

## Econometric Research Regarding the Expectations of the Romanian Emigrants. Part II

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### Abstract:

The economic growth from the last period, created multiple opportunities both for the internal workers and for the foreign ones, because the workers from all EU Member States directly contribute to the functioning of the economy on high standards, by eliminating the lack of competence and the blockages specific for the workforce market from certain regions or European states. On the other hand, it is well known the fact that, the evolution of the economy and the economic crisis affected the employment by reducing the aggregate demand, and in this context, the economic policies both on a micro and on a macroeconomic level, the employment policies and the educational policies became especially important for all the directly and indirectly involved actors.

Therefore, we built several models starting from the five dependent variables and the five explanatory variables, that are: the estimate income growth after transfer, changing the qualification level after transfer, changing the labor conditions after transfer, the duration of the transfer abroad, the degree of satisfaction after the transfer abroad, the age, the gender, the level of the studies, the level of the incomes before transfer, the seniority in labor. This research is structured and published in two parts, the first part including an introduction, presenting the research methodology, results and discussions concerning the analysis of the variable change\_income and the analysis of the variable qualification (Cojocaru T.M. *et al.* 2021); the second part results and discussions are related to the analysis of the variable labour\_conditions, the analysis of the variable duration and the analysis of the variable satisfaction) and also relevant conclusions.

**Keywords:** mobility; expectations; geographical mobility; migrants; workforce; education.

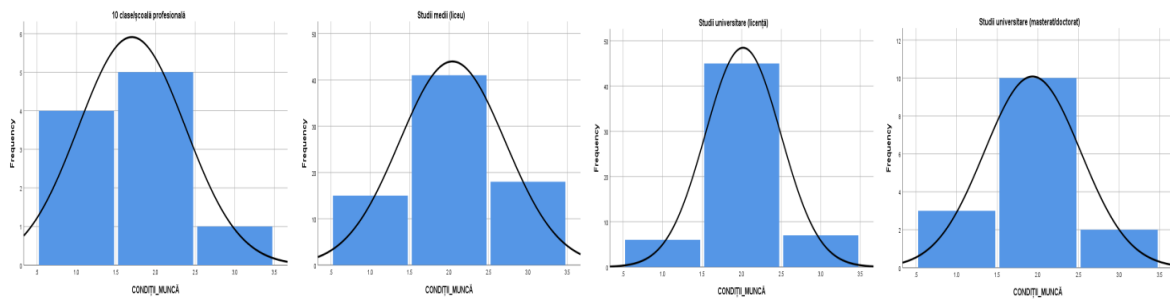
**JEL Classification:** M51; M57.

### Introduction

#### 1. Analysis of the variable LABOR\_CONDITIONS

Based on the results obtained from the Chi-Square test ( $\chi^2$ ), see the Table 4 and Table 5 (Cojocaru, T.M., *et al.* 2021, 878-892) and on the use of the binomial ordinal logistic regression model with cumulative odds, we notice the fact that from the five explanatory variables, only one of the variables (respectively STUDIES) can bring extra information about the relation between this and the variable LABOR\_CONDITIONS for a confidence coefficient of 90% (Confidence level 90%), corresponding to a signification threshold  $\alpha = 0,10$ .

Figure 1 Distribution of the answers regarding the influence STUDIES on the LABOR\_CONDITIONS



Source: Own calculations using SPSS

As we can notice from Figure 1, the frequency of the answers from the investigation based on the variable STUDIES offers extra information regarding the changes of the variable LABOR\_CONDITIONS. Therefore, after the transfer abroad people with 10 grades vocational school expect to find equal or at least equal conditions with the ones before the transfer, whereas after graduating higher studies, there are higher expectations that the labor conditions will significantly change. The parameters of the relation LABOR\_CONDITIONS = f(STUDIES) are presented in the Table 20:

Table 1. The assessed values of the parameters of the model LABOR\_CONDITIONS= f(STUDIES)

		Estimate in (odd)	Wald	Sig.	ODD	STUDII=10		
						ODD	Prob.	Prob.
Threshold	[LABOUR_CONDITIONS = easier]	-1.325	6.050	0.414	0,270	0,116	0,104	0,104
	[LABOUR_CONDITIONS = same]	1.782	10.45 <sub>2</sub>	0.001* *	5,940	1,000	0,500	0,604
Location	[STUDIES = 10 grades/ vocational school]	-0.831	1.032	0.031*	0,440			
	[STUDIES = average studies (high school)]	0.377	0.423	0.516	1,460			
	[STUDIES = university studies (Bachelor)]	0.284	0.229	0.632	1,330			
	[STUDIES = university studies (MA/ PhD)]	0 <sup>a</sup>						

Note: Confidence level: \*=95%, \*\*=99%; <sup>a</sup> This parameter is set to zero because it is redundant.

Source: own calculations using SPSS

Analyzing the results obtained from the tests on the hypothesis regarding the statistical signification of the values of the parameters of the model, in the case of the dependent variable, except from [LABOUR\_CONDITIONS = easier], for the other parameters, the null hypothesis H<sub>0,3</sub> is rejected and the alternative hypothesis H<sub>1,3</sub> is accepted. In consequence, the parameters are significant from a statistical point of view (offer relevant information).

For the explanatory variable STUDIES = 10 grades/vocational school, the value of the corresponding coefficient is significant from a statistical point of view.

