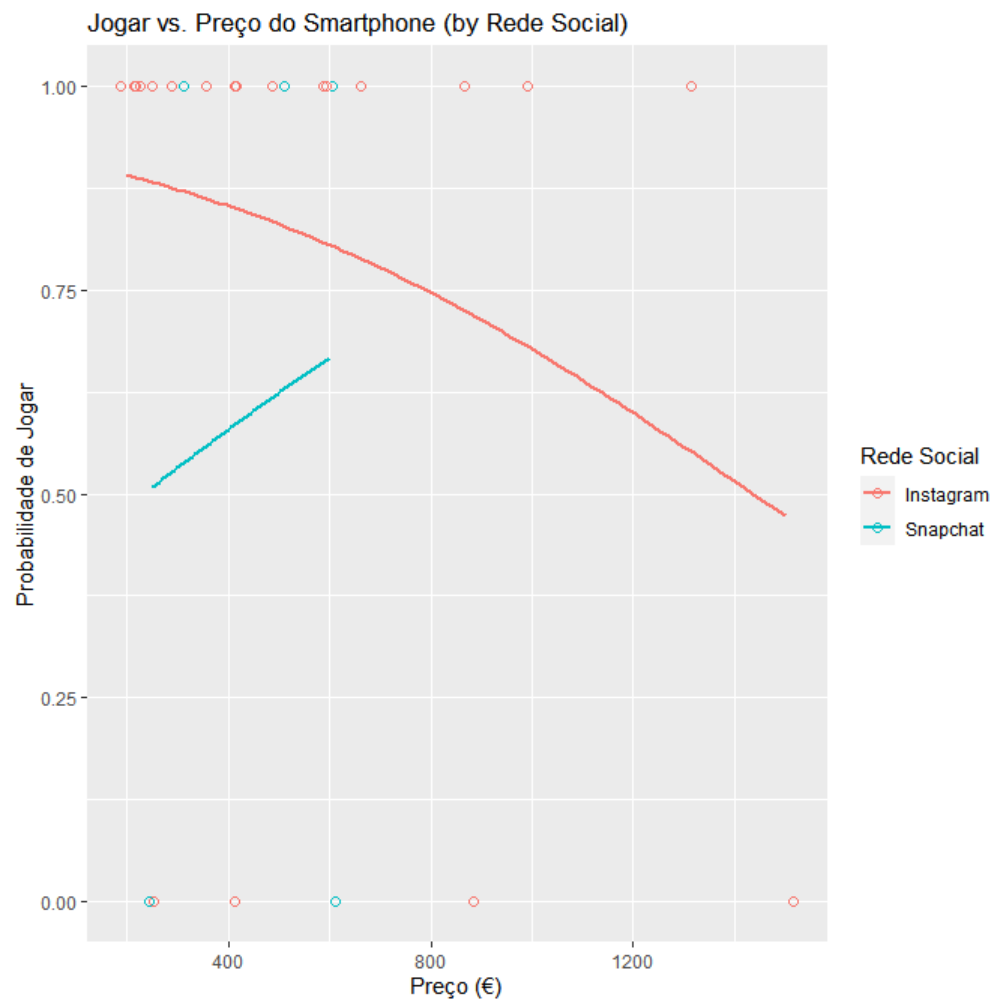
	Estimate	Std. Error	z value	Pr(> z)
(Intercept)	2.320487	1.090018	2.129	0.0333 *
PRICE	-0.001518	0.001384	-1.097	0.2725
SOCIALNETSnapchat	-1.226445	1.123474	-1.092	0.2750

AIC: 31.546

	OR	2.5 %	97.5 %
PRICE	1.00	0.99	1.01
SOCIALNETWhatsapp	0.29	0.03	2.65



IUT/Analise/Modelos





OE-IUT



Obrigado

<https://www.r-project.org/>

<https://rstudio.com/>

<https://github.com/jsollari/OE-IUT2020>