Cumplimiento tributario en un contexto descentralizado: El papel de la confianza institucional y de las políticas coactivas

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- **AIM**

We analyse the impact of two drivers of **tax compliance in a decentralized context**:

- **Tax morale** − institutional **trust** – decentralization – voluntary compliance
- **Tax enforcement** – decentralized tax administration– deterrent compliance

If they are influential, the degree of decentralization would matter.

- **MOTIVATION**

In Spain there are two substantially different institutional models of tax decentralization regarding:

- Regulatory power
- Tax administration
- Interregional redistribution

Common system → partially decentralized

Foral regime → fully decentralized

- **HOW**

A unique survey data from a sample of 3,017 observations, ensuring statistical representativeness at the national level, as well as for specific ACs, including the *foral* regions (the Basque Country and Navarre).

We use the answers to four questions concerning:

- tax morale
- tax fraud in Spain
- tax fraud in each respective AC
- tax enforcement

- **SUMMARY RESULTS**

We do not find any differences between the two systems in terms of

- tax morale
- perceived tax fraud in Spain
- tax enforcement

but, the residents under the *foral* regime perceive **lower rates of tax fraud in their AC** with respect to those perceived by residents in common regime regions.

A tentative explanation for this **paradoxical result** could be related with the higher quality of their public services compared to that of the services in regions with fewer resources.

We find that around **one-third** of the lower perception of tax fraud among *foral* residents is **attributable to higher resource levels**, while **the rest** can be attributed to the ***foral*** **regime itself**.

It merits further research.

- **LITERATURE**

Decentralization and tax morale: Güth et al. (2005), Torgler and Werner (2005), Torgler et al. (2010), Jimenez and Iyer (2016), Matthaei et al. (2023)

Tax morale in Spain: Torgler and Schneider (2007), Alm and Gomez (2008), Martinez-Vazquez and Torgler (2009), López Laborda and Sanz Arcega (2016)

Decentralization of tax administration: Mikesell (2003), Martinez-Vazquez and Timofeev (2010), Vehorn and Ahmad (1997)

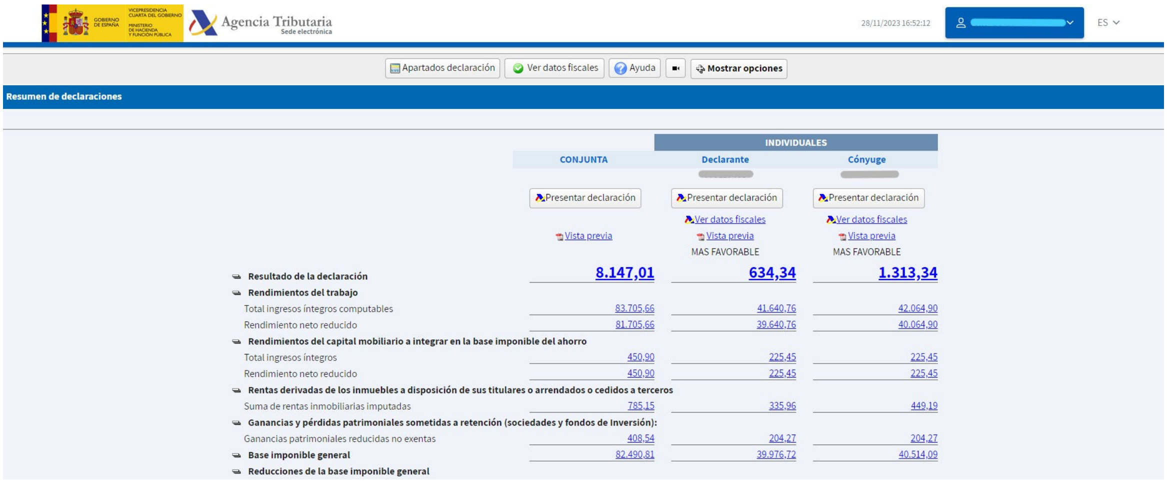
- **SPAIN'S TWO REGIONAL FINANCING SYSTEMS**

- **DIFFERENCES REGARDING TAXES**

  - **Common system:**
    - National taxes partially or fully ceded
    - Some regulatory power
    - Regions are responsible of the administration of minor taxes

  - ***Foral* system:**
    - Comprehensive powers over the regulation
    - Comprehensive powers over the administration

