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European Union Funds – Application Perspective

Abstract

The result of an effective management of the redistribution of European Union funds should be a reduction of disparities between EU regions by guaranteeing their comprehensive and harmonious development and supporting the economic and social cohesion of member countries. A poorly-conducted programming process of financial interventionism, the source of which is EU funds, may result in divergence between regions, the direct effect of which would be their social and economic marginalisation. For this reason, it is important to skillfully manage those funds. The main aim of this article is to present the factors affecting the decision-making process of the use of EU co-financing, and that includes the pandemic as an external variable being a threat to the implementation of investments from the EU's structural funds. To explain the multivariate associations between explanatory variables and the binary outcome variables, logistic regression was employed. Based on the tests' results, significant associations were observed between the dependent variable and (a) participation in training co-financed by EU funds, (b) receiving information regarding additional EU funds as pandemic support, and (c) the suspension of planned investments using EU funds due to the pandemic situation. A comprehensive distribution of respondents according to the response categories in the analysed variables within the entire sample (N = 950) was presented. Corresponding associations were evident within a sub-sample (N = 303). The model showed that all significant independent variables explain the use of EU funds, but the model explains just 28.6% of the

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decision to use the funds. Thus, the following study indicates directions that require further research.

Keywords: European Union, European Social Fund, Investments, Human Capital

Introduction

European Union funds are now seen as one of the main factors supporting the development of Polish regions, and are additionally seen as the main financial instrument of regional development policy. Economic and social differences between individual countries and regions of the European Community became the reason for the development of interventionism, which aimed at achieving economic and social cohesion for member countries (Nowak, 2005, p. 69). The actions taken by the Community in the framework of regional policy were based on the resources set aside under the Structural Funds *and* the Cohesion Fund. They should encourage regional development through interregional convergence, competitiveness, employment, and European territorial cooperation (Dumciuviene, Stundziene, Startiene, 2015, pp. 508–510).

Article 1 of a treaty signed in 1997 in Amsterdam indicates the objectives of the Structural Funds, the actions implemented by those funds along with the Cohesion Fund, as well as other available financial instruments that should support the fulfillment of the tasks set by the regional policy of the European Union.[1] The activities related to the Structural Funds were defined in the Council Regulation of June 2nd, 1999. It defines the tasks, main objectives and basic rules for the use of structural funds, which are divided into four main categories: general rules; organisational rules; financing rules; and evaluation rules.

The result of the effective management of the redistribution of EU funds should be a reduction of disparities between EU regions by guaranteeing their comprehensive and harmonious development, and supporting the economic and social cohesion of member countries (Dubel, 2020, p. 10). A poorly-conducted programming process of financial interventionism, the source of which is EU funds, may result in divergence between regions, the direct effect of which will be their

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[1] In addition to the structural funds, two aid mechanisms within the European Economic Area financed from Norwegian sources or jointly by Norway, Iceland and Liechtenstein, i.e., the three EFTA countries, play an important role in the implementation of the objectives of the socio-economic cohesion policy.

social and economic marginalisation. For this reason, it is important to skillfully manage the funds from programming, distribution, and, finally, to the monitoring of the final effects. The task of the funds is to support activities that reduce the level of structural problems resulting mainly from their peripheral location, difficult climatic and geological conditions, unfavourable structure of the economy (especially with regard to the dominance of agriculture), underdeveloped infrastructure, and the low level of education and professional qualifications of the population (Uryga, Magielski, Bienias, 2007, p. 10).

The expansion of infrastructure, the activation of entrepreneurship, and the enrichment of human resources are examples of areas of impact of the funds, while simultaneously guaranteeing the development of regions, and thus subsequent economic progress and job creation (Camagni, 2017, pp. 232–244). Member States' previous experience in managing financial instruments in the system of EU interventionism and creating application procedures proves that the level of support from the European Union budget depends largely on the created application ecosystem, within which one can include the national institutional system of managing EU funds, absorption capacity, and emerging barriers (Dubel, 2020, pp. 117–124).

The research presented in this article was carried out in late 2022 and early 2023. During this programming period, the two main funds that directly influenced and continue to influence the Polish economy and human resource development were the European Regional Development Fund and the European Social Fund.

