



Agenzia Tributaria

# INCOME LEVEL

How IA closes the information gaps



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**Predictive AI:** Predictive artificial intelligence is a type of AI that uses statistical analysis and machine learning to identify patterns, anticipate behaviors, and predict future events based on data.



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# How do we define the Income Level Prediction?

To understand it, it is mandatory to explain what **regression** means. This is a concept that already has over 220 years of history. In fact, the first documented form of linear regression was the method of least squares, which was published by Legendre in 1805.



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The best way to explain a regression is through an example. Suppose we create a chart using data from 1,000 people, for whom we definitively know their actual **annual income** and the number of **square meters** of the housing they live in.

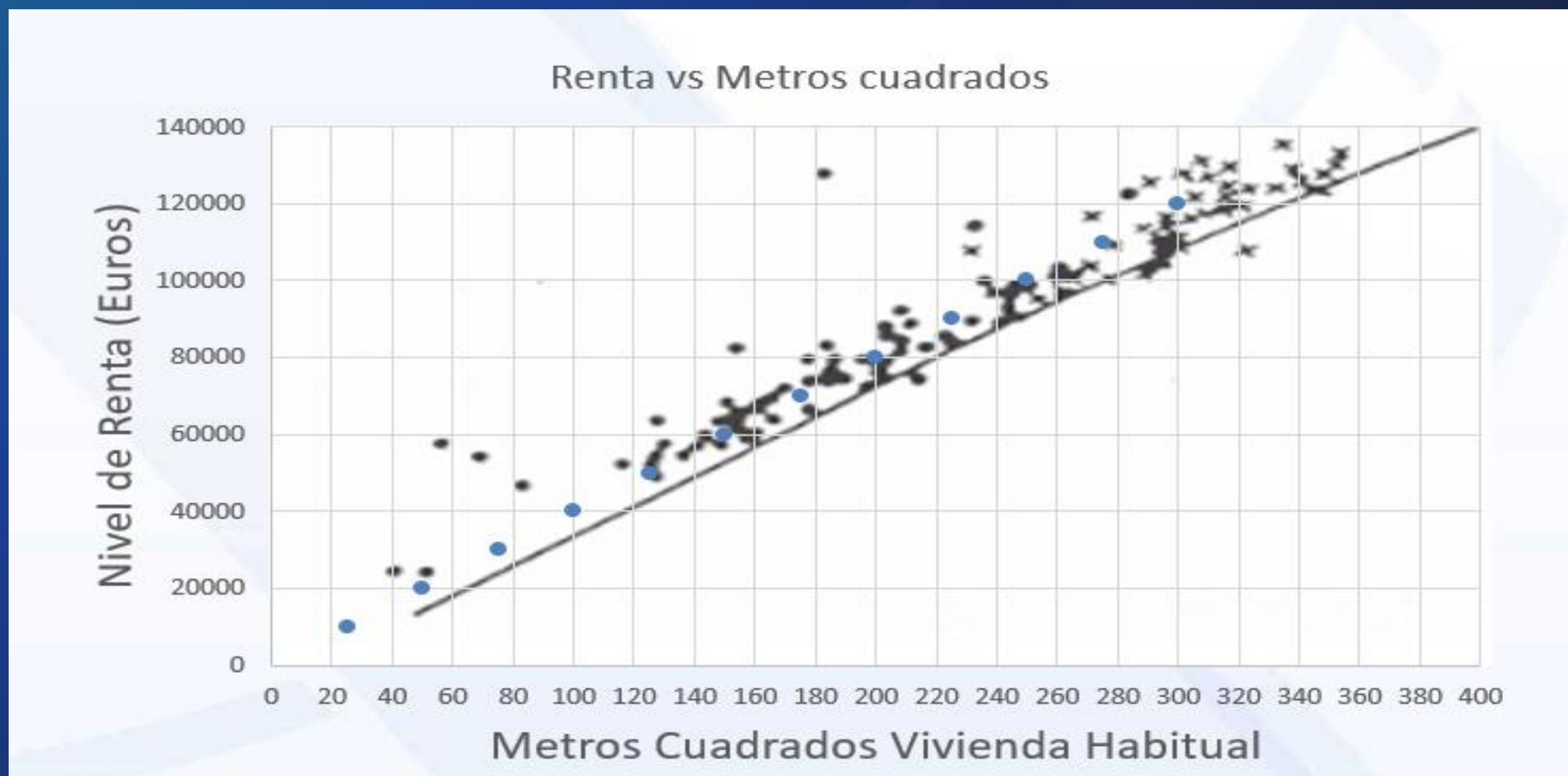
And this sample of 1,000 people has been obtained without any bias that could distort the study.