In this case, the general form of the model will be:

$$\ln(odds_i) = \alpha_i + \beta_{[CONDITII_MUNCA= Mai usoare]}; i = 2$$

$$odd_i = e^{\alpha_i + \beta_{[CONDITII_MUNCA= Mai usoare]}} \tag{1}$$

Based on the equation (1), the models and the chance-values corresponding for the migrants have a degree equivalent with:

$$odd_{[LABOUR_CONDITIONS=easier]} = e^{-1.325-0.831} = 0,116 \tag{2}$$

The marginal probabilities corresponding to the dependent variable LABOR\_CONDITIONS for the factorial variable [STUDIES=10 degrees/vocational school] are presented in the Table 2. From the analysis of the information obtained, it results that for the respondents graduating 10 degrees/vocational school, the chance to have easier labor conditions than in the country after the transfer abroad is 0,116 (corresponding to an odd of

10,4%), and the chance to have the same labor conditions as those in the country is 1,000 (corresponding to a odd of 50%).

As for the influence of the explanatory variable, AGE, the cumulated probabilities and the chance coefficients (table 3) point out the fact that in the case of the respondents younger than 25 years, the chance to keep the same labor conditions and after the transfer abroad is of 0,382 (corresponding to a odd of 61,9%), for the respondents aged between 26-35 years the chance is 0,414 (respectively 70,7% odd), for the respondents between 36-45 years the chance is of 0,368 (respectively 58,3% odd), for the migrants aged between 45-55 years the chance is of only 0,386 (respectively a odd of 62,9,0%), and for the respondents older than 55 years, the same chance of keeping the same labor conditions is of 0,429 (corresponding to an odd of 75,0%).

Table 2. Assessed probabilities and marginal probabilities of the variable LABOUR\_CONDITIONS for the factorial variable [STUDIES=10 grades/vocational school]

STUDIES		LABOUR_CONDITIONS		
		1	2	3
10 grades/vocational school	PE	0,400	0,500	0,100
	PM	0,400	0,500	0,100
	N	10	10	10

Note: AP – assessed probabilities, MP – marginal probabilities, N – number of respondents with 10 grades/vocational school  
Source: own calculation, using SPSS

From the analysis of the available information, we can underline the fact that from all age groups included in the questionnaire, we can underline the fact that from all age groups included in the questionnaire, the migrants aged between 45-55 years have the highest probabilities (80,0%) to have the same conditions after the transfer as compared to those before the transfer, the migrants older than 55 years have the highest odd (24,9%) to have easier labor conditions, and the migrants between 45-55 years have the highest odd (20,0%) to have more difficult labor conditions after the transfer abroad. At the same time, we must underline the observation that the migrants above 55 years have a null odd (0,001%) to have heavier labor conditions after the transfer abroad.

Table 3. AGE \* LABOUR CONDITIONS Cross-tabulation

Parameters			LABOUR_CONDITIONS		
			1	2	3
AGE	below 25 years	Odd	0,191	0,619	0,190
		Cumulated odd	0,191	0,810	1,000
		ODD	0,160	0,382	0,160
	26-35 years	Odd	0,098	0,707	0,195
		Cumulated odd	0,098	0,805	1,000
		ODD	0,089	0,414	0,163
	36-45 years	Odd	0,229	0,583	0,188
		Cumulated odd	0,229	0,812	1,000
		ODD	0,186	0,368	0,158
	45-55 years	Odd	0,171	0,629	0,200
		Cumulated odd	0,171	0,800	1,000
		ODD	0,146	0,386	0,167
	above 55 years	Odd	0,249	0,750	0,001
		Cumulated odd	0,249	0,999	1,000
		ODD	0,200	0,429	0,001
ODD Ratio (Reference: above 55 years)	below 25 years	0,800	0,890	160,000	
	26-35 years	0,445	0,965	163,000	
	36-45 years	0,930	0,858	158,000	
	46-55 years	0,730	0,900	167,000	

Source: own calculations, using SPSS

Referring to the influence of the explanatory variable GENDER, the cumulated odds and the chance coefficients point out the fact that both for the female respondents, and for the masculine respondents, the chances to keep the same labor conditions after the transfer abroad are equal, respectively 0,390 (corresponding to an odd of 64%). We can still underline the fact that based on the analyzed data we can notice a higher odd for the female

migrants as opposed to the male migrants to benefit from easier labor conditions (23% as opposed to 16%), in exchange the male migrants have a higher odd than the female odds for more difficult labor conditions after the transfer abroad (20% as opposed to 13%) (Table 5).

Regarding the influence of the explanatory variable INCOME on the dependent variable LABOUR\_CONDITIONS, the cumulated odds, and the chance coefficients (Table 6) point out the fact that in the case of the respondents with an income before the transfer abroad of less than 2000 lei, had a chance of 0,395 (corresponding to an odd of 65,3%) to keep their labor conditions before the transfer abroad. Similarly, for the respondents with an income between 2001-2500 lei, the chance to keep their labour conditions after the transfer abroad is of 0,388 (representing an odd of 63,3%), for the migrants with an income between 2501-3500 lei the chance is of 0,375 (corresponding to an odd of 60%), and for the emigrants with a higher income than 3501 lei the chance to keep the same labour conditions is of 0,450 (that is an odd of 81,8%).