The European Regional Development Fund (ERDF) was established in 1975. It is the most important financial instrument (of all funds) of the European Community and the most strongly oriented to supporting regional development (Brodecki, 2005, p. 118). The aim of the ERDF is to increase economic and social cohesion in the European Union and eliminate inequalities between regions. It finances direct support for investment in enterprises (especially SMEs) to create sustainable jobs, as well as ensuring the construction of infrastructure related to research and innovation, telecommunications, environmental protection, energy and transport, financial instruments (i.e., venture capital funds and local development funds) to stimulate regional and local development and to facilitate cooperation between cities and regions (Giordano, Dubois, 2019, pp. 1221–1230). The oldest European structural fund is the European Social Fund (ESF), which was established in 1957 under the Treaty establishing the European Economic Community. It co-finances member countries' activities in the field of employment policy and human

resources development. As with the other structural funds, its specific tasks and the way it functions have been changing. The reforms went in two major directions. Firstly, akin to the ERDF, the ESF systematically became an instrument of Community employment policy. Secondly, its nature evolved from a state of independence and autonomy from the other structural funds to an integral financial tool based on coordination and cooperation with the other instruments of the European Union's regional policy (Głąbicka, Grewiński, 2005, pp. 121–125).

The ESF is, first and foremost, a dynamic policy instrument for employment and combating unemployment. The main tasks carried out by the fund focus on co-financing labour market-oriented activities and the development of human resources potential. In terms of human resource development, it plays a supporting, complementary role to the activities of the Member States, intervening in such areas as, for example, developing and promoting active labour market policies, facilitating the reintegration of the unemployed, supporting vocational training, education and career counseling activities, increasing the potential of a skilled and adaptable workforce, and fostering innovation and adaptation potential in the field of labour organisation (Dubel, 2011, pp. 34–36).

Since 2004, Poland has been the largest net recipient of EU funds (see: https://ec.europa.eu/eurostat), and the balance of flows between the European Union and Poland is shown in Figure 1 below.
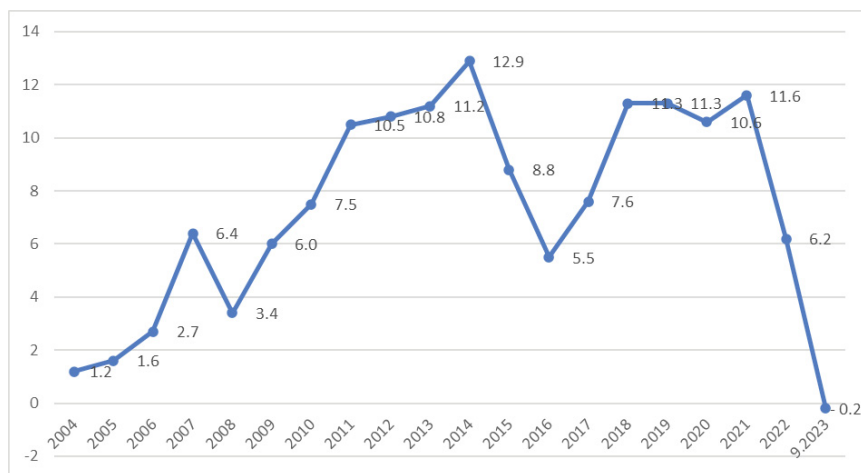

Figure 1. Balance of Net Flows Between the EU and Poland in Billions of Euros
Source: the authors' own compilation based on Ministry of Finance data (https://www.gov.pl/web/finanse/transfery-polska-ue-unia-europejska, Access: 3.01.2024).

The total (net) amount of support received from the EU as at the end of September 2023 was almost 160 billion euros, which directly shapes Poland's competitiveness and affects its development. Unfortunately, the year 2023 marks the absence of subsidies from both the National Reconstruction Program and the partial suspension of financial flows for 2021–2027. The result of such a policy is a negative balance of about 0.2 billion euros. which occurred for the first time since Poland joined the European Union. Thus, as can be seen, the creation of a stable yet secure application environment, of which the project recipient is one of the main elements, and the identification of which factors influence the process of applying for EU funding is a recipe for achieving a high absorption rate of EU funds, which for Poland (for the period 2004–2020) is about 96% of the total allocation (based on data from the Ministry of Funds and Regional Policy, https://www.gov.pl/web/fundusze-regiony). Hence, the purpose of this article is to present the factors affecting the decision-making process of using EU co-financing including the pandemic as an external variable that is a threat to the implementation of investments from EU structural funds.