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We would have the following :





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**Each point** on the graph represents one of those thousand individuals with known information on **Income Level** and **Square Meters** of their usual residence.

By applying the method of least squares, either manually (without a calculator, as it was done 220 years ago) or computationally, a line can be calculated that best approximates **the relationship between Income and Square Meters**.



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Thus, if we are asked **how much money** (statistically, according to the example) a person **living** in an **180-square-meter** apartment (a known, or independent, explanatory variable) should earn, the system, based on the calculated line, will tell us that approximately **65,000 euros per year** (an unknown, or dependent, explained variable).

We have already calculated their **INCOME LEVEL PREDICTION**.



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## Calculation process:

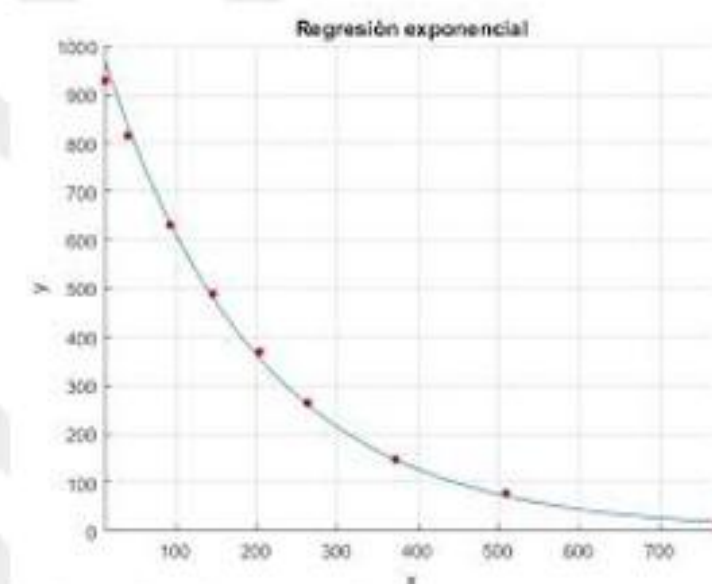
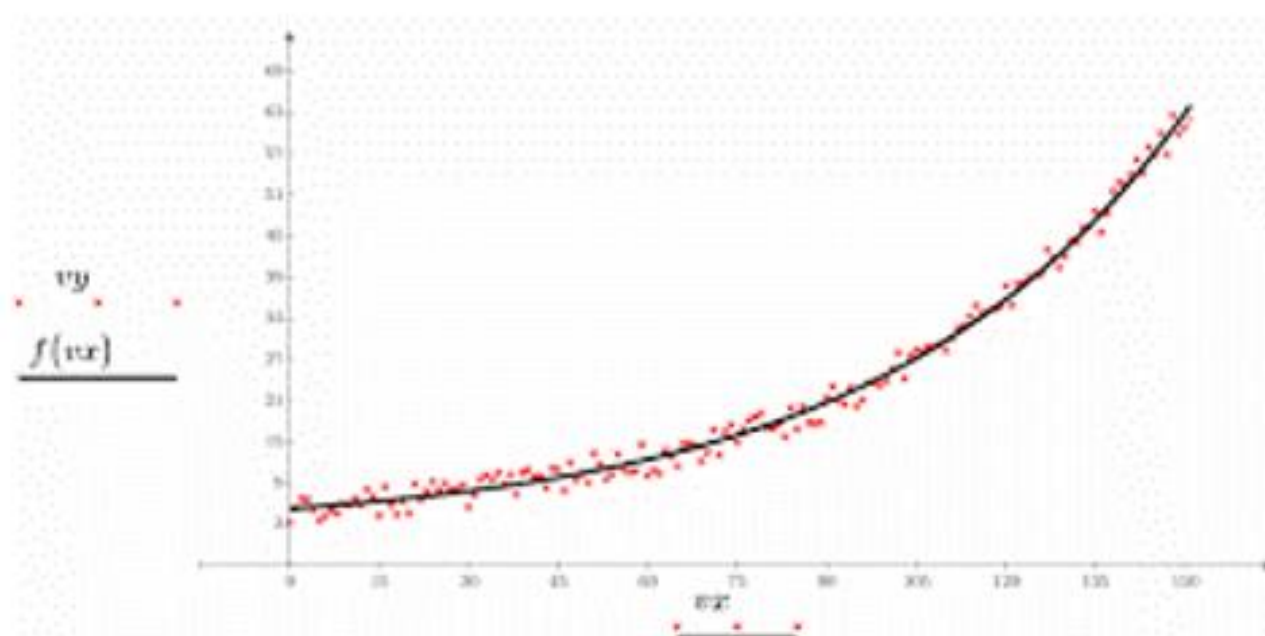
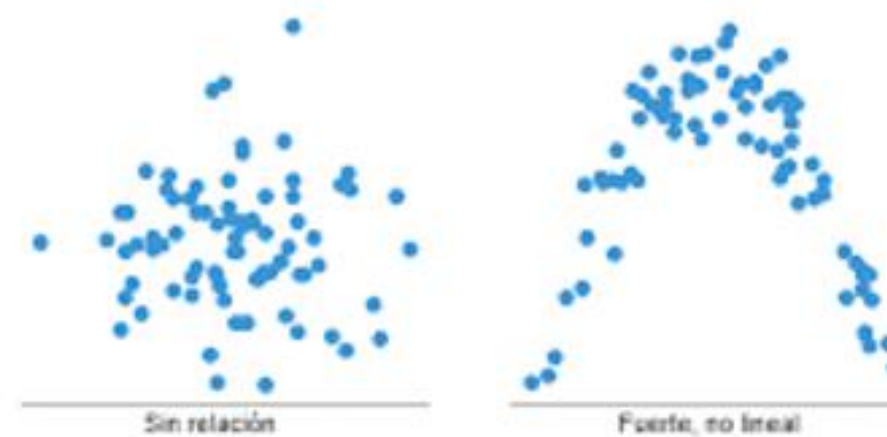
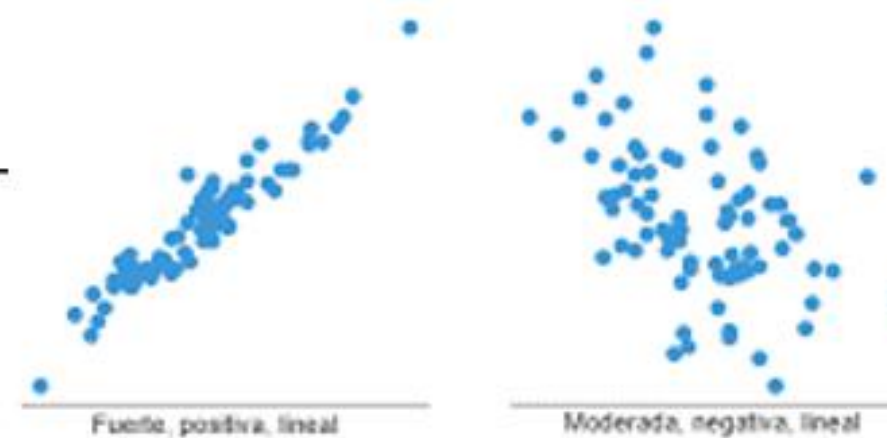
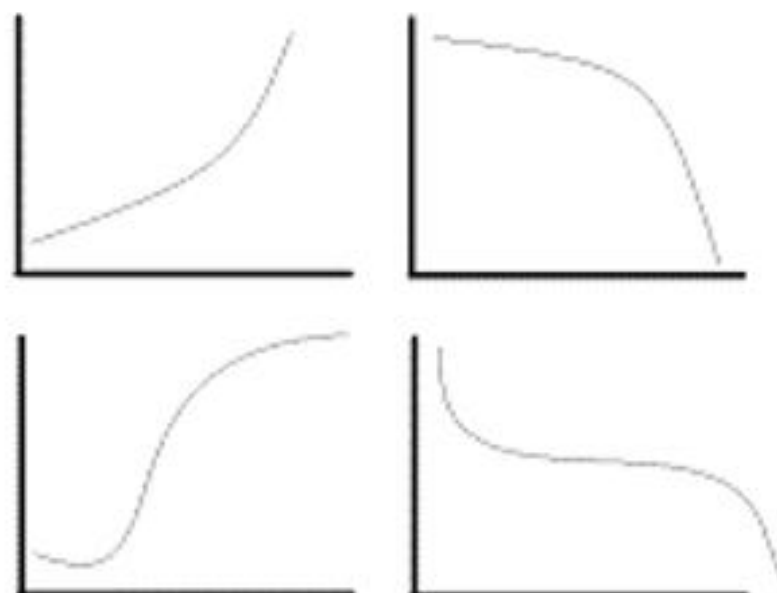
- I. There are 52 explanatory variables and only one explained variable.
- II. The variables have different degrees of correlation, ranging between 1 and -1.
- III. The mathematical equation relating the explanatory variables to the explained variable is not always a straight line.