Table 4. GENDER \* LABOUR CONDITIONS Cross-tabulation

Parameters			LABOUR_CONDITIONS		
			1	2	3
GENDER	Masculine	Odd	0,160	0,640	0,200
		Cumulated odd	0,160	0,800	1,000
		ODD	0,130	0,390	0,170
	Feminine	Odd	0,230	0,640	0,130
		Cumulated odd	0,230	0,870	1,000
		ODD	0,180	0,390	0,120
ODD Ratio (Reference: female)			0,722	1,000	1,417

Source: own calculations, using SPSS

At the same time, we should point out the fact that the highest chances for easier labor conditions after transfer are for the migrants registering an income in the interval 2001-3500 lei (chance 0,178, that is an odd of 21,7%). In exchange, the highest chances to experience more severe labor conditions goes to the migrants registering a lower income than 2000 lei before the transfer (chance 0,179, with an odd of 21,7%)

Table 5. INCOME \* LABOUR\_CONDITIONS Cross-tabulation

Parameters			LABOUR_CONDITIONS		
			1	2	3
INCOME	Less than 2000 lei	Odd	0,130	0,653	0,217
		Cumulated odd	0,130	0,783	1,000
		ODD	0,115	0,395	0,179
	2001-2500 lei	Odd	0,217	0,633	0,150
		Cumulated odd	0,217	0,850	1,000
		ODD	0,178	0,388	0,130
	2501-3500 lei	Odd	0,200	0,600	0,200
		Cumulated odd	0,200	0,800	1,000
		ODD	0,167	0,375	0,167
	Less than 3501 lei	Odd	0,091	0,818	0,091
		Cumulated odd	0,091	0,909	1,000
		ODD	0,083	0,450	0,083
ODD Ratio (Reference: more than 3501 lei)	Less than 2000 lei	1,386	0,878	2,157	
	2001-2500 lei	2,146	0,862	1,566	
	2501-3500 lei	2,012	0,833	2,012	

Source: own calculations, using SPSS

Analyzing the influence of the explanatory variable SENIORITY (Table 5), based on the chance coefficients and the cumulated odds, we notice the fact that for the respondents with a seniority in work of 0-5 years before the transfer abroad, the chance to maintain the same labor conditions is of 0,382 (corresponding to an odd of 61,7%), and for the migrants with 5-10 years seniority the chance to keep the same labor conditions is 0,403 (corresponding to an odd of 67,5%). For the respondents with a seniority of 10-20 years 0,392 (corresponding to an odd of 64,5%) to keep the same labor conditions, while for the respondents with 20 seniority the chance is equal with 0,444, having an associated odd of 80,0%.

The highest chances to improve the labor conditions, respectively to have easier labor conditions after the transfer abroad belong to the migrants with a seniority of 10-20 years (chance 0,184, odd 22,6%). On the contrary,

the migrants with a seniority of 5-10 years have the highest odd to have more difficult conditions after the transfer abroad (chance 0,184, odd 22,5%).

Table 6. SENIORITY \* LABOUR CONDITIONS Cross-tabulation

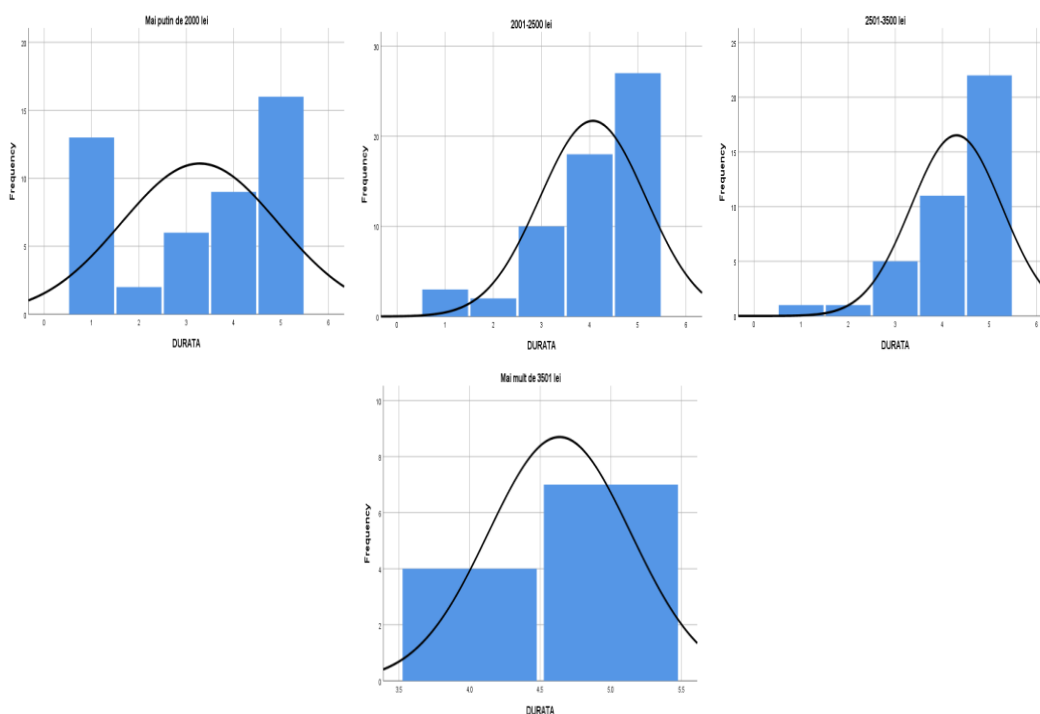
Parameters			LABOUR_CONDITIONS		
			1	2	3
SENIORITY	0-5 years	Odd	0,198	0,617	0,185
		Cumulated odd	0,198	0,815	1,000
		ODD	0,165	0,382	0,156
	5-10 years	Odd	0,100	0,675	0,225
		Cumulated odd	0,100	0,775	1,000
		ODD	0,091	0,403	0,184
	10-20 years	Odd	0,226	0,645	0,129
		Cumulated odd	0,226	0,871	1,000
		ODD	0,184	0,392	0,114
	above 20 years	Odd	0,199	0,800	0,001
		Cumulated odd	0,199	0,999	1,000
		ODD	0,167	0,444	0,001
ODD Ratio (Reference: ABOVE 20 ani)	0-5 years	0,988	0,860	156,000	
	5-10 years	0,545	0,908	184,000	
	10-20 years	1,102	0,883	114,000	