Given the focus on economic growth, regional development, job creation, and human resource development, this text corresponds with Sustainable Development Goal (SDG) 8: "Decent Work and Economic Growth" (see: https://sdgs.un.org/goals/goal8). SDG 8 aims to promote sustained, inclusive, and sustainable economic growth, full and productive employment, and decent employment for all. In the given text, there is a focus on the European Union funds which support activities such as job creation, infrastructure expansion, regional development, entrepreneurship activation, and human resource enrichment, all of which align with the objectives of SDG 8. The emphasis on reducing both social and economic inequalities between EU countries and promoting cohesion further reinforces the connection to SDG 8 as fostering economic progress and job creation are its key components. Drawing on the aforementioned potential contribution of the text to the field, and on the basis of literature review and knowledge, the authors pose the following research hypotheses:

H1: A higher level of education attained by people applying for EU funds increases the chances of deciding to join the application process.

H2: Participation in training co-financed by EU funds increases the chances of making a decision to obtain this form of co-financing.

H3: Resignation from financing due to the pandemic situation more often applies to people who use the funds.

Method

Sample

The research involved a sample of $N = 1069$ respondents with no missing data. However, a thorough exploratory analysis revealed some concerns regarding data quality (such as individuals reporting ages exceeding the assumed maximum of 75 years or indicating their unemployment but qualifying for benefits while being of retirement age). As a result, the final sample for further analysis comprised $N = 950$ individuals, including 497 women and 453 men. The mean age of the respondents was $M = 43.31$, with a standard deviation of $SD = 14.57$ ($M = 43.13$, $SD = 14.53$ for women; $M = 43.5$, $SD = 14.64$ for men). The basic sample characteristics are presented in Table 1 below.

Table 1. Sample Characteristics (N = 950)

Variable	Categories	All (N = 950)		Women (N = 497)		Men (N = 453)	
		n	%	n	%	n	%
Age	18–24	119	12.5	69	13.9	50	11.0
	25–34	204	21.5	102	20.5	102	22.5
	35–44	180	18.9	85	17.1	95	21.0
	45–54	192	20.2	98	19.7	94	20.8
	55 or older	255	26.8	143	28.8	112	24.7
Place of residence	Village	380	40.0	189	38.0	191	42.2
	City up to 20,000 residents	124	13.1	67	13.5	57	12.6
	City of 20,000 to 100,000 residents	185	19.5	90	18.1	95	21.0
	City of 100,000 to 500,000 residents	164	17.3	93	18.7	71	15.7
	City of 500,000 or more residents	97	10.2	58	11.7	39	8.6
Education	Primary or basic vocation	109	11.5	48	9.7	61	13.5
	Secondary	400	42.1	219	44.1	181	40.0
	Tertiary or higher	437	46.0	228	45.9	209	46.1
	Other	4	0.4	2	0.4	2	0.4

Among the 950 respondents surveyed, the vast majority (85.6%) did not benefit from EU funding. Therefore, in order to assess the validity of the obtained results, the analyses were conducted in parallel in two cases: (1), for the entire sample examined, and (2), for a sub-sample of $n = 303$ people,

consisting of all people benefiting from EU funding and randomly selected $n = 166$ people who did not benefit from such funding at all (20% of all those meetings this criterion). The average age in the sample thus created was $M = 42.27$ ($SD = 14.19$), among people benefiting from EU funding: $M = 41.96$, $SD = 15.41$, and among those not using it: $M = 42.53$, $SD = 12.61$. The basic sub-sample characteristics are presented below in Table 2.

Table 2. Sub-sample Characteristics (N = 303)

| Variable | Categories | All | | Have you ever benefitted from EU funding? | | | |
| | | ($N = 303$) | | Yes ($n = 137$) | | No ($n = 166$) | |
		n	%	n	%	n	%
Gender	Female	174	57.4	71	51.8	103	62.0
	Male	129	42.6	66	48.2	63	38.0
Age	18–24	40	13.2	9	6.6	31	18.7
	25–34	68	22.4	39	28.5	29	17.5
	35–44	65	21.5	37	27.0	28	16.9
	45–54	59	19.5	26	19.0	33	19.9
	55 or older	71	23.4	26	19.0	45	27.1
Place of residence	Village	125	41.3	57	41.6	68	41.0
	City up to 20,000 residents	36	11.9	14	10.2	22	13.3
	City of 20,000 to 100,000 residents	57	18.8	26	19.0	31	18.7
	City of 100,000 to 500,000 residents	60	19.8	29	21.2	31	18.7
	City of 500,000 or more residents	25	8.3	11	8.0	14	8.4
Education	Primary or basic vocation	25	8.3	6	4.4	19	11.4
	Secondary	120	39.6	40	29.2	80	48.2
	Tertiary or higher	157	51.8	91	66.4	66	39.8
	Other	1	0.1			1	0.6

Analysis

To explain the multivariate associations between explanatory variables and the binary outcome variables, logistic regression was employed. In all models, the same set of socio-demographic characteristics (Model 0) was controlled for. The models were computed separately for each independent variable, and, in the final step, only those of significance were included into a single model. The analyses were conducted using IBM SPSS 29.0 software.