Figure 1. PIT assistance program and tax returns in the common regime



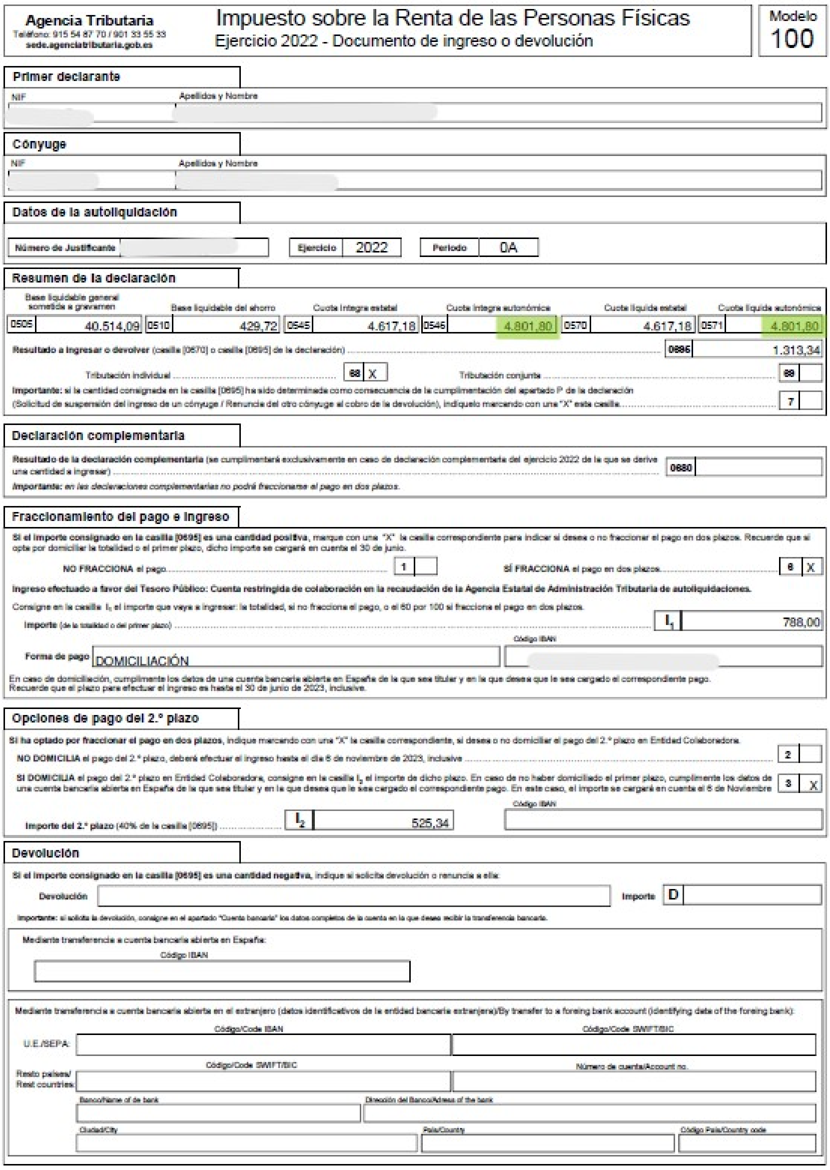


Figure 2. PIT assistance program and tax returns in the *foral* regime (Navarre)

navarra.es

ES | EU

← Buscador de trámites

Hacer la declaración de la renta por internet

Puede calcular su declaración de renta 2022 y entregarla telemáticamente, así como acceder a sus datos tributarios, modificarlos o añadir otros.

Puede también presentar declaraciones correspondientes a ejercicios anteriores (2016 a 2021).

Manual de uso - Vídeo explicativo

EN PLAZO

Suscribirse a este trámite

Ocultar todo

TRAMITACIÓN

Hacer la declaración

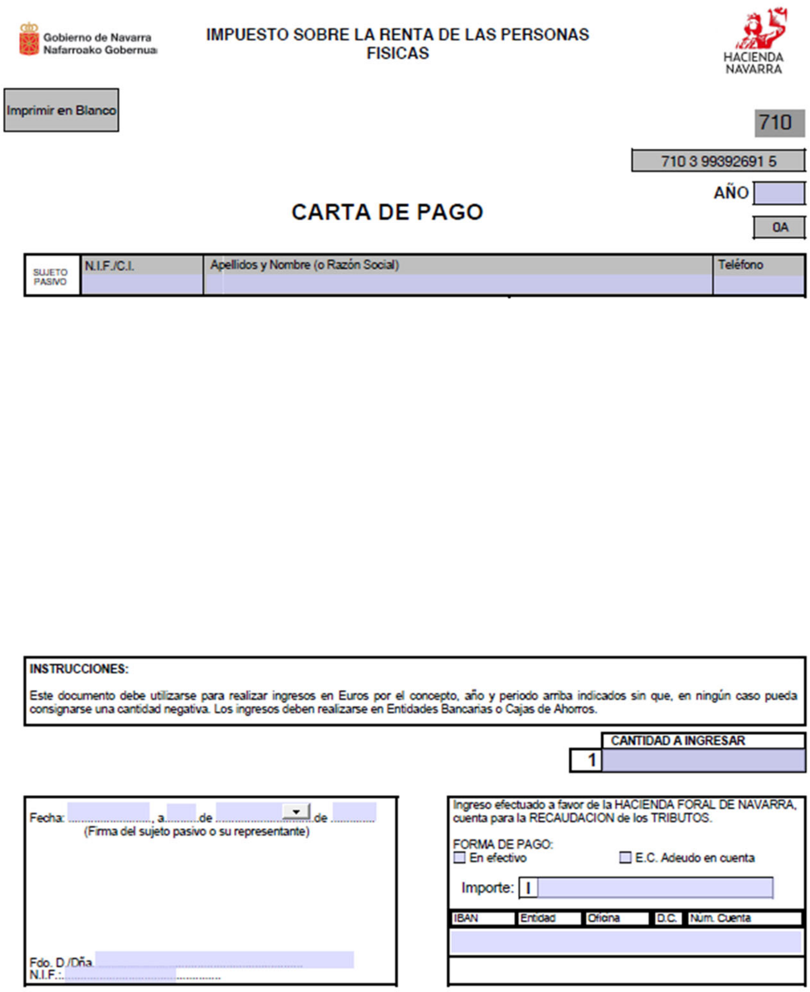
Se puede tramitar con las siguientes credenciales:

- Certificado digital o DNI electrónico
- DNI + PIN de Hacienda
- Cl@ve

CONTENIDO RELACIONADO

→ Preguntas frecuentes sobre la renta

→ Reglamento de IRPF vigente a 31/12/2022



Gobierno de Navarra
Nafarroako Gobernua

IMPUESTO SOBRE LA RENTA DE LAS PERSONAS FISICAS

HACIENDA NAVARRA

Imprimir en Blanco

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AÑO

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CARTA DE PAGO

SUJETO PASIVO	N.I.F./C.I.	Apellidos y Nombre (o Razón Social)	Teléfono

INSTRUCCIONES:
Este documento debe utilizarse para realizar ingresos en Euros por el concepto, año y periodo arriba indicados sin que, en ningún caso pueda consignarse una cantidad negativa. Los ingresos deben realizarse en Entidades Bancarias o Cajas de Ahorros.

CANTIDAD A INGRESAR
1

Fecha: ...., a .... de .... de ....
(Firma del sujeto pasivo o su representante)

Fdo. D./Dña. ....
N.I.F.: ....

Ingreso efectuado a favor de la HACIENDA FORAL DE NAVARRA, cuenta para la RECAUDACION de los TRIBUTOS.

FORMA DE PAGO:
☐ En efectivo ☐ E.C. Adeudo en cuenta

Importe: I

IBAN	Entidad	Oficina	D.C.	Num. Cuenta

- **SPAIN'S TWO REGIONAL FINANCING SYSTEMS**

- **DIFFERENCES REGARDING TAXES**

    - **Common system:**
        - National taxes partially or fully ceded
        - Some regulatory power
        - Regions are responsible of the administration of minor taxes

    - ***Foral* system:**
        - Comprehensive powers over the regulation
        - Comprehensive powers over the administration

- **DIFFERENCES INTERREGIONAL REDISTRIBUTION**

    - **Common system:** there are equalisation grants

    - ***Foral* system:** equalisation grants are not included

- **DATA**

– **On-line survey**, which was monitored and processed by a professional survey firm, *Netquest*

– Launched in early **November 2021**, participation was by invitation only.

– The survey included one item concerning **respondent sincerity** and one quality check item to verify their attention.

– Respondents had to be over the age of 18, residing in Spain, and were rewarded via an **in-kind compensation programme**.

– The sample consists of **3,017 observations**, which ensures statistical representation at the national level, as well as for specific regions, including Catalonia, Canary Islands, the AC of Madrid, and the regions of the *foral* regime (806 observations).

- **QUESTIONS ABOUT COMPLIANCE**

– TAX MORALE

¿Cuál es tu opinión en relación con el fraude fiscal?

- *Nunca puede estar justificado*
- *Siempre está justificado*
- *En ocasiones puede estar justificado*

– TAX FRAUD IN SPAIN

En tu opinión, ¿crees que en España existe mucho fraude fiscal, bastante, poco o muy poco fraude fiscal?

- *Existe mucho fraude fiscal*
- *Existe bastante fraude fiscal*
- *Existe poco fraude fiscal*
- *Existe muy poco fraude fiscal*

– TAX FRAUD IN THE REGION

¿Y en tu Comunidad Autónoma?

- *Existe mucho fraude fiscal*
- *Existe bastante fraude fiscal*
- *Existe poco fraude fiscal*
- *Existe muy poco fraude fiscal*

– ENFORCEMENT

¿Crees que, en la actualidad, la Administración hace mucho, bastante, poco o muy poco esfuerzo para luchar contra el fraude fiscal?

- *Mucho*
- *Bastante*
- *Poco*
- *Muy poco*

- **QUESTIONS ABOUT COMPLIANCE**

	AGGREGATE	**COMMON**	***FORAL***
Tax morale (0 - 1)	0.8114	0.7987	0.8462
Tax fraud Spain (1 - 4)	3.5177	3.5120	3.5335
Tax fraud AC (1 - 4)	3.2324	3.2990	3.0496
Tax enforcement (1 - 4)	1.9470	1.9503	1.9380

- **MODEL**

$$\boldsymbol{Z_{ij}} = \Phi Foral_j + X_{ij}b + \mu_{ij}$$

$\boldsymbol{Z_{ij}}$ survey responses provided by individual-i residing in regime-j

$Foral_j$ equals one if the respondent resides either in the Basque Country or Navarre

Φ estimated impact on the corresponding variable of compliance

X_{ij} vector of personal characteristics of the respondents (political ideology, age, education, income, sex, degree of autonomy, children, marital status, employment status) and of the region (GDP, surface) in which they reside

b the corresponding vector of estimates

μ_{ij} estimation error with the standard statistical properties

- **MODEL**

Basic OLS model to facilitate the interpretation, but also probit (for Tax Morale) and ordered probit regressions (for the rest of the variables).

Possible selection bias of the sample: “poststratification weighting” (e.g., Stantcheva, 2022)

In the model we include personal and regional characteristics:

- We assume personal characteristics are independent of being *Foral*.
  We check this assumption with a coarsened exact matching (CEM).