Source: own calculations, using SPSS

## 2. Analysis of the Variable: DURATION

Continuing the analysis started, we notice that based on the results obtained by applying the Chi-Square ( $\chi^2$ ), see Table 4 and Table 5) in order to use the binominal ordinal logistic regression model with cumulated probabilities, that one of the five explanatory variables, only one (that is INCOME) might bring extra information regarding the relations among these and the variable DURATION for a confidence coefficient of 90 (*Confidence level 90%*), corresponding to a significance threshold  $\alpha = 0,10$ .

Figure 2. Distribution of the answers regarding the influence INCOME on DURATION



Source: own calculations, using SPSS

As we can notice from Figure 2, the frequency of the answers obtained from the investigation based on the explanatory variable INCOME offer extra information regarding the changes of the dependent variable DURATION.

Therefore, people with a lower income than 2000 lei willing to leave abroad for smaller periods of time than 1 year (seasonal work), in exchange people with a higher income higher than 3501 lei are more likely to leave the country for longer periods of time (5-10 years) for good. The parameters of the relations DURATION = f(INCOME) are presented in the Table 7.

Table 7. The assessed values of the parameters model DURATION= f(VENIT)

		Estimate in(odd)	Wald	Sig.	ODD	[INCOME=less than 2000 lei]		
						ODD	Cumulated odd	Prob
Threshold	[DURATION=seasonal (under 1 year)]	-2.173	21.639	0.000**	0.042	0,020	0,020	0,020
	[DURATION = 1-2 years]	-0.857	18.113	0.000**	0.057	0,073	0,068	0,048
	[DURATION = 2-5 years]	-0.260	9.063	0.003**	0.141	0,132	0,117	0,069
	[DURATION = 5-10 years]	-0.759	1.427	0.232	0.468	0,250	0,200	0,131
Location	[INCOME = Less than 2000 lei]	-1.762	6.453	0.011*	0.172			
	[INCOME = 2001-2500 lei]	-0.887	1.704	0.192	0.412			
	[INCOME = 2501-3500 lei]	-0.497	0.497	0.481	0.608			
	[INCOME = more than 3500 lei]	0 <sup>a</sup>						

Note: Confidence level: \*=95%, \*\*=99%; <sup>a</sup> This parameter is set to zero because it is redundant.

Source: own calculations using SPSS

Analyzing the results from testing the hypothesis regarding the statistical significance of the parameter values of the model, in the case of the dependent variable except for [DURATION = 5-10 years], for the other parameters the null hypothesis H<sub>0.3</sub> is rejected and we accept the alternative hypothesis H<sub>1.3</sub>. In consequence, the parameters are significant from a statistical point of view (offer relevant information).

For the explanatory variable, only for the variable [INCOME = less than 2000 lei] the value of the corresponding coefficient from a statistical point of view.

In this case, the general form of the model will be:

$$\ln(odd_{s_i}) = \alpha_i + \beta_{[DURATA=5-10 ani]}; i=1,2,3$$

$$odd_i = e^{\alpha_i + \beta_{[DURATA=5-10 ani]}} \tag{3}$$

According to the equation (3), the models and the chance values corresponding to the migrants with a level of graduated studies is equivalent with:

$$odd_{[DURATA=Sezonier (sub 1 an)]} = e^{-2.173-1.762} = 0,020$$

$$odd_{[DURATA=1-2 ani]} = e^{-0.857-1.762} = 0,073$$

$$odd_{[DURATA=2-5 ani]} = e^{-0.260-1.762} = 0,132$$

The marginal odds corresponding to the dependent variable LABOUR\_CONDITIONS for the factorial variable [STUDIES=10 grades/vocational school] are presented in Table 8:

Table 8. The estimated odds and the marginal odds of the variable DURATION for the factorial variable [INCOME=less than 2000 lei]

INCOME		DURATION				
		1	2	3	4	5
Less than 2000 lei	PE	0,280	0,040	0,130	0,200	0,350
	PM	0,283	0,043	0,130	0,196	0,348
	N	46	46	46	46	46

Note: PE – estimated odd, PM – marginal odd, N – number of respondents with 10 grades-vocational school.

Source: own calculations, using SPSS

Analyzing the obtained information, it results that for the respondents with a lower income than 2000 lei the chance to leave the country for a duration of 5-10 years is of 0,250 (corresponding to an odd of 13,1%).

As for the influence of the explanatory variable AGE, the cumulated odds and the chance coefficients (Table 8) point out the fact that in the case of the respondents younger than 25 years, the chance to leave the country for good is 0,323 (corresponding to an odd 47,6%), for the respondents aged between 26-35 years the chance is 0,241

(respectively 31,7% odd), for the respondents aged 36-45 the chance is 0,314 (that is 45,8% odd), for the migrants aged between 45-55 years the chance is 0,340 (that is an odd of 51,4%), and for the respondents aged above 55 years, the chance of leaving the country for good is 0,429 (correspond 75,%).