To assess the robustness of the models, the authors conducted the analyses with various combinations of control variables. Consistently, all the results remained stable across different model specifications. Therefore, only the final solutions have been presented in the article, while the results of additional analyses can be made available upon request.

Results

Descriptive Statistics

In the initial phase of the analysis, the authors looked for variables that would significantly distinguish between individuals benefiting from EU funding and those who do not. Given that all independent variables were categorical, the chi-square test of independence for comparative purposes was used. Based on the test results, significant associations were observed between the dependent variable and (a), participation in training co-financed by EU funds $\chi^2 (1) = 130{,}98$; $p < 0{,}001$ $\chi^2 (1) = 130{,}98$; $p < 0{,}001$, (b), receiving information regarding additional EU funds as pandemic support ($\chi^2 (2) = 44{,}25$; $p < 0{,}001$ $\chi^2 (2) = 44{,}25$; $p < 0{,}001$), and (c), the suspension of planned investments using EU funds due to the pandemic situation ($\chi^2 (2) = 37{,}11$; $p < 0{,}001$). A comprehensive distribution of respondents according to the response categories in the analysed variables within the entire sample ($N = 950$) is detailed in Table 3 below. Corresponding associations were evident within the sub-sample ($N = 303$), and the distribution of the variables' responses is presented in Table 4. Those variables were used in the next step of the analysis as predictors of the variability of the dependent variable.

Table 3. The Percentage of Participants who Benefitted (or not) From EU Funding by Categorical Explanatory Variable (N = 950)

Variable	Categories	All		Have you ever benefitted from EU funding?			
		($N = 950$)		Yes ($n = 137$)		No ($n = 813$)	
		n	%	*n*	%	*n*	%
Have you ever participated in training co-financed by EU funds?	No	639	67.3	34	24.8	605	74.4
	Yes	311	32.7	103	75.2	208	25.6
Did you hear about additional EU funds as support during the pandemic?	No	533	56.1	65	47.4	468	57.6
	Yes	178	18.7	53	38.7	125	15.4
	Not applicable	239	25.2	19	13.9	220	27.1

Has the pandemic situation resulted in the abandonment of planned investments using EU funds?							
	No	398	41.9	58	42.3	340	41.8
	Yes	63	6.6	25	18.2	38	4.7
	Not applicable	489	51.5	54	39.4	435	53.5

Table 4. The Percentage of Participants Who Benefitted (or not) From EU Funding by Categorical Explanatory Variable (N = 303)

Variable	Categories	All		Have you ever benefited from EU funding?			
		(N = 303)		Yes (n = 137)		No (n = 166)	
		n	%	*n*	%	*n*	%
Have you ever participated in training co-financed by EU funds?	No	155	51.2	34	24.8	121	72.9
	Yes	148	48.8	103	75.2	45	27.1
Did you hear about additional EU funds as support during the pandemic?	No	162	53.5	65	47.4	97	58.4
	Yes	75	24.8	53	38.7	22	13.3
	Not applicable	66	21.8	19	13.9	47	28.3
Has the pandemic situation resulted in the abandonment of planned investments using EU funds?	No	124	40.9	58	42.3	66	39.8
	Yes	34	11.2	25	18.2	9	5.4
	Not applicable	145	47.9	54	39.4	91	54.8

Regression Models

Table 5 (the tables from 5a to 5e) shows the results of multivariate analyses, including coefficients (*B*) with standard errors (*SE*) and odds ratios (*OR*) with the corresponding 95% confidence interval (*CI*) and *p-values* for each explanatory variable. Each model predicts the increasing chance of benefitting from EU funding based on a set of predictors. In Model 0, only control variables were entered into the model (gender, age, place of residence, and level of education). None of them showed any statistical significance.

Next, in the subsequent steps (Models 1–4), individual explanatory variables were incorporated into the analysis while controlling for socio-demographic factors. It is noteworthy that all variables demonstrated statistical significance, both within the overall study sample ($N = 950$) and in the sub-sample ($N = 303$).

