



Research article

Evaluating the acceptance of CBDCs: experimental research with artificial intelligence (AI) generated synthetic response

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Supplementary

Appendix

1. Prompt used to generate synthetic responses in Generative AI.

“General Public Demographic attributes

[Gender]: male, female

[Income]: <25,000 euros, 25,000-50,000, 50,000-75,000, 75,000-120,000, >120,000

[Education]: no high school, high school, college, graduate, postgraduate, PhD.

[Age]: 18-24, 25-34, 35-54, 55-64, >65

[Network Effect]: Then you meet a friend who says he rejects using CBDC at the news or another friend who says that CBDCs have many advantages and that he will accept it.

[Identity Statement]: You are not a financial expert; you have experience in finance, or you are a crypto enthusiast.

[Media]: Twitter user, Newspaper, TV news.

[Acceptance by Merchant]: Widely accepted/[easy and convenient, Not widely accepted/ difficult and inconvenient.

You are a [gender], with an annual household income of [income]. You have [education] education, and your age is in the [age] year range, with previous experience in finance [identity statement]. You have just learned that the Central Bank will soon launch a CBDC (Central Bank Digital Currency). [Network Effect]. You also notice that merchants in your area [Acceptance by Merchant], meaning that using CBDCs for everyday purchases is [easy and convenient / difficult and inconvenient].

You go online and see the following info from a popular [Media]:

- Deposits may be blocked, Possible withdrawal limits.
- They want to control your money.
- They can easily track your banking transactions, Goodbye to your privacy.
- Easy and direct access to financial services for all, without traditional intermediaries.
- Instant, secure payments with lower transaction costs.

Given this information, do you plan to reject, wait for more information, or accept the CBDC?" Include an explanation or rationale for the decision.

1. **Availability of data and material:** The dataset generated during the current study are available in: <https://portalcientifico.ucavila.es/datos/666959516de39433ff6e20f7>

Table A.1. Descriptive statistics.

	Gender	Income	Education	Age	Network Effect	Identity Statement	Media	Merchant Acceptance	Decision
N	663	663	663	663	663	663	663	663	663
Lost	0	0	0	0	0	0	0	0	0
Mean	0.48	2.99	3.47	3.01	0.50	2.02	2.06	0.50	1.33
Standard error of the mean	0.019	0.054	0.067	0.055	0.019	0.031	0.032	0.019	0.021
Median	0.00	3.00	3.00	3.00	1.00	2.00	2.00	0.00	1.00
Mode	0	2	1	5	1	2	3	0	1
Standard deviation	0.500	1.387	1.712	1.420	0.500	0.798	0.828	0.500	0.546
Variance	0.250	1.923	2.932	2.016	0.250	0.637	0.685	0.250	0.298
Skewness	0.070	0.041	0.001	0.014	-0.015	-0.032	-0.119	0.009	1.397
Standard error of skewness	0.095	0.095	0.095	0.095	0.095	0.095	0.095	0.095	0.095
Kurtosis	-2.001	-1.256	-1.259	-1.300	-2.006	-1.429	-1.530	-2.006	1.000
Standard error of Kurtosis	0.190	0.190	0.190	0.190	0.190	0.190	0.190	0.190	0.190
Range	1	4	5	4	1	2	2	1	2
Minimum	0	1	1	1	0	1	1	0	1
Maximun	1	5	6	5	1	3	3	1	3
Sum	320	1980	2301	1998	334	1338	1368	330	883
Percentiles	25 0.00	2.00	2.00	2.00	0.00	1.00	1.00	0.00	1.00
	50 0.00	3.00	3.00	3.00	1.00	2.00	2.00	0.00	1.00
	75 1.00	4.00	5.00	4.00	1.00	3.00	3.00	1.00	2.00

Source: Own elaboration.

Table A.2. Spearman's correlation.