Table 9. AGE \* DURATION Cross-tabulation

Parameters			DURATION				
			1	2	3	4	5
AGE	below 25 years	Odd	0,143	0,048	0,143	0,190	0,476
		Cumulated odd	0,143	0,191	0,334	0,524	1,000
		ODD	0,125	0,045	0,125	0,160	0,323
	26-35 years	Odd	0,146	0,024	0,171	0,342	0,317
		Cumulated odd	0,146	0,170	0,341	0,683	1,000
		ODD	0,128	0,024	0,146	0,255	0,241
	36-45 years	Odd	0,104	0,021	0,146	0,271	0,458
		Cumulated odd	0,104	0,125	0,271	0,542	1,000
		ODD	0,094	0,020	0,127	0,213	0,314
	45-55 years	Odd	0,057	0,057	0,086	0,286	0,514
		Cumulated odd	0,057	0,114	0,200	0,486	1,00
		ODD	0,054	0,054	0,079	0,222	0,340
	above 55 years	Odd	0,083	0,001	0,083	0,083	0,750
		Cumulated odd	0,083	0,084	0,167	0,250	1,000
		ODD	0,077	0,001	0,077	0,077	0,429
ODD Ratio (Reference: above 55 years)	Younger than 25 years		1,623	45,000	1,623	2,078	0,753
	26-35 years		1,662	24,000	1,896	1,896	0,562
	36-45 years		1,221	20,000	1,649	1,649	0,732
	46-55 years		0,701	54,000	1,026	1,026	0,793

Source: own calculations, using SPSS

Regarding the influence of the explanatory variable GENDER, the cumulated odds and the chance coefficients point out the fact that for the masculine migrants the chances to leave the country for good are of 0,320 (corresponding to an odd of 47,0%), while for the female migrants the chances are lower that is 0,300 (corresponding to a probability of 43%). In spite of this, we can notice that in the case of the transfers abroad for a period of 5-10 years, the higher chances are for the female migrants (chance 0,222, odd 28,0%) as opposed to the male migrants (chance 0,210, odd 26,0%) (Table 10).

Table 10. GENDER \* DURATION Crosstabulation

Parameters			DURATA				
			1	2	3	4	5
SEX	Masculine	Odd	0,090	0,030	0,150	0,260	0,470
		Cumulated odd	0,090	0,120	0,270	0,530	1,000
		ODD	0,080	0,030	0,130	0,210	0,320
	Feminine	Odd	0,150	0,040	0,100	0,280	0,430
		Cumulated odd	0,150	0,190	0,290	0,570	1,000
		ODD	0,130	0,040	0,090	0,220	0,300
ODD Ratio (Reference: feminine)			0,615	0,750	1,444	0,955	1,067

Source: own calculations, using SPSS

In the case of the explanatory variable STUDIES, the cumulated odds and the chance coefficients (Table 11) point out the fact that in the case of the respondents who graduated 10 grades or a professional school have a chance of 0,091 (respectively a probability of 10%) to accomplish a transfer abroad with a duration of 5-10 years. For the migrants with average studies (high school) the chance to go abroad for 5-10 years is of 0,221 (that is an odd of 28,4%), for the migrants with higher university studies (Bachelor) the chance to go abroad for 5-10 years is of 0,205 (corresponding to an odd of 25,9%), and for the higher university studies (MA/PhD) the chance to go abroad for 5-10 years is of 0,250 (that is an odd of 33,3%).

The situation of the chances and of the odds is dramatically changed when it comes to a definite transfer abroad. For the migrants graduating 10 grades or a vocational school, the chance of a definite transfer abroad is of 0,375 (that is an odd of 60%), for the migrants with average studies (high school) the chance to carry out a transfer abroad is 0,288 (that is an odd of 40,4%), for the migrants with university studies (Bachelor) the chance is

0,310 (corresponding to an odd of 44,8%), and for the university studies graduates (MA/PhD) the chance for a definite transfer abroad is 0,400 (that is an odd of 66,7%).

Therefore, we can notice that the duration of the transfer abroad is influenced by the level of the graduated studies, the higher the level of studies, the higher odd for a transfer abroad with a duration of 5-10 years or definite.

Analyzing the influence of the explanatory value SENIORITY (Table 11), based on the chance coefficients, we noticed the fact that for the respondents with a 0-5 years seniority before the transfer abroad the chance of a definite transfer abroad 0,296 (corresponding to an odd of 42,0%), and for the migrants with 5-10 years seniority in work there will be a definite transfer abroad of 0,322 (corresponding to an odd of 47,5%). For the respondents with a seniority of 10-20 years we notice a chance of 0,340 (having as a correspondent an odd of 51,6%) to carry out a definite transfer abroad, while for the respondents with a seniority in work of more than 20 years the chance is equal with 0,375 being associated with a probability of 60,0%.