- Some regional characteristics might be correlated with *Foral*.
  We include indices of GDP per capita and surface area as regional control variables.

RESULTS: TAX MORALE

	(1) OLS	**(2) OLS Weighted Regression**	(3) OLS Weighted Regression
***Foral* Regime**	**0.0281***	**0.0025**	**0.00534**
	(0.0161)	(0.0199)	(0.0227)
GDP index			-0.00579
			(0.0585)
Surface area index			0.00690
			(0.0295)
Left	0.128***	**0.140*** **	0.141***
	(0.0249)	(0.0289)	(0.0289)
Centre	0.0201	0.0374	0.0375
	(0.0293)	(0.0335)	(0.0335)
Right	-0.0196	0.00744	0.00762
	(0.0288)	(0.0323)	(0.0324)
Older	0.0510***	**0.0698*** **	0.0701***
	(0.0166)	(0.0192)	(0.0192)
High Edu	-0.0126	-0.0105	-0.0103
	(0.0146)	(0.0160)	(0.0160)
High Income	0.0106	0.0142	0.0146
	(0.0158)	(0.0180)	(0.0181)
Inactive	-0.0327**	**-0.0466** **	-0.0463**
	(0.0166)	(0.0189)	(0.0193)
Married	0.0328*	0.0345*	0.0343*
	(0.0175)	(0.0194)	(0.0194)
Female	0.00541	0.0157	0.0155
	(0.0148)	(0.0169)	(0.0169)
Having kids	-0.000999	-0.00927	-0.00939
	(0.0178)	(0.0196)	(0.0196)
Self-employed	-0.155***	**-0.154*** **	-0.154***
	(0.0372)	(0.0386)	(0.0386)
Pro Autonomy	-0.0324**	-0.0313*	-0.0314*
	(0.0151)	(0.0172)	(0.0172)
Constant	0.730***	0.707***	0.709***
	(0.0291)	(0.0325)	(0.0547)
Observations	3,017	3,017	3,017
R-squared	0.045	0.043	0.043

Robust standard errors in parentheses. *** p<0.01. ** p<0.05. * p<0.1.

RESULTS: PERCEIVED TAX FRAUD IN SPAIN

	(1) OLS	**(2) OLS Weighted Regression**	(3) OLS Weighted Regression
***Foral* Regime**	**-0.0316**	**-0.0365**	**-0.0150**
	(0.0255)	(0.0295)	(0.0339)
GDP index			-0.103
			(0.0895)
Surface area index			0.00999
			(0.0476)
Left	0.155***	**0.194*** **	0.196***
	(0.0405)	(0.0474)	(0.0475)
Centre	0.0461	0.0880*	0.0891*
	(0.0466)	(0.0534)	(0.0534)
Right	-0.0951**	-0.0494	-0.0469
	(0.0463)	(0.0525)	(0.0525)
Older	-0.00919	-0.00317	-0.000433
	(0.0262)	(0.0276)	(0.0276)
High Edu	-0.0836***	**-0.0736*** **	-0.0724***
	(0.0234)	(0.0248)	(0.0248)
High Income	0.0381	0.0117	0.0161
	(0.0251)	(0.0282)	(0.0283)
Inactive	-0.0697***	**-0.0855*** **	-0.0802***
	(0.0268)	(0.0285)	(0.0291)
Married	0.0116	0.0155	0.0134
	(0.0270)	(0.0297)	(0.0296)
Female	0.0187	0.00856	0.00893
	(0.0235)	(0.0251)	(0.0251)
Having kids	-0.0135	-0.00570	-0.00627
	(0.0282)	(0.0304)	(0.0304)
Self-employed	-0.138**	**-0.131** **	-0.133**
	(0.0543)	(0.0600)	(0.0599)
Pro Autonomy	0.0685***	**0.0661** **	0.0670**
	(0.0238)	(0.0260)	(0.0261)
Constant	3.495***	3.464***	3.529***
	(0.0455)	(0.0512)	(0.0862)
Observations	3.017	3.017	3.017
R-squared	0.042	0.040	0.041

Robust standard errors in parentheses. *** p<0.01. ** p<0.05. * p<0.1.

RESULTS: PERCEIVED TAX FRAUD IN AC

	(1) OLS	**(2) OLS Weighted Regression**	(3) OLS Weighted Regression
***Foral* Regime**	**-0.290*****	**-0.292*****	**-0.296*****
	(0.0307)	(0.0365)	(0.0415)
GDP index			0.134
			(0.102)
Surface area index			0.0784
			(0.0521)
Left	0.158***	**0.189*****	0.189***
	(0.0471)	(0.0519)	(0.0520)
Centre	0.103**	**0.129****	0.129**
	(0.0524)	(0.0572)	(0.0573)
Right	-0.0564	-0.0128	-0.0154
	(0.0518)	(0.0568)	(0.0569)
Older	0.0350	0.0326	0.0307
	(0.0308)	(0.0341)	(0.0342)
High Edu	-0.0343	-0.0301	-0.0304
	(0.0268)	(0.0283)	(0.0283)
High Income	0.0328	0.0158	0.0113
	(0.0291)	(0.0335)	(0.0337)
Inactive	-0.149***	**-0.168*****	-0.175***
	(0.0303)	(0.0335)	(0.0341)
Married	0.00818	0.0118	0.0125
	(0.0316)	(0.0356)	(0.0356)
Female	-0.0215	-0.0244	-0.0273
	(0.0270)	(0.0299)	(0.0299)
Having kids	0.0405	**0.0780****	0.0774**
	(0.0339)	(0.0376)	(0.0376)
Self-employed	-0.140**	**-0.116***	-0.113*
	(0.0588)	(0.0641)	(0.0641)
Pro Autonomy	-0.0693**	**-0.0631****	-0.0652**
	(0.0278)	(0.0310)	(0.0311)
Constant	3.281***	3.238***	3.121***
	(0.0527)	(0.0575)	(0.0958)
Observations	3.017	3.017	3.017
R-squared	0.049	0.056	0.057

Robust standard errors in parentheses. *** p<0.01. ** p<0.05. * p<0.1.