Model 2 warrants special attention, as the inclusion of the predictor (participation in training co-financed by EU funds) led to the emergence of statistical significance for one of the control variables – age ($p = 0.039$). However, within the sub-sample, a significant difference arose between

individuals residing in village areas and those in cities with populations of up to 20,000 residents. One possible explanation for that shift may be a substantial percentage disparity in the distribution of individuals within this predictor (see Tables 3 and 4).

In the final step, all the predictors were included in one model. In the case of the entire sample ($N = 950$), each of them also turned out to be statistically significant, increasing the probability of benefitting from EU funding. The strongest predictor turned out to be participation in training co-financed by EU funds which increases the chance of using EU funding by approximately seven times ($RO = 7.05$; 95% *CI* [4.52; 10.99]). The weakest effect was observed for receiving information about additional EU funds as support during the pandemic ($RO = 1.72$; 95% *CI* [1.06; 2.78]).

In the sub-sample, similar results were obtained, but with one exception. The resignation of planned investments using EU funds due to the pandemic was no longer statistically significant (Model 6b, $p = 0.160$).

Analysing the percentage of responses in the compared samples, as well as by the dependent variable, it can be observed that the distribution of responses to the question about resignation has changed (see Tables 3 and 4). That change could result in a statistically insignificant effect in the sub-sample. However, the effectiveness of Model 6b in classifying correctly is in 77.2% of cases.

Table 5a. Logistic Regression: Predicting the Chance of Benefitting From EU Funding Due to Selected Predictors in the Sample and Sub-sample

Predictor	Model 0a ($N = 950$)				Model 0b ($N = 303$)			
	B (SE B)	*OR*	*95% LL*	*95% UL*	*B (SE B)*	*OR*	*95% LL*	*95% UL*
Gender (ref. female)	0.030 (0.189)	1.030	0.711	1.492	0.458 (0.246)	1.581	0.976	2.558
Age	-0.008 (0.007)	0.992	0.979	1.005	-0.006 (0.009)	0.994	0.977	1.011
Place of residence (ref. Village)								
City up to 20.000 residents	-0.299 (0.325)	0.671	0.355	1.268	-0.342 (0.406)	0.711	0.321	1.575
City of 20.000 to 100.000 residents	-0.162 (0.266)	0.850	0.505	1.433	-0.246 (0.346)	0.782	0.397	1.539
City of 100.000 to 500.000 residents	0.042 (0.260)	1.043	0.627	1.735	-0.074 (0.338)	0.928	0.478	1.802

Predictor	B (SE B)	OR	95% LL	95% UL	B (SE B)	OR	95% LL	95% UL
City of 500.000 or more residents	-0.485 (0.362)	0.616	0.303	1.251	0.038 (0.470)	1.039	0.413	2.611
Education (ref. Primary or basic vocation)								
Secondary	-0.678 (0.454)	1.970	0.810	4.793	0.533 (0.513)	1.704	0.624	4.655
Tertiary or higher	**1.573 (0.440)**	**4.822★★★**	**2.035**	**11.428**	**1.597 (0.504)**	**4.939★★**	**1.838**	**13.271**
Participation in training co-financed by EU funds (ref. No)								
Receiving information regarding additional EU funds as pandemic support (ref. No)								
Yes								
Not applicable								
Suspension of planned investments using EU funds due to the pandemic situation (ref. No)								
Yes								
Not applicable								
Constant	-2.433 (0.512)	0.088			-1.077 (0.608)	0.341		
χ^2		34.741				27.185		
df		8				8		
R^2 (Nagelkerke)		0.064				0.115		

★★★ $p < 0.001$, ★★ $p < 0.01$, ★ $p < 0.05$

Table 5b. Logistic Regression: Predicting the Chance of Benefitting From EU Funding Due to Selected Predictors in the Sample and Sub-sample (Continued)

Predictor	Model 1a (N = 950)				Model 1b (N = 303)			
	B (SE B)	OR	95% LL	95% UL	B (SE B)	OR	95% LL	95% UL
Gender (ref. female)	0.013 (0.204)	1.013	0.679	1.512	0.439 (0.276)	1.551	0.902	2.665
Age	**-0.016 (0.008)**	**0.985★**	**0.970**	**0.999**	-0.006 (0.010)	0.994	0.974	1.014