		Gender	Income	Education	Age	Network Effect	Identity Statement	Media	Merchant Acceptance	Decision
Gender	Correlation coefficient	1.000	0.066	−0.003	0.001	−0.019	−0.048	0.054	0.004	0.003
	Sig. (bilateral)		0.090	0.937	0.977	0.619	0.214	0.163	0.911	0.939
	N	663	663	663	663	663	663	663	663	663
Income	Correlation coefficient	0.066	1.000	0.024	0.005	0.003	0.027	0.034	−0.017	−0.045
	Sig. (bilateral)	0.090		0.530	0.903	0.935	0.482	0.388	0.671	0.245
	N	663	663	663	663	663	663	663	663	663
Education	Correlation coefficient	−0.003	0.024	1.000	0.009	0.001	0.070	0.032	0.024	−0.023
	Sig. (bilateral)	0.937	0.530		0.822	0.972	0.072	0.413	0.543	0.558
	N	663	663	663	663	663	663	663	663	663
Age	Correlation coefficient	0.001	0.005	0.009	1.000	−0.022	0.035	−0.084*	0.002	−0.051
	Sig. (bilateral)	0.977	0.903	0.822		0.572	0.366	0.030	0.968	0.193
	N	663	663	663	663	663	663	663	663	663
Network Effect	Correlation coefficient	−0.019	0.003	0.001	−0.022	1.000	0.060	−0.004	0.011	0.636**
	Sig. (bilateral)	0.619	0.935	0.972	0.572		0.122	0.922	0.785	0.000
	N	663	663	663	663	663	663	663	663	663
Identity Statement	Correlation coefficient	−0.048	0.027	0.070	0.035	0.060	1.000	0.014	0.030	−0.321**
	Sig. (bilateral)	0.214	0.482	0.072	0.366	0.122		0.719	0.438	0.000
	N	663	663	663	663	663	663	663	663	663
Media	Correlation coefficient	0.054	0.034	0.032	−0.084*	−0.004	0.014	1.000	−0.006	−0.021
	Sig. (bilateral)	0.163	0.388	0.413	0.030	0.922	0.719		0.886	0.598
	N	663	663	663	663	663	663	663	663	663
Merchant Acceptance	Correlation coefficient	0.004	−0.017	0.024	0.002	0.011	0.030	−0.006	1.000	0.015
	Sig. (bilateral)	0.911	0.671	0.543	0.968	0.785	0.438	0.886		0.694
	N	663	663	663	663	663	663	663	663	663

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		Gender	Income	Education	Age	Network Effect	Identity Statement	Media	Merchant Acceptance	Decision
Decision	Correlation coefficient	0.003	−0.045	−0.023	−0.051	0.636**	−0.321**	−0.021	0.015	1.000
	Sig. (bilateral)	0.939	0.245	0.558	0.193	0.000	0.000	0.598	0.694	
	N	663	663	663	663	663	663	663	663	663

Source: Own elaboration. *Correlation is significant at the 0.05 level (bilateral). ** Correlation is significant at the 0.01 level (bilateral).

Table A.3. Parameter estimates.

Decision ^a		B	Desv. Error	Wald	Df	Sig.	Exp(B)	95% confidence interval for Exp(B)	
								Lower limit	Upper limit
Reject	Intersection	42.260	5836.540	0.000	1	0.994			
	[Gender=0]	−0.330	0.701	0.222	1	0.637	0.719	0.182	2.838
	[Gender=1]	0b			0				
	[Income=1]	−20.359	5418.488	0.000	1	0.997	1.439E−09	0.000	.c
	[Income=2]	−20.030	5418.488	0.000	1	0.997	2.001E−09	0.000	.c
	[Income=3]	−19.889	5418.488	0.000	1	0.997	2.303E−09	0.000	.c
	[Income=4]	−20.510	5418.488	0.000	1	0.997	1.237E−09	0.000	.c
	[Income=5]	0b			0				
	[Education=1]	−1.103	1.754	0.395	1	0.529	0.332	0.011	10.333
	[Education=2]	−1.347	1.543	0.762	1	0.383	0.260	0.013	5.349
	[Education=3]	−0.722	1.515	0.227	1	0.634	0.486	0.025	9.455
	[Education=4]	0.302	1.674	0.033	1	0.857	1.353	0.051	35.965
	[Education=5]	−0.728	1.750	0.173	1	0.677	0.483	0.016	14.905
	[Education=6]	0b			0				
	[Age=1]	−0.456	1.308	0.121	1	0.727	0.634	0.049	8.230
	[Age=2]	−0.867	1.239	0.490	1	0.484	0.420	0.037	4.760
	[Age=3]	0.248	1.012	0.060	1	0.806	1.282	0.176	9.314
	[Age=4]	0.426	1.122	0.144	1	0.704	1.531	0.170	13.810
	[Age=5]	0b			0				
	[Network Effect=1]	21.213	3455.419	0.000	1	0.995	163193209 5.379	0.000	.c
	[Network Effect=2]	0b			0				
	[Identity Statement=1]	−21.867	2169.143	0.000	1	0.992	3.186E−10	0.000	.c
	[Identity Statement=2]	−20.017	5956.327	0.000	1	0.997	2.026E−09	0.000	.c