RESULTS: PERCEIVED TAX ENFORCEMENT

	(1) OLS	**(2) OLS Weighted Regression**	(3) OLS Weighted Regression
***Foral* Regime**	**0.0241**	**0.0514**	**0.0401**
	(0.0314)	(0.0360)	(0.0407)
GDP index			-0.0234
			(0.107)
Surface area index			-0.0603
			(0.0586)
Left	0.00844	-0.00684	-0.00821
	(0.0462)	(0.0529)	(0.0530)
Centre	-0.00663	-0.0285	-0.0292
	(0.0544)	(0.0601)	(0.0602)
Right	0.101*	0.0665	0.0666
	(0.0528)	(0.0588)	(0.0590)
Older	0.0547*	0.0535	0.0531
	(0.0326)	(0.0351)	(0.0351)
High Edu	0.0440	0.0429	0.0423
	(0.0285)	(0.0303)	(0.0302)
High Income	-0.0579*	-0.0427	-0.0425
	(0.0298)	(0.0322)	(0.0324)
Inactive	0.0566*	**0.0639***	0.0652*
	(0.0323)	(0.0342)	(0.0348)
Married	-0.0141	-0.0281	-0.0272
	(0.0356)	(0.0387)	(0.0387)
Female	-0.00161	-0.00783	-0.00605
	(0.0291)	(0.0318)	(0.0320)
Having kids	0.0422	0.0598	0.0606
	(0.0372)	(0.0405)	(0.0404)
Self-employed	0.180***	**0.160****	0.159**
	(0.0664)	(0.0710)	(0.0709)
Pro Autonomy	-0.0683**	**-0.0679****	-0.0671**
	(0.0292)	(0.0321)	(0.0321)
Constant	1.867***	1.882***	1.919***
	(0.0535)	(0.0590)	(0.101)
Observations	3.017	3.017	3.017
R-squared	0.014	0.014	0.014

Robust standard errors in parentheses. *** p<0.01. ** p<0.05. * p<0.1.

- **RESULTS**

Our empirical results suggest that a fully decentralized tax system offers **no obvious advantages in terms of tax compliance**.

Neither the level of **tax morale** nor the perceived effectiveness of **tax enforcement** is **significantly higher** in the ***foral*** **system**.

Regarding **tax morale**, the results are very much in line with the residents' lack of knowledge about decentralization (Durán-Cabré, Esteller-Moré and Salvadori, 2024): If residents (also in *foral* regions) are unaware they pay all their taxes to the regional government, then full decentralization is unlikely to have any impact on tax morale.

The absence of a higher **perception of effort** on the part of the tax administration fails to explain the lower rate of tax fraud perceived by *foral* residents in their region.

- **RESULTS**

As the *foral* regime provides its citizens with a level of **public resources per capita** that is **well above** the average for Spain, could this circumstance have an impact on the margins related here to compliance?