	B (SE)	Exp(B)			B (SE)	Exp(B)		
Place of residence (ref. Village)								
City up to 20.000 residents	-0.584 (0.345)	0.558	0.284	1.096	**-0.963 (0.468)**	**0.382***	**0.153**	**0.955**
City of 20.000 to 100.000 residents	-0.170 (0.287)	0.843	0.481	1.479	-0.575 (0.397)	0.562	0.258	1.225
City of 100.000 to 500.000 residents	0.089 (0.283)	1.093	0.628	1.902	-0.274 (0.383)	0.760	0.359	1.612
City of 500.000 or more residents	-0.463 (0.386)	0.629	0.295	1.342	-0.084 (0.539)	0.919	0.320	2.642
Education (ref. Primary or basic vocation)								
Secondary	0.688 (0.475)	1.991	0.785	5.049	0.646 (0.584)	1.908	0.607	5.998
Tertiary or higher	**1.213 (0.462)**	**3.363****	**1.361**	**8.311**	**1.391 (0.574)**	**4.020***	**1.306**	**12.377**
Participation in training co-financed by EU funds (ref. No)	**2.143 (0.221)**	**8.527*****	**5.532**	**13.144**	**2.188 (0.285)**	**8.318*****	**4.759**	**14.538**
Receiving information regarding additional EU funds as pandemic support (ref. No)								
Yes								
Not applicable								
Suspension of planned investments using EU funds due to the pandemic situation (ref. No)								
Yes								
Not applicable								
Constant	-2.993 (0.549)	0.050			-1.925 (0.709)	0.146		
χ^2		145.262				90.706		
df		9				9		
R^2 (Nagelkerke)		0.253				0.347		

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$

Table 5c. Logistic Regression: Predicting the Chance of Benefitting From EU Funding Due to Selected Predictors in the Sample and Sub-sample (Continued)

Predictor	Model 2a (N = 950)				Model 2b (N = 303)			
	B (SE B)	OR	95% LL	95% UL	B (SE B)	OR	95% LL	95% UL
Gender (ref. female)	-0.020 (0.194)	0.980	0.670	1.434	0.423 (0.255)	1.527	0.927	2.515
Age	-0.011 (0.007)	0.989	0.976	1.003	-0.007 (0.009)	0.993	0.975	1.011
Place of residence (ref. Village)								
City up to 20.000 residents	-0.397 (0.332)	0.672	0.350	1.290	-0.313 (0.425)	0.731	0.318	1.682
City of 20.000 to 100.000 residents	-0.250 (0.273)	0.779	0.456	1.330	-0.202 (0.357)	0.817	0.406	1.643
City of 100.000 to 500.000 residents	-0.009 (0.266)	0.991	0.589	1.670	-0.137 (0.353)	0.872	0.437	1.743
City of 500.000 or more residents	-0.547 (0.369)	0.579	0.281	1.193	0.068 (0.484)	1.070	0.414	2.764
Education (ref. Primary or basic vocation)								
Secondary	0.650 (0.460)	1.916	0.777	4.725	0.567 (0.530)	1.763	0.624	4.982
Tertiary or higher	**1.458 (0.449)**	**4.296**★★	**1.784**	**10.349**	**1.465 (0.521)**	**4.327**★★	**1.559**	**12.014**
Participation in training co-financed by EU funds (ref. No)								
Receiving information regarding additional EU funds as pandemic support (ref. No)								
Yes	**1.111 (0.218)**	**3.036**★★★	**1.980**	**4.655**	**1.198 (0.312)**	**3.312**★★★	**1.798**	**6.101**
Not applicable	-0.335 (0.279)	0.715	0.414	1.237	-0.319 (0.331)	0.727	0.380	1.391
Suspension of planned investments using EU funds due to the pandemic situation (ref. No)								
Yes								

Not applicable

Constant	-2.429 (0.525)	0.715		-1.925 (0.709)	0.303
^{2}		67.730			47.701
df		10			10
R^2 (Nagelkerke)		0.123			0.195

★★★ $p < 0.001$, ★★ $p < 0.01$, ★ $p < 0.05$

Table 5d. Logistic Regression: Predicting the Chance of Benefitting From EU Funding Due to Selected Predictors in the Sample and Sub-sample (Continued)