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### EJEMPLOS DE RELACIONES NO LINEALES





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## Types of variables:

- Continuous quantitative variables (1.23; 1.78; 2.65; etc.).
- Discrete quantitative variables (1; 2; 4; 8; etc.).
- Dichotomous qualitative variables (0; 1).
- Categorical or nominal qualitative variables (Cantabria; Andalusia; Catalonia; etc.).
- Ordinal qualitative variables (poor; regular; good; excellent).



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## EXPLAINED VARIABLES.

An explained (dependent) variable is being calculated, which is the **Estimated Income Level**. In the near future, the **Estimated Consumption Level** could also be addressed with little complication, and, due to differences with the previous one, would give us the Estimated Savings Level (deviations in asset and liability prices would need to be added).

# EXPLAINED VARIABLES.

Zújar de origen	Nombre	Descripción
<a href="#">Unidad Familiar</a>	Número de miembros en la familia	Número de miembros en la familia
<a href="#">Zar Origenes</a> <a href="#">ZAR</a>	Valor Inmueble Máximo	Valor más alto de los inmuebles del contribuyente
<a href="#">Patrimonio Neto</a>	Activos	Activos
<a href="#">ZARNIF</a> <a href="#">Parcelas Rusticas</a>	Valor Catastral Rustico	El valor de los inmuebles rústicos
<a href="#">ZARNIF</a> <a href="#">Inmuebles Urbanos</a>	Valor Catastral Urbano	El valor de los inmuebles urbanos
<a href="#">Participaciones Societarias</a>	Número de Ventas Ocultas	Número de Ventas Ocultas
<a href="#">ZARNIF</a> <a href="#">ZAR</a>	Valor Inmueble Habitual	Valor Inmueble Habitual

**\* 52 in total**



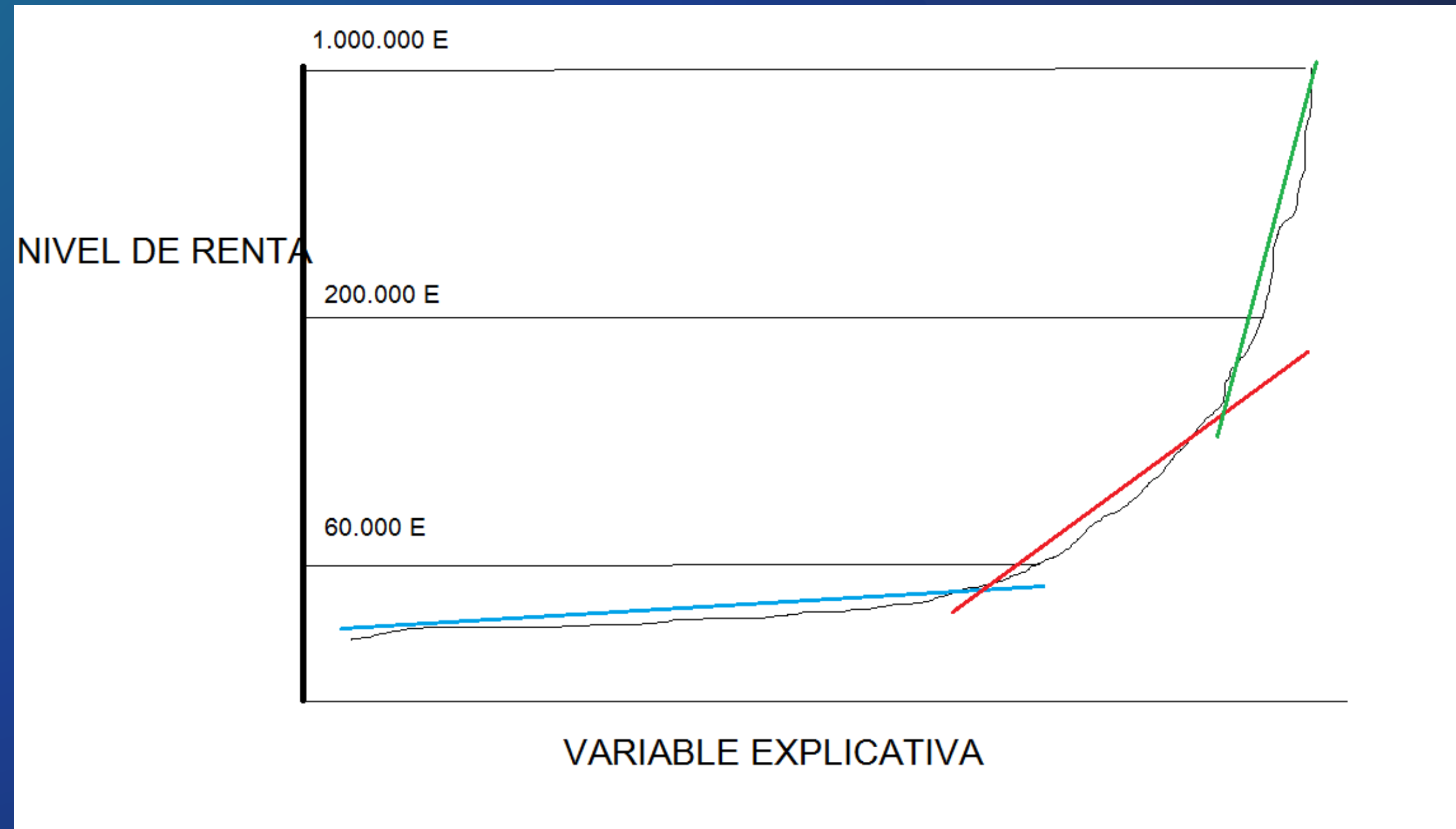
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# Within what income level range does the system work well?