The impact of the regional financing system on Compliance

	Tax Morale	*Perceived Tax Fraud in Spain*	***Perceived Tax Fraud in the AC***	*Perceived Tax Enforc.*	*Tax Morale*	*Perceived Tax Fraud in Spain*	***Perceived Tax Fraud in the AC***	*Perceived Tax Enforc.*
Foral Regime	-0.00804	-0.0259	**-0.220*****	0.0234	-0.0132	0.0200	**-0.209*****	0.00656
	(0.0243)	(0.0371)	(0.0439)	(0.0448)	(0.0304)	(0.0476)	(0.0545)	(0.0572)
High resources	0.0149	-0.0150	**-0.103*****	0.0397	0.0220	-0.0417	**-0.104****	0.0399
	(0.0198)	(0.0312)	(0.0345)	(0.0376)	(0.0236)	(0.0383)	(0.0410)	(0.0469)
GDP index					0.0286	-0.169	-0.0289	0.0390
					(0.0687)	(0.108)	(0.119)	(0.132)
Surface area index					0.0197	-0.0144	0.0176	-0.0370
					(0.0320)	(0.0526)	(0.0563)	(0.0652)
Left	0.141***	0.193***	0.183***	-0.00434	0.142***	0.194***	0.184***	-0.00627
	(0.0290)	(0.0474)	(0.0518)	(0.0530)	(0.0290)	(0.0475)	(0.0519)	(0.0531)
Centre	0.0381	0.0873	0.124**	-0.0267	0.0385	0.0874	0.125**	-0.0276
	(0.0335)	(0.0533)	(0.0571)	(0.0601)	(0.0336)	(0.0533)	(0.0571)	(0.0602)
Right	0.00832	-0.0503	-0.0188	0.0688	0.00820	-0.0480	-0.0182	0.0677
	(0.0323)	(0.0524)	(0.0567)	(0.0589)	(0.0323)	(0.0525)	(0.0568)	(0.0590)
Older	0.0700***	-0.0033	0.0316	0.0540	0.0697***	0.000328	0.0326	0.0524
	(0.0192)	(0.0276)	(0.0341)	(0.0351)	(0.0192)	(0.0276)	(0.0342)	(0.0350)
High Edu	-0.0102	-0.074***	-0.0318	0.0435	-0.0101	-0.073***	-0.0313	0.0427
	(0.0160)	(0.0248)	(0.0282)	(0.0303)	(0.0160)	(0.0247)	(0.0282)	(0.0302)
High Income	0.0151	0.0109	0.00982	-0.0404	0.0146	0.0160	0.0111	-0.0425
	(0.0180)	(0.0283)	(0.0335)	(0.0322)	(0.0181)	(0.0283)	(0.0336)	(0.0324)
Inactive	-0.0453**	-0.087***	-0.177***	0.0674**	-0.0461**	-0.081***	-0.176***	0.0654*
	(0.0190)	(0.0286)	(0.0336)	(0.0341)	(0.0193)	(0.0291)	(0.0341)	(0.0348)
Married	0.0348*	0.0152	0.0100	-0.0274	0.0350*	0.0120	0.00908	-0.0259
	(0.0194)	(0.0297)	(0.0355)	(0.0387)	(0.0194)	(0.0295)	(0.0355)	(0.0387)
Female	0.0161	0.00812	-0.0274	-0.00667	0.0156	0.00877	-0.0277	-0.00590
	(0.0169)	(0.0250)	(0.0299)	(0.0319)	(0.0169)	(0.0250)	(0.0299)	(0.0320)
Having kids	-0.00955	-0.00542	0.0799**	0.0591	-0.00985	-0.00540	0.0795**	0.0598
	(0.0197)	(0.0304)	(0.0376)	(0.0405)	(0.0196)	(0.0304)	(0.0376)	(0.0404)
Self-employed	-0.154***	-0.131**	-0.117*	0.160**	-0.153***	-0.134**	-0.118*	0.161**
	(0.0386)	(0.0600)	(0.0638)	(0.0711)	(0.0386)	(0.0600)	(0.0640)	(0.0709)
Pro Autonomy	-0.0309*	0.0656**	-0.0663**	-0.0667**	-0.0311*	0.0666**	-0.0662**	-0.0668**
	(0.0172)	(0.0261)	(0.0311)	(0.0321)	(0.0172)	(0.0261)	(0.0311)	(0.0321)
Constant	0.701***	3.471***	3.282***	1.865***	0.672***	3.599***	3.296***	1.852***
	(0.0337)	(0.0519)	(0.0585)	(0.0606)	(0.0672)	(0.106)	(0.115)	(0.128)
Observations	3,017	3,017	3,017	3,017	3,017	3,017	3,017	3,017
R-squared	0.043	0.041	0.059	0.014	0.043	0.042	0.059	0.014

Robust standard errors in parentheses. *** p<0.01. ** p<0.05. * p<0.1.

- **RESULTS**

As the *foral* regime provides its citizens with a level of **public resources per capita** that is **well above** the average for Spain, could this circumstance have an impact on the margins related here to compliance?

Around one-third (an estimate of -0.1 over almost -0.3) of the impact of *foral* on the perceived level of fraud is due to the high level of resources in the *foral* regime.

The rest can be attributed to the *foral* regime itself, independently of the good financial results of its residents, but it merits further research.

- **Conclusions**

Our empirical results suggest that a fully **decentralized tax system** offers **no obvious advantages** in terms of compliance.

Neither the level of tax morale nor the perceived effectiveness of tax enforcement is significantly higher in the *foral* system.

There are no differences in the perceived level of tax fraud in the whole country, but there are significant differences regarding the perceived tax fraud in the region.

Tax decentralization does not seem to promote tax compliance.

Robustness Tests: Non-linear Binary Response Models

	Tax Morale	*Perceived Tax Fraud in Spain*	*Perceived Tax Fraud in the AC*	*Perceived Tax Enforcement*
	Weighted Probit	Weighted Ordered Probit	Weighted Ordered Probit	Weighted Ordered Probit
Foral Regime	0.0109	-0.0843	**-0.456*****	0.0807
	(0.0752)	(0.0572)	(0.0544)	(0.0520)
Left	0.507***	0.349***	0.283***	0.00195
	(0.0959)	(0.0834)	(0.0774)	(0.0765)
Centre	0.113	0.142	0.188**	-0.0431
	(0.105)	(0.0945)	(0.0864)	(0.0877)
Right	0.00922	-0.108	-0.0366	0.0952
	(0.0998)	(0.0899)	(0.0845)	(0.0849)
Older	0.269***	-0.00787	0.0550	0.0856*
	(0.0712)	(0.0549)	(0.0539)	(0.0510)
High Edu	-0.0368	-0.144***	-0.0581	0.0583
	(0.0587)	(0.0476)	(0.0443)	(0.0439)
High Income	0.0610	0.0122	0.0269	-0.0471
	(0.0686)	(0.0547)	(0.0524)	(0.0471)
Inactive	-0.170**	-0.161***	-0.261***	0.0926*
	(0.0688)	(0.0540)	(0.0512)	(0.0494)
Married	0.130*	0.0478	0.0273	-0.0430
	(0.0712)	(0.0585)	(0.0558)	(0.0562)
Female	0.0517	0.0187	-0.0391	-0.0121
	(0.0619)	(0.0493)	(0.0467)	(0.0461)
Having kids	-0.0414	-0.0238	0.105*	0.0806
	(0.0743)	(0.0614)	(0.0593)	(0.0589)
Self-employed	-0.511***	-0.229**	-0.177*	0.219**
	(0.113)	(0.104)	(0.0985)	(0.0991)
Pro Autonomy	-0.111*	0.142***	-0.103**	-0.104**
	(0.0634)	(0.0519)	(0.0483)	(0.0467)
Constant	0.542***			
	(0.105)			
Observations	3,017	3,017	3,017	3,017
(Pseudo) R-squared	0.0424	0.0235	0.0269	0.0061