Predictor	Model 3a (N = 950)				Model 3b (N = 303)			
	B (SE B)	OR	95% LL	95% UL	B (SE B)	OR	95% LL	95% UL
Gender (ref. female)	-0.059 (0.196)	0.943	0.642	1.386	0.370 (0.253)	1.448	0.882	2.377
Age	-0.006 (0.007)	0.994	0.980	1.007	-0.001 (0.009)	0.999	0.981	1.017
Place of residence (ref. Village)								
City up to 20.000 residents	-0.448 (0.332)	0.639	0.333	1.226	-0.359 (0.420)	0.698	0.306	1.591
City of 20.000 to 100.000 residents	-0.201 (0.273)	0.818	0.479	1.396	-0.231 (0.351)	0.794	0.399	1.579
City of 100.000 to 500.000 residents	0.015 (0.264)	1.015	0.605	1.703	-0.126 (0.346)	0.882	0.448	1.737
City of 500.000 or more residents	-0.508 (0.368)	0.601	0.292	1.238	0.034 (0.473)	1.035	0.410	2.614
Education (ref. Primary or basic vocation)								
Secondary	0.528 (0.459)	1.696	0.689	4.173	0.399 (0.519)	1.491	0.539	4.126
Tertiary or higher	**1.487** (0.445)	4.423★★★	1.849	10.580	**1.471** (0.510)	4.352★★	1.603	11.819
Participation in training co-financed by EU funds (ref. No)								
Receiving information regarding additional EU funds as pandemic support (ref. No)								

Yes

Not applicable

Suspension of planned investments using EU funds due to the pandemic situation (ref. No)

	B (SE B)	OR	95% LL	95% UL	B (SE B)	OR	95% LL	95% UL
Yes	1.460 (0.306)	4.304★★★	2.365	7.834	1.198 (0.445)	3.313★★	1.384	7.934
Not applicable	-0.213 (0.211)	0.808	0.534	1.223	-0.248 (0.268)	0.780	0.461	1.320
Constant	-2.404 (0.533)	0.090			-1.151 (0.632)	0.316		
χ^2	62.221				38.670			
df	10				10			
R^2 (Nagelkerke)	0.113				0.161			

★★★ $p < 0.001$, ★★ $p < 0.01$, ★ $p < 0.05$

Table 5e. Logistic Regression: Predicting the Chance of Benefitting From EU Funding Due to Selected Predictors in the Sample and Sub-sample (Continued)

Predictor	Model 4a (N = 950)				Model 4b (N = 303)			
	B (SE B)	OR	95% LL	95% UL	B (SE B)	OR	95% LL	95% UL
Gender (ref. female)	-0.040 (0.213)	0.961	0.633	1.457	0.439 (0.285)	1.552	0.888	2.710
Age	-0.014 (0.008)	0.986	0.971	1.001	-0.007 (0.011)	0.993	0.972	1.014
Place of residence (ref. Village)								
City up to 20.000 residents	-0.601 (0.354)	0.549	0.274	1.098	-0.873 (0.482)	0.418	0.162	1.075
City of 20.000 to 100.000 residents	-0.268 (0.296)	0.765	0.428	1.367	-0.528 (0.408)	0.590	0.265	1.312
City of 100.000 to 500.000 residents	0.013 (0.290)	1.013	0.574	1.788	-0.290 (0.393)	0.749	0.347	1.616
City of 500.000 or more residents	-0.500 (0.390)	0.606	0.282	1.302	-0.057 (0.530)	0.945	0.334	2.670

Education (ref. Primary or basic vocation)								
Secondary	0.553 (0.482)	1.739	0.676	4.472	0.651 (0.592)	1.918	0.601	6.119
Tertiary or higher	**1.102 (0.467)**	**3.012***	**1.206**	**7.519**	**1.344 (0.581)**	**3.834***	**1.227**	**11.976**
Participation in training co-financed by EU funds (ref. No)	**1.953 (0.227)**	**7.051*****	**4.522**	**10.994**	**1.953 (0.297)**	**7.047*****	**3.936**	**12.618**
Receiving information regarding additional EU funds as pandemic support (ref. No)								
Yes	**0.540 (0.246)**	**1.715***	**1.058**	**2.780**	**0.753 (0.358)**	**2.124***	**1.053**	**4.282**
Not applicable	-0.415 (0.311)	0.660	0.359	1.214	-0.252 (0.391)	0.777	0.361	1.673
Suspension of planned investments using EU funds due to the pandemic situation (ref. No)								
Yes	**0.949 (0.348)**	**2.584****	**1.307**	**5.107**	0.722 (0.514)	2.060	0.752	5.639
Not applicable	0.102 (0.246)	1.107	0.684	1.791	0.312 (0.335)	1.367	0.709	2.635
Constant	-2.970 (0.575)	0.051			-2.138 (0.739)	0.118		
χ^2		165.922				100.090		
df		13				13		
R^2 (Nagelkerke)		0.286				0.377		

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$

Discussion

The results of the above analysis indicate that the chance of making a decision to obtain this form of co-financing is increased in two different cases; a higher level of education (H1), and prior participation in training co-financed by EU funds (H2).