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To solve this problem, we will perform three independent linear regression models, marked in blue, red, and green.



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The analysis will be based on the assumption that the **Income Level** (regular income) is a direct linear function of a series of explanatory variables that will be defined in this document. This direct linear function will take the following form:

$$\text{Income Level} = A1 \times X1 + A2 \times X2 + A3 \times X3 + A4 \times X4 + \dots + Ai \times Xi + \varepsilon; (i=1,n)$$

Where:

**Income Level** is the dependent variable to be estimated.

**$X_i$**  are the known explanatory variables for all taxpayers.

**$A_i$**  are the coefficients to be calculated using multivariate analysis techniques.

**$\varepsilon$**  is the error term, which is unknown.



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## Copy into RESCAL's Zújar

The calculated explanatory variable, **Estimated Income Level**, is dumped into RESCAL's Zújar variable "**Statistical Income**", providing an indicator of inconsistency between this and the regular income (actual declared or known income) calculated by RESCAL, resulting in the variable "Statistical Inconsistency." This variable will be used as the starting point for taxpayer selection queries, Hermes Risks, or future tools based on **Generative or Cognitive Artificial Intelligence**.



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## How are the data displayed?

**There is a Forecast Level of Income Dashboard.**

**Displayed fields:**

- **Tax period**
- **NIF**
- **Estimated Income**
- **Level Regular Income**

**It is also copied to the RESCAL Dashboard.**



# ZÚJAR OF PREDICTION LEVEL INCOME

Página principal

RRSS Perfiles y Post

HERMES

Predicción Nivel de Renta

RESCAL Rentas Estadísticas y CALculadas (v1.1)

Multirregistro\*

Exportar

Autofiltro

Condiciones

Aplicar

Actualizar

Totales

SAIT/MARFIL

Grupo de columnas

Columnas

Expresión

Ajustar

Guardar

Cancelar

Los datos mostrados en este zújar han sido calculados con Inteligencia Artificial. Los valores, clasificaciones o puntuaciones mostradas son predicciones y por lo tanto deben ser usados con cautela. Si necesita usar estos datos póngase en contacto con el Departamento Funcional propietario del zújar para analizar la situación..

Ejercicio	NIF i...	Nivel de Renta Estimado	Rentas Regulares
= 2023	x =	>	=
2023	162...	2.684,13	0,00
2023	162...	4.168,03	0,00
2023	162...	2.100,45	353,86
2023	727...	1.206,37	0,00
2023	728...	24.745,89	29.955,48
2023	X91...	17.992,89	32.777,10
2023	446...	2.221,76	0,00
2023	580...	-3.067,33	0,00
2023	580...	-2.156,95	148,55
2023	075...	24.057,66	22.881,68
2023	443...	10.842,35	8.303,51
2023	470...	12.378,04	8.358,19
2023	775...	24.846,28	25.089,81
2023	X98...	7.475,20	2.865,00
2023	205...	1.089,14	0,00
2023	X08...	3.448,46	0,00
2023	116...	-116,84	0,00
2023	213...	20.508,97	24.757,45
2023	421...	-281,22	0,00
2023	741...	1.566,56	0,00
2023	312...	12.629,26	10.963,40
2023	218...	-108,18	0,00
2023	216...	-974,44	0,00
2023	025...	13.226,60	6.784,54
2023	741...	-974,44	0,00
2023	739...	14.413,25	17.100,55
2023	050...	-974,44	0,00
2023	X10...	-45,55	0,00
2023	X13...	-88,86	0,00
2023	123...	17.263,33	14.261,80
2023	215...	-974,44	0,00
2023	X21...	565,19	0,00
2023	X24...	897,00	0,00
2023	X27...	-166,83	0,00
2023	X27...	897,00	0,00
2023	X38...	523,77	0,00
2023	X45...	2.803,34	0,00

Se muestran los 1.000 primeros contribuyentes de un total de 137.916.646.