Robust standard errors in parentheses. *** p<0.01. ** p<0.05. * p<0.1.

Robustness Tests: Inclusion of AC-fixed effects and Fake *Foral*

	Tax Morale	*Perceived Tax Fraud in Spain*	*Perceived Tax Fraud in the AC*	*Perceived Tax Enforc.*	*Tax Morale*	*Perceived Tax Fraud in Spain*	*Perceived Tax Fraud in the AC*	*Perceived Tax Enforc.*
	AC-Fixed Effects				**Fake *Foral***			
Foral Regime	0.00149	-0.0574*	-0.289***	0.0604				
	(0.0224)	(0.0339)	(0.0406)	(0.0415)				
Fake *Foral*					-0.00698	-0.0308	-0.0879	0.0109
					(0.0332)	(0.0550)	(0.0631)	(0.0607)
Left	0.141***	0.196***	0.186***	-0.00619	0.140***	0.195***	0.202***	-0.00900
	(0.0289)	(0.0475)	(0.0521)	(0.0530)	(0.0289)	(0.0475)	(0.0522)	(0.0532)
Centre	0.0378	0.0894*	0.128**	-0.0277	0.0373	0.0909*	0.151***	-0.0323
	(0.0335)	(0.0534)	(0.0573)	(0.0602)	(0.0336)	(0.0535)	(0.0579)	(0.0604)
Right	0.00747	-0.0481	-0.0173	0.0668	0.00708	-0.0432	0.0355	0.0580
	(0.0323)	(0.0525)	(0.0569)	(0.0590)	(0.0324)	(0.0525)	(0.0567)	(0.0590)
Older	0.0705***	-0.000387	0.0297	0.0547	0.0700***	-0.00663	0.00613	0.0582*
	(0.0192)	(0.0277)	(0.0343)	(0.0351)	(0.0190)	(0.0274)	(0.0351)	(0.0352)
High Edu	-0.0101	-0.0726***	-0.0312	0.0435	-0.0106	-0.0718***	-0.0155	0.0403
	(0.0160)	(0.0248)	(0.0283)	(0.0303)	(0.0161)	(0.0248)	(0.0290)	(0.0304)
High Income	0.0151	0.0156	0.00968	-0.0412	0.0143	0.00947	0.000147	-0.0400
	(0.0181)	(0.0284)	(0.0337)	(0.0324)	(0.0179)	(0.0281)	(0.0341)	(0.0323)
Inactive	-0.0444**	-0.0816***	-0.177***	0.0700**	-0.0466**	-0.0852***	-0.166***	0.0635*
	(0.0193)	(0.0290)	(0.0342)	(0.0348)	(0.0189)	(0.0285)	(0.0341)	(0.0341)
Married	0.0348*	0.0131	0.0127	-0.0259	0.0347*	0.0130	-0.00824	-0.0246
	(0.0194)	(0.0297)	(0.0357)	(0.0388)	(0.0193)	(0.0295)	(0.0364)	(0.0386)
Female	0.0160	0.00784	-0.0267	-0.00588	0.0158	0.00823	-0.0290	-0.00695
	(0.0169)	(0.0250)	(0.0299)	(0.0320)	(0.0168)	(0.0250)	(0.0305)	(0.0319)
Having kids	-0.00899	-0.00571	0.0788**	0.0605	-0.00948	-0.00445	0.0902**	0.0576
	(0.0197)	(0.0304)	(0.0376)	(0.0405)	(0.0197)	(0.0303)	(0.0388)	(0.0405)
Self-employed	-0.154***	-0.134**	-0.115*	0.162**	-0.154***	-0.129**	-0.103	0.158**
	(0.0386)	(0.0601)	(0.0641)	(0.0710)	(0.0386)	(0.0597)	(0.0651)	(0.0710)
Pro Autonomy	-0.0277	0.0712**	-0.0642*	-0.0596*	-0.0311*	0.0633**	-0.0863***	-0.0638**
	(0.0183)	(0.0281)	(0.0333)	(0.0341)	(0.0170)	(0.0256)	(0.0313)	(0.0319)
CAT	0.00149	-0.0574*	-0.289***	0.0604				
	(0.0224)	(0.0339)	(0.0406)	(0.0415)				
MAD	-0.0165	-0.0494	0.0243	-0.0255				
	(0.0264)	(0.0429)	(0.0476)	(0.0503)				
CAN	0.00525	-0.0437	0.0406	0.0340				
	(0.0246)	(0.0377)	(0.0434)	(0.0452)				
Constant	0.704***	3.478***	3.244***	1.862***	0.708***	3.457***	3.169***	1.894***
	(0.0341)	(0.0535)	(0.0598)	(0.0619)	(0.0328)	(0.0510)	(0.0576)	(0.0590)
Observations	3,017	3,017	3,017	3,017	3,017	3,017	3,017	3,017
R-squared	0.043	0.041	0.057	0.015	0.043	0.040	0.027	0.013

Robust standard errors in parentheses. *** p<0.01. ** p<0.05. * p<0.1.