Table 11. STUDIES \* DURATION Cross-tabulation

Parameters			DURATION				
			1	2	3	4	5
STUDIES	10 grades/vocational school	Odd	0,001	0,001	0,298	0,100	0,600
		Cumulated odd	0,001	0,002	0,300	0,400	1,000
		ODD	0,001	0,001	0,231	0,091	0,375
	Average studies (high school)	Odd	0,135	0,041	0,135	0,284	0,405
		Cumulated odd	0,135	0,176	0,311	0,595	1,000
		ODD	0,119	0,039	0,119	0,221	0,288
	University studies (Bachelor)	Odd	0,121	0,034	0,138	0,259	0,448
		Cumulated odd	0,121	0,155	0,293	0,552	1,000
		ODD	0,108	0,033	0,121	0,205	0,310
	University studies (MA/PhD)	Odd	0,001	0,001	0,001	0,333	0,667
		Cumulated odd	0,001	0,002	0,003	0,336	1,000
		ODD	0,001	0,001	0,001	0,250	0,400
ODD Ratio (Reference: University studies (MA/PhD))	10 grades/vocational school		1,000	1,000	231,000	0,364	0,938
	Average studies (high school)		119,000	39,000	119,000	0,884	0,720
	University studies (PhD)		108,000	33,000	121,000	0,820	0,775

Source: own calculations, using SPSS

Table 12. SENIORITY \* DURATION Cross-tabulation

Parameters			DURATION					
			1	2	3	4	5	
SENIORITY	0-5 years	Odd	0,111	0,037	0,136	0,296	0,420	
		Cumulated odd	0,111	0,148	0,284	0,580	1,000	
		ODD	0,100	0,036	0,120	0,229	0,296	
	5-10 years	Prob.	0,100	0,050	0,100	0,275	0,475	
		Cumulated odd	0,100	0,150	0,250	0,525	1,000	
		ODD	0,091	0,048	0,091	0,216	0,322	
	10-20 years	Odd	0,129	0,001	0,129	0,225	0,516	
		Cumulated odd	0,129	0,130	0,259	0,484	1,000	
		ODD	0,114	0,001	0,114	0,184	0,340	
	More than 20 years	Odd	0,001	0,001	0,397	0,001	0,600	
		Cumulated odd	0,001	0,002	0,399	0,400	1,000	
		ODD	0,001	0,001	0,286	0,001	0,375	
	ODD Ratio (Reference: more than 20 ani)	0-5 years		100,000	36,000	0,420	229,000	0,789
		5-10 years		91,000	48,000	0,318	216,000	0,859
		10-20 years		114,000	1,000	0,399	184,000	0,907

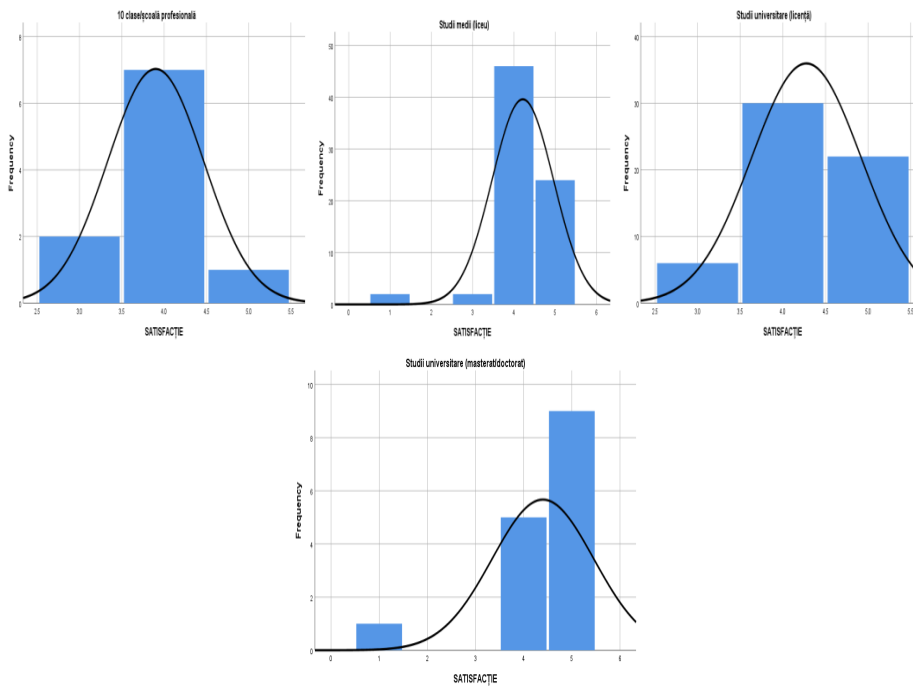
Source: own calculations using SPSS



### 3. Analysis of the Variable: SATISFACTION

By using the Chi-Square test ( $\chi^2$ ), see the Table 4 and Table 5, for the binomial ordinal logistic regression model with cumulated probabilities, we notice that from the five explanatory variables, only one of the variables (respectively STUDIES) might add extra information regarding the relations among these and the variable SATISFACTION for a confidence coefficient of 90% (*Confidence level 90%*), corresponding to a signification threshold  $\alpha = 0,10$ .

Figure 3. Distribution of the answers regarding the variable STUDIES on SATISFACTION



Source: own calculations, using SPSS

As we can notice in Figure 3, the frequency of the answers from the investigation based on the variable STUDIES offers extra information regarding the changes of the variable SATISFACTION. Therefore, the higher the level of the studies, the more the degree of satisfaction related to the transfer abroad, the average of the answers oscillating from 3,9 for the respondents with 10 grades/vocational school up to 4,4 (on a scale from 1 to 5). The parameters of the relation  $SATISFACTION = f(STUDIES)$  are presented in Table 13.