#: 2017-11-2025

ZÚJAR OF ESTIMATED AND CALCULATED INCOMES (RESCAL)

Multirregistro\*

ExportarAutofiltroCondicionesAplicarActualizarTotalesSAIT/MARFILGrupo de columnasColumnasExpresiónAjustarGuardarCancelar

Algunos datos ("Rentas Estadísticas") mostrados en el Zujar de Rescal - Rentas Estadísticas y Calculadas, han sido generados con Inteligencia Artificial. Los valores, clasificaciones o puntuaciones mostradas son predicciones y por lo tanto deben ser usados con cautela. Si necesita usar estos datos póngase en contacto con el Departamento Funcional propietario del Zujar para analizar la situación. .

Ejercicio igual a 2021

	Ejercicio	NIF...	No...	Rentas disponibles	Consumos disponibles	Ahorro disponible	Rentas extensivas	Consumos extensivos	Ahorro extensivo	Rentas regulares	Consumos regulares	Ahorro regular	Rentas estadísticas	Consumos estadísticos	Ahorro estadístico
	= 2021	=	=	≥	≥	≥	≥	≥	≥	≥	≥	≥	>	≥	≥
→	2021	745...	C...	14.623,27	433,27	14.190,00	14.623,27	433,27	14.190,00	14.623,27	433,27	14.190,00	10.686,67		
	2021	050...	C...	12.096,80	665,28	11.431,52	12.096,80	665,28	11.431,52	12.096,80	665,28	11.431,52	11.780,35		
	2021	443...	C...	22.284,25	1.372,00	20.912,25	22.284,25	1.372,00	20.912,25	22.284,25	1.372,00	20.912,25	17.877,95		
	2021	470...	LO...	13.525,62	0,00	13.525,62	13.525,62	0,00	13.525,62	13.525,62	0,00	13.525,62	9.516,10		
	2021	766...	M...	4.110,18	0,00	4.110,18	4.110,18	0,00	4.110,18	4.110,18	0,00	4.110,18	6.515,24		
	2021	205...	C...	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00			
	2021	414...	O...	6.490,68	192,60	6.298,08	6.490,68	192,60	6.298,08	6.410,94	192,60	6.218,34	18.871,81		
	2021	X25...	DE...	222.579,84	14.039,90	208.539,94	22.579,84	4.039,90	18.539,94	22.579,84	4.039,90	18.539,94	35.779,92		
	2021	532...	G...	158.262,43	281.596,98	-123.334,55	21.007,31	144.321,98	-123.314,67	21.007,31	144.321,98	-123.314,67	19.416,55		
	2021	771...	M...	17.764,79	54,40	17.710,39	17.764,79	54,40	17.710,39	17.764,79	54,40	17.710,39	14.605,11		
	2021	771...	S...	26.394,52	1.624,28	24.770,24	26.394,52	1.624,28	24.770,24	26.394,52	1.624,28	24.770,24	20.376,01		
	2021	773...	FA...	12.238,99	0,00	12.238,99	12.238,99	0,00	12.238,99	12.238,99	0,00	12.238,99	11.568,65		
	2021	773...	OL...	3.526,47	1.298,47	2.228,00	3.526,47	1.298,47	2.228,00	3.526,47	1.298,47	2.228,00	8.545,14		
	2021	464...	M...	8.717,81	453,73	8.264,08	8.717,81	453,73	8.264,08	8.717,81	453,73	8.264,08	7.745,08		
	2021	456...	SA...	26.813,86	1.408,03	25.405,83	26.813,86	1.408,03	25.405,83	26.813,86	1.408,03	25.405,83	15.897,51		
	2021	776...	R...	31.633,94	50.710,28	-19.076,34	28.102,59	50.710,28	-22.607,69	28.102,59	50.710,28	-22.607,69	21.015,10		
	2021	142...	R...	14.581,26	1.334,38	13.246,88	14.581,26	1.334,38	13.246,88	14.581,26	1.334,38	13.246,88	11.857,74		
	2021	410...	LO...	13.059,17	0,00	13.059,17	13.059,17	0,00	13.059,17	13.059,17	0,00	13.059,17	9.049,21		
	2021	462...	A...	30.969,29	152,81	30.816,48	30.969,29	152,81	30.816,48	30.969,29	152,81	30.816,48	28.975,52		
	2021	463...	G...	34.239,73	515,67	33.724,06	34.239,73	515,67	33.724,06	34.239,73	515,67	33.724,06	34.170,34		
	2021	464...	AL...	91.209,69	88.861,90	2.347,79	16.146,53	3.861,90	12.284,63	16.146,53	3.861,90	12.284,63	16.692,55		
	2021	467...	VI...	422.191,28	342.787,24	79.404,04	41.761,66	1.692,41	40.069,25	41.761,66	1.692,41	40.069,25	39.787,25		
	2021	471...	S...	18.734,87	2.341,11	16.393,76	18.734,87	2.341,11	16.393,76	18.734,87	2.341,11	16.393,76	20.620,51		
	2021	478...	AL...	78.631,60	67.722,26	10.909,34	78.631,60	67.722,26	10.909,34	78.631,60	67.722,26	10.909,34	5.365,42		
	2021	478...	M...	143.247,53	388.859,53	-245.612,00	143.247,53	388.859,53	-245.612,00	143.247,53	388.859,53	-245.612,00	47.669,77		
	2021	410...	BA...	43.263,76	533,55	42.730,21	43.263,76	533,55	42.730,21	43.263,76	533,55	42.730,21	44.959,32		
	2021	478...	BE...	153,82	4.126,08	-3.972,26	153,82	4.126,08	-3.972,26	153,82	4.126,08	-3.972,26	17.805,28		
	2021	716...	BA...	16.054,84	1.612,43	14.442,41	16.054,81	1.612,43	14.442,38	16.054,81	1.612,43	14.442,38	13.037,43		
	2021	393...	PA...	14.954,47	828,52	14.125,95	14.954,47	828,52	14.125,95	14.954,47	828,52	14.125,95	10.457,30		
	2021	388...	W...	40.688,77	815.368,81	-774.680,04	40.688,77	15.368,81	25.319,96	40.688,77	15.368,81	25.319,96	33.033,01		
	2021	462...	DE...	19.850,66	764,68	19.085,98	19.850,66	764,68	19.085,98	17.782,94	764,68	17.018,26	10.317,18		
	2021	467...	SA...	46.488,75	6.216,58	40.272,17	46.488,75	6.216,58	40.272,17	46.488,75	6.216,58	40.272,17	22.881,79		
	2021	478...	G...	36.147,90	2.362,88	33.785,02	36.147,90	2.362,88	33.785,02	36.147,90	2.362,88	33.785,02	33.948,52		
	2021	523...	JI...	113.351,23	88.114,10	25.237,13	106.126,70	88.114,10	18.012,60	106.126,70	88.114,10	18.012,60	23.745,68		