Robustness Tests: Coarsened Exact Matching (CEM)

	(1) Tax Morale OLS	(2) Perceived Tax Fraud in Spain OLS	(3) Perceived Tax Fraud in the AC OLS	(4) Perceived Tax Enforc. OLS	(5) Tax Morale Probit	(6) Perceived Tax Fraud in Spain Ord. Probit	(7) Perceived Tax Fraud in the AC Ord. Probit	(8) Perceived Tax Enforc. Ord. Probit
Foral Regime	0.0217	0.000133	-0.267***	-0.00302	0.0937	-0.00835	-0.435***	0.00446
	(0.0182)	(0.0316)	(0.0370)	(0.0462)	(0.0808)	(0.0654)	(0.0597)	(0.0663)
Left	0.105***	0.125**	0.117*	0.0871	0.441***	0.248**	0.179*	0.142
	(0.0318)	(0.0522)	(0.0620)	(0.0626)	(0.120)	(0.102)	(0.0980)	(0.0963)
Centre	0.0239	0.0660	0.114	0.0151	0.0741	0.125	0.170	0.0225
	(0.0390)	(0.0620)	(0.0702)	(0.0726)	(0.139)	(0.120)	(0.113)	(0.112)
Right	-0.0671*	-0.0958	-0.130*	0.113	-0.250*	-0.168	-0.216*	0.172
	(0.0403)	(0.0657)	(0.0775)	(0.0781)	(0.135)	(0.120)	(0.120)	(0.118)
Older	0.0576***	-0.0201	-0.00538	0.132**	0.265***	-0.0334	-0.00160	0.190**
	(0.0223)	(0.0439)	(0.0466)	(0.0649)	(0.100)	(0.0914)	(0.0787)	(0.0883)
High Edu	-0.00596	-0.0997***	-0.0322	0.0573	-0.0267	-0.203**	-0.0601	0.0796
	(0.0211)	(0.0382)	(0.0403)	(0.0507)	(0.0915)	(0.0793)	(0.0671)	(0.0725)
High Income	0.0354	0.0553	0.0964**	-0.0147	0.180	0.0992	0.160**	-0.0196
	(0.0230)	(0.0427)	(0.0449)	(0.0658)	(0.110)	(0.0911)	(0.0769)	(0.0943)
Inactive	-0.0518**	-0.0212	-0.101**	0.0243	-0.203**	-0.0503	-0.167**	0.0434
	(0.0245)	(0.0421)	(0.0467)	(0.0515)	(0.0967)	(0.0854)	(0.0742)	(0.0764)
Married	0.0296	-0.00166	0.0545	0.00532	0.119	0.0240	0.103	0.00501
	(0.0282)	(0.0420)	(0.0495)	(0.0572)	(0.118)	(0.0864)	(0.0820)	(0.0865)
Female	0.0111	0.0162	-0.0255	0.00286	0.0477	0.0416	-0.0401	-0.00232
	(0.0206)	(0.0376)	(0.0395)	(0.0574)	(0.0904)	(0.0787)	(0.0663)	(0.0812)
Having kids	0.0234	-0.0114	-0.0110	-0.00416	0.0973	-0.0360	-0.0375	-0.00721
	(0.0277)	(0.0484)	(0.0542)	(0.0581)	(0.122)	(0.101)	(0.0910)	(0.0882)
Self-employed	-0.134*	-0.0951	-0.0248	-0.0480	-0.540**	-0.199	-0.0452	-0.0588
	(0.0783)	(0.0865)	(0.0960)	(0.122)	(0.247)	(0.166)	(0.160)	(0.180)
Pro Autonomy	-0.0200	0.0804**	-0.0469	-0.0743	-0.0790	0.166**	-0.0859	-0.122
	(0.0200)	(0.0351)	(0.0399)	(0.0529)	(0.0896)	(0.0750)	(0.0671)	(0.0775)
Constant	0.725***	3.479***	3.264***	1.800***	0.547***			
	(0.0418)	(0.0658)	(0.0765)	(0.105)	(0.153)			
Observations	2,169	2,169	2,169	2,169	2,169	2,169	2,169	2,169
(Pseudo)R-squared	0.049	0.037	0.054	0.014	0.0560	0.0217	0.0270	0.0065

Robust standard errors in parentheses. *** p<0.01. ** p<0.05. * p<0.1.

The matching method is performed using the command CEM in STATA. The sample contains fewer than 3,017 observations because of the process of matching (i.e., there are 848 unmatched observations). The above regressions are weighted to equalize the number of treated and control units within each stratum.