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Decision ^a	B	Desv. Error	Wald	Df	Sig.	Exp(B)	95% confidence interval for Exp(B)	
							Lower limit	Upper limit
Wait for More Information	[Identity Statement=3]	0b		0				
	[Media=1]	2.784	3885.572	0.000	1	0.999	16.177	0.000 .c
	[Media=2]	0.011	0.842	0.000	1	0.989	1.011	0.194 5.266
	[Media=3]	0b		0				
	[Merchant Acceptance=0]	0.685	0.792	0.747	1	0.387	1.983	0.420 9.372
	[Merchant Acceptance=1]	0b		0				
	Intersection	-24.175	5484.873	0.000	1	0.996		
	[Gender=0]	0.675	0.825	0.670	1	0.413	1.965	0.390 9.897
	[Gender=1]	0b		0				
	[Income=1]	-17.968	5418.488	0.000	1	0.997	1.572E-08	0.000 .c
	[Income=2]	-17.629	5418.488	0.000	1	0.997	2.208E-08	0.000 .c
	[Income=3]	-16.097	5418.488	0.000	1	0.998	1.021E-07	0.000 .c
	[Income=4]	-18.099	5418.488	0.000	1	0.997	1.379E-08	0.000 .c
	[Income=5]	0b		0				
	[Education=1]	10.139	850.773	0.000	1	0.990	25311.499	0.000 .c
	[Education=2]	11.621	850.772	0.000	1	0.989	111421.175	0.000 .c
	[Education=3]	12.196	850.772	0.000	1	0.989	197959.528	0.000 .c
	[Education=4]	12.875	850.772	0.000	1	0.988	390436.460	0.000 .c
	[Education=5]	14.008	850.772	0.000	1	0.987	1212170.80	0.000 .c
						8		
	[Education=6]	0b		0				
	[Age=1]	2.261	1.334	2.875	1	0.090	9.596	0.703 130.973
	[Age=2]	0.251	1.401	0.032	1	0.858	1.286	0.083 20.019
	[Age=3]	0.287	1.251	0.052	1	0.819	1.332	0.115 15.471
	[Age=4]	0.369	1.403	0.069	1	0.793	1.446	0.092 22.616
	[Age=5]	0b		0				
	[Network Effect=1]	-59.293	4518.541	0.000	1	0.990	1.775E-26	0.000 .c
	[Network Effect=2]	0b		0				
	[Identity Statement=1]	26.702	0.000		1		394767820 195.058	39476782019 5.058 39476782 0195.058

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Decision ^a	B	Desv. Error	Wald	Df	Sig.	Exp(B)	95% confidence interval for Exp(B)	
							Lower limit	Upper limit
[Identity Statement=2]	60.949	5517.009	0.000	1	0.991	294967650 551753000 000000000. 000	0.000	.c
[Identity Statement=3]	0b			0				
[Media=1]	31.799	3838.181	0.000	1	0.993	646153297 23914.900	0.000	.c
[Media=2]	1.169	0.933	1.570	1	0.210	3.217	0.517	20.013
[Media=3]	0b			0				
[Merchant Acceptance=0]	1.365	0.862	2.506	1	0.113	3.916	0.723	21.224
[Merchant Acceptance=1]	0b			0				

Source: Own elaboration.

Note: a. The reference category is: Accept CBDC. b. This parameter is set to zero because it is redundant. Degrees of Freedom (Df). c. A floating point overflow has occurred when calculating this statistic. Therefore, its value is defined as lost from the system.



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