Se muestran los1.000 primeros contribuyentes de un total de 65.837.223.

07-11-2025



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**It can be observed that when regular income exists, the calculated result matches quite well.**

**It would be necessary to verify the results when no regular income is declared.**

**And select a case to view the details.**

Página principal

RRSS Perfiles y Post

HERMES

Predicción Nivel de Renta

RESCAL Rentas Estadísticas y CALculadas (v1.1)

Multirregistro\*

Exportar

Autofiltro

Condiciones

Aplicar

Actualizar

Totales

SAIT/MARFIL

Grupo de columnas

Columnas

Expresión

Ajustar

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Cancelar

Los datos mostrados en este zújar han sido calculados con Inteligencia Artificial. Los valores, clasificaciones o puntuaciones mostradas son predicciones y por lo tanto deben ser usados con cautela. Si necesita usar estos datos póngase en contacto con el Departamento Funcional propietario del zújar para analizar la situación..

	Ejercicio	NIF i...	Nivel de Renta Estimado	Rentas Regulares
🏠	= 2023	×	=	0,00 ×
	2023	162...	294.264,30	0,00
	2023	162...	251.767,21	0,00
	2023	153...	197.322,82	0,00
	2023	153...	167.003,32	0,00
	2023	049...	61.048,93	0,00
	2023	005...	262.379,82	0,00
	2023	005...	229.367,34	0,00
	2023	L963...	61.588,96	0,00
	2023	212...	65.573,46	0,00
	2023	228...	69.898,85	0,00
	2023	213...	58.208,20	0,00
	2023	X10...	76.089,99	0,00
	2023	X10...	65.437,57	0,00
	2023	022...	91.917,31	0,00
	2023	X12...	55.079,28	0,00
	2023	219...	56.611,48	0,00
→	2023	486...	302.965,40	0,00
	2023	X25...	53.874,57	0,00
	2023	X60...	87.762,57	0,00
	2023	X60...	85.659,48	0,00
	2023	X81...	168.480,86	0,00
	2023	X82...	139.241,48	0,00
	2023	Y07...	78.003,24	0,00
	2023	Y01...	66.317,41	0,00
	2023	Y16...	59.846,80	0,00
	2023	Y31...	86.714,96	0,00
	2023	Y32...	52.252,82	0,00
	2023	X27...	59.114,04	0,00
	2023	Y39...	73.602,57	0,00
	2023	Y40...	74.217,75	0,00
	2023	Y62...	208.111,27	0,00
	2023	X18...	84.228,00	0,00
	2023	Y26...	84.207,65	0,00
	2023	Y26...	72.467,33	0,00
	2023	065...	57.165,00	0,00
	2023	120...	136.875,92	0,00
	2023	802...	60.514,71	0,00