Educated people show better developed cognitive and analytical skills (Hanushek, Woessmann, 2020; Lövdén et al., 2020). Thus, it should be

easier for them to gather necessary, up-to-date, complete information and documents in order to apply for external co-funding. It is easier for them to verify relevant data and assess its usefulness at the stage of filling out an application. Familiarity with ICT technologies also makes it easier to fill out and submit an application, especially since they are now submitted in so-called application generators. In turn, those who have already had contact with various forms of external support have experience of what the process of applying for monetary benefits from public funds looks like. Thus, they are more likely to use this form of funding because they are aware of what the requirements are, how to read the documents, and what to pay special attention to. A similar conclusion can be drawn should one take into account the fact that those who have previously participated in training courses co-financed by EU funds are more than 8.5 times more likely to make such decisions (H2). Admittedly, the consequences of participation varied from making the participants more competitive on the labour market, to career advancement and salary increase, to keeping their current job.

For selected respondents, supplementary training was simply dictated by the need for self-realisation. On the other hand, those who did not undertake training co-financed by EU funds cited that they had used other forms of subsidies, or that the offer was too modest, not adapted to their needs, or it was that these people did not need training hence their lack of consideration of it, or they did not know about such an opportunity, and that no one directly offered it to them or that they did not have the time. Indeed, an application process perceived as being formalised, bureaucratic, or requiring subsequent settlements may effectively discourage them from participating in the application process.

In this regard, it should be noted that after adding the independent variable, i.e., previous participation in training, the control variable "age" became significant which, in this case, shows that the older the person, the lower the chance (by 1.5%) that he or she benefits from EU funds. But are age and participation in EU-funded training related? Seemingly yes, since there used to be (before 2004) no such training, as respondents also pointed out. Exploring this direction further, rather exploratory analyses indicate that in the case of participation in EU-funded training, there is indeed a higher participation of older people ($M = 44.19$ versus the average age of non-attendees: $M = 41.03$). This could lead to the conclusion that older people take advantage of the opportunity to develop their competencies more readily than younger people, e.g., due to their professional position as well as ongoing changes in the labour market (Li et al., 2023; Martínez-Alcalá et al., 2021), caused, for example, by technological changes (Pihlainen

et al., 2023). In contrast, the fact of having benefited from any EU funding dominates as regards younger people ($M = 41.03$ versus the average age of those who do not: $M = 44.16$). The interaction effect of these two variables on age did not appear as significant, but a significant difference could be observed in the group of those who do not benefit from EU-funded training, among whom younger people reach for EU funds ($M = 39.18$ versus the average age of those who do not benefit from EU funds: 42.87). However, considering the turnout of respondents in each category, that particular observation would need to be verified by further research.

While the first two hypotheses were confirmed, hypothesis 3 is unsupported in the smaller sub-sample. The relationship as regards those who resigned are more likely to benefit (here more than 4 times) from EU funds than those who did not resign from their planned investments was only confirmed in the entire sample. Thus, this observation also requires further research.

Conclusions

The study undertook to test the above model after adding all the significant, independent variables. Among all the variables tested, age, locality, education, gender (control variables) were included, as well as participation in training co-financed by EU funds, obtaining information about additional EU funds as support during the pandemic, and details on the abandonment of planned investments using EU funds caused by the pandemic situation. All the independent variables are shown to explain the use of EU funds, but the model explains the decision to use funds at 28.6%. Thus, it exploratively points in directions that would require further investigation. A drawback of the model is that, in part, its good performance is due to the fact that a relatively small percentage of respondents used EU funds (14.4%). Thus, it would be necessary to reach out to those who apply for such funds, using the tool designed for this study to re-test the hypotheses.

Nevertheless, the results allow us to conclude that an attractive application environment for a project developer should be characterised by clear and simple instructions, along with an indication of the scope of requirements or identified benefits for potential users. The promotion of EU funds is also key, as respondents admit that they did not know about such forms of funding. Given that people who already receive cash benefits or have benefitted from co-funded training are more likely to decide to apply for funds, it is worth considering centralising the promotion of benefits.

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