Table 13. Estimated values of the parameters of the model  $SATISFACTION = f(STUDIES)$

		Estimate ln(odd)	Wald	Sig,	ODD	Studies =10 grades/vocational school		
						ODD	Cumulated odd	Prob.
Threshold	[SATISFACTION = totally unsatisfied]	-4.989	40.094	0.000*	0,007	0,001	0,001	0,001
	[SATISFACTION = less satisfied]	-3.443	33.068	0.000*	0,032	0,004	0,005	0,004
	[SATISFACTIE = satisfied]	-0.335	0.417	0.518	0,715	0,700	0,417	0,412
Location	[STUDIES = 10 grades/vocational school]	-2.178	6.641	0.010**	0,113			
	[STUDIES = average studies (high school)]	-0.993	3.047	0.081	0,370			
	[STUDIES = University studies (bachelor)]	-0.908	2.447	0.118	0,403			
	[STUDIES = University studies (MA/PhD)]	0 <sup>a</sup>						

Note: Confidence level: \*=99%, \*\*=90%; <sup>a</sup> This parameter is set to zero because it is redundant.

Source: own calculations, using SPSS

Analyzing the results obtained after testing the hypothesis regarding the statistical signification of the values of the parameters of the model in the case of the dependent variable, excepting [SATISFACTION=satisfied], for the other parameters we reject the null hypothesis  $H_{0,3}$  and we accept the alternative hypothesis  $H_{1,3}$ . In consequence, the parameters are significant from a statistical point of view (offer relevant information).

Regarding the explanatory variable, only for the variable [STUDIES=10 grades/vocational school] the value of the coefficient corresponding is significant from a statistical point of view.

Therefore, the general form of the model will be:

$$\ln(odds_i) = \alpha_i + \beta_{[SATISFACTION=satisfied]}; i=1,2$$

$$odd_i = e^{\alpha_i + \beta_{[SATISFACTION=satisfied]}} \tag{4}$$

According to the equation (4), the models and the chance values corresponding to the migrants graduating 10 grades or vocational school are:

$$odd_{[SATISFACTION=Totally\ unsatisfied]} = e^{-4.989-2.178} = 0,001$$

$$odd_{[SATISFACTION=Less\ satisfied]} = e^{-3.443-2.178} = 0,004$$

The consequence is that for the respondents graduating from 10 grades/vocational school have the chance for a satisfaction degree = satisfied after the transfer abroad is of 0,700 (corresponding to an odd of 41,7%). Marginal odds corresponding to the dependent variable SATISFACTION for a factorial variable STUDIES=10 grades/vocational school are presented in Table 14.

Table 14. Estimated odds and marginal odds of the variable SATISFACTION for the factorial variable [STUDIES=10 grades/vocational school]

STUDIES		SATISFACTION				
		1	2	3	4	5
10 grades/vocational school	PE	0,001	0,001	0,200	0,700	0,100
	PM	0,001	0,001	0,200	0,700	0,100
	N	10	10	10	10	10

Note: PE – estimated odds, PM – marginal odds, N – number of respondents graduating 10 grades/vocational school  
Source: own calculations, using SPSS

Regarding the influence of the explanatory variable AGE, the cumulated odds and the chance coefficients (Table 15) points out the fact that in the case of the respondents younger than 25 years, the chance to be satisfied after the transfer abroad is 0,344 (corresponding to an odd of 52,3%), and the chance to be very satisfied is of 0,276 (that is an odd of 38,1%). For the respondents aged between 26-35 the chance to be satisfied after transfer is 0,379 (corresponding to an odd of 61%), and the chance to be very satisfied after transfer 0,396 (cu an odd of 22%).

Table 15. AGE \* SATISFACTION Cross-tabulation

Parameters			SATISFACTION				
			1	2	3	4	5
AGE	Sub 25 years	Odd	0,001	n/a	0,095	0,523	0,381
		Cumulated odd	0,001	n/a	0,096	0,619	1,000
		ODD	0,001	n/a	0,087	0,344	0,276
	26-35 years	Odd	0,073	n/a	0,097	0,610	0,220
		Cumulated odd	0,073	n/a	0,171	0,780	1,000
		ODD	0,068	n/a	0,089	0,379	0,180
	36-45 years	Odd	0,001	n/a	0,021	0,582	0,396
		Cumulated odd	0,001	n/a	0,022	0,604	1,000
		ODD	0,001	n/a	0,020	0,368	0,284
	45-55 years	Odd	0,001	n/a	0,086	0,456	0,457
		Cumulated odd	0,001	n/a	0,087	0,543	1,000
		ODD	0,001	n/a	0,079	0,314	0,314

	Older than 55 years	Odd	0,001	n/a	0,001	0,665	0,333
		Cumulated odd	0,001	n/a	0,002	0,667	1,000
		ODD	0,001	n/a	0,001	0,400	0,250
ODD Ratio (Reference: older than 55 years)	below 25 years		1,000	n/a	87,000	0,860	1,104
	26-35 years		68,000	n/a	89,000	0,948	0,720
	36-45 years		1,000	n/a	20,000	0,920	1,136
	46-55 years		1,000	n/a	79,000	0,785	1,256

In the case of the migrants aged between 36-45 years the chance is 0,368 (that is 58,3% odd), for the migrants aged between 45-55 years the chance to be satisfied after transfer is 0,368 (that is an odd of 58,2%), and the chance to be very satisfied is 0,284 (an odd of 39,6%). For the migrants older than 55 years the chance to be satisfied after the transfer abroad is 0,400 (corresponding to an odd of 66,5%), and the chance to be very satisfied after transfer is 0,250 (33,3% odd).

For the explanatory variable GENDER, the cumulated odds and the chance coefficients point out the fact that the chance of the male migrants to be satisfied after the transfer abroad is 0,358 (that is an odd of 55,8%), while the chance of the female migrants to be satisfied after transfer is 0,361 (that is an odd of 56,6%). If we consider the chance to be very satisfied after the transfer abroad, the male migrants have a chance of 0,273 (that is an odd of 37,5%), while the female migrants have a chance of 0,243 (that is an odd of 32,1%) (Table 16).