Se muestran los 1.000 primeros contribuyentes de un total de 2.979.

#: 117-11-2025





Agencia Tributaria

Datos Avanzados

Análisis Patrimonial

Análisis de Actuaciones previas

Análisis de Declaraciones

Información Bancaria

Domicilios

Referencias Catastrales

Indice Unico Notarial

Colectivo de No Residentes

Países declarados

Fechas deducidas

Conclusiones NR

Ayuda

Exportar

Indice

Contribuyente

Foto del Contribuyente

Incoherencias Patrimoniales

Patrimonio, Renta y Consumo

Conclusiones RESCAL

Exportar

[1]

GRUPO	CONCEPTO	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
	(A) PATRIMONIO N	17.675.472€	27.769.692€	30.456.536€	33.384.217€	24.038.364€	41.784.478€	41.011.616€	24.791.207€	601.917€	79.712.599€
	(B) PATRIMONIO N-1		17.675.472€	27.769.692€	30.456.536€	33.384.217€	24.038.364€	41.784.478€	41.011.616€	24.791.207€	601.917€
(1) PATRIMONIO NETO	(A-B) INCREMENTO PN	0€	10.094.219€	2.686.843€	2.927.681€	-9.345.853€	17.746.114€	-772.861€	-16.220.409€	-24.189.290€	79.110.682€
	(C) RENTA EXTENSIVA	0€	0€	0€	102.774€	0€	0€	0€	0€	0€	1.800€
	(D) CONSUMO EXTENSIVO	0€	0€	19.876€	304.928€	242.506€	234.474€	224.060€	263.123€	63.385€	32.965€
	(E) DESVIACIONES PRECIO	0€	0€	2.747.872€	2.819.826€	-9.228.044€	17.765.916€	-736.741€	-16.128.602€	-24.349.563€	79.127.820€
(2) RESCAL	(C-D+E) INCREMENTO PAT TEORICO	0€	0€	2.727.995€	2.617.672€	-9.470.550€	17.531.441€	-960.801€	-16.391.726€	-24.412.949€	79.096.655€
(1)-(2) TOTAL INCOHERENCIA PATRIMONIAL	(A-B)-(C-D+E)	ND	ND	-41.152€	310.009€	124.696€	214.672€	187.940€	171.317€	223.658€	14.027€



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This taxpayer has been selected and included in the **Inspection Plan** for 2023 and 2024.

Resultados: 4: E



AP Proc en curso

Buscando otros procedimientos en curso (2/3)

PROCEDIMIENTOS EN CURSO PNI  
No constan procedimientos en curso PNI

EXPEDIENTES EN ORION

Código Expediente	NIF Titular 1	Nombre Titular 1	Grupo Actuaciones	Subgrupo Actualciones	Estado	Expediente Plan	Clave EE
<a href="#">2023000000000137516</a>	4	R E	Emisión de Informes INTERCAMBIOS INTERNACIONALES INFORMACION (Alta Automática)	Informes	Enviado a Plan de Inspección	<a href="#">OA001115886</a>	<a href="#">20236ER326145532665Y</a>
<a href="#">2024000000000060009</a>	4	R E	Análisis de Fichas (Alta automática)	Actuaciones de análisis de la información	Analizado		<a href="#">2024FNS326454813861Y</a>
<a href="#">2024000000000054487</a>	4	R E	Fichas de información y análisis	Actuaciones de análisis de la información	Enviado a Plan de Inspección	<a href="#">OA001166262</a>	<a href="#">2024FJN326090048614N</a>

PROCEDIMIENTOS DE GESTIÓN TRIBUTARIA EN CURSO  
No constan Procedimientos de Gestión Tributaria en curso



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## Conclusion.

This is therefore a project of **Predictive Artificial Intelligence**, as it 'predicts' a taxpayer's income based on explanatory variables and a sophisticated set of **multivariate statistical analysis techniques**.

The next step, within the field of Artificial Intelligence, is for the system **to learn from itself**, using reference groups—an area currently under development.





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