Table 16. GENDER \* SATISFACTION Cross-tabulation

Parameters			SATISFACTION				
			1	2	3	4	5
SEX	Masculine	Odd	0,019	n/a	0,048	0,558	0,375
		Cumulated odd	0,019	n/a	0,067	0,625	1,000
		ODD	0,019	n/a	0,046	0,358	0,273
	Feminine	Odd	0,019	n/a	0,094	0,566	0,321
		Cumulated odd	0,019	n/a	0,113	0,679	1,000
		ODD	0,019	n/a	0,086	0,361	0,243
ODD Ratio (Reference: feminine)			1,000	n/a	0,535	0,992	1,123

Source: own calculations, using SPSS

Regarding the influence of the explanatory variable INCOME on the dependent variable SATISFACTION, the cumulated odds and the chance coefficients (Table 17) point out the fact that in the case of the respondents with an income before the transfer abroad less than 2000 lei, have a chance of 0,370 (corresponding to an odd of 58,7%) to be satisfied after their transfer abroad and a chance of 0,233 (with an odd of 30,4%) to be very satisfied after the transfer. For the respondents with an income between 2001-2500 lei, the chance to be satisfied after their transfer abroad is 0,375 (representing an odd of 60%), and the chance for these respondents to be very satisfied is 0,250 (with an odd of 33,3%)

Table 17. INCOME \* SATISFACTION Cross-tabulation

Parameters			SATISFACTIE				
			1	2	3	4	5
INCOME	Less than 2000 lei	Odd	0,022	n/a	0,087	0,587	0,304
		Cumulated odd	0,022	n/a	0,109	0,696	1,000
		ODD	0,021	n/a	0,080	0,370	0,233
	2001-2500 lei	Odd	0,001	n/a	0,066	0,600	0,333
		Cumulated odd	0,001	n/a	0,067	0,667	0,333
		ODD	0,001	n/a	0,063	0,375	0,250
	2501-3500 lei	Odd	0,050	n/a	0,050	0,500	0,400
		Cumulated odd	0,050	n/a	0,100	0,600	0,400
		ODD	0,048	n/a	0,048	0,333	0,286
	More than 3501 lei	Odd	0,001	n/a	0,001	0,453	0,545
		Cumulated odd	0,001	n/a	0,002	0,455	1,000
		ODD	0,001	n/a	0,001	0,313	0,353
ODD Ratio (Reference: more than 3501 lei)	Less than 2000 lei		21,000	n/a	80,000	1,182	0,660
	2001-2500 lei		1,000	n/a	63,000	1,198	1,133
	2501-3500 lei		48,000	n/a	48,000	1,064	0,810

In the case of the migrants with an income between 2501-3500 lei the chance to be satisfied after the transfer abroad is 0,333 (corresponding to an odd of 50%), while the chance to be very satisfied is 0,286 (respectively an odd of 40,0%). For migrants with an income higher than 3501 lei the chance to be satisfied after the transfer abroad is 0,313 (corresponding to an odd of 45,3%), while the chance to be very satisfied is 0,353 (that is an odd of 54,5%).

Analyzing the influence of the explanatory variable SENIORITY (Table 18), based on the chance coefficients and the cumulated odds, we notice the fact that for the respondents with a seniority in work of 0-5 years before the transfer abroad, the chance to be satisfied after transfer is of 0,372 (corresponding to an odd of 59,2%), and the chance to be very satisfied is 0,236 (that is an odd of 30,9%). For the migrants with a seniority between 5-10 years, the chance to be satisfied after the transfer abroad is 0,322 (corresponding to an odd of 47,4%), while the chance to be very satisfied after transfer is 0,310 (corresponding to an odd of 45,0%).

Regarding the respondents with a seniority in work of 10-20 years, we notice an odd of 0,354 (corresponding to an odd of 54,7%) to be satisfied after the transfer abroad and a chance of 0,279 (with an odd of 38,7%) to be very satisfied after transfer. For the respondents with 20 years seniority, the chance to be satisfied after transfer is 0,444 (with an associated odd of 80,2%), and the chance to be satisfied after their transfer abroad is 0,167 (with an associated odd of 19,8%).

Table 18. SENIORITY \* SATISFACTION Cross-tabulation

Parameters			SATISFACTION					
			1	2	3	4	5	
SENIORITY	0-5 years	Odd	0,037	n/a	0,062	0,592	0,309	
		Cumulated odd	0,037	n/a	0,099	0,691	1,000	
		ODD	0,036	n/a	0,058	0,372	0,236	
	5-10 years	Odd	0,001	n/a	0,075	0,474	0,450	
		Cumulated odd	0,001	n/a	0,076	0,550	1,000	
		ODD	0,001	n/a	0,070	0,322	0,310	
	10-20 years	Odd	0,001	n/a	0,065	0,547	0,387	
		Cumulated odd	0,001	n/a	0,066	0,613	1,000	
		ODD	0,001	n/a	0,061	0,354	0,279	
	More than 20 years	Odd	0,001	n/a	0,001	0,800	0,198	
		Cumulated odd	0,001	n/a	0,002	0,802	1,000	
		ODD	0,001	n/a	0,001	0,444	0,167	
	ODD Ratio (Reference: more than 20)	0-5 years		36,000	n/a	58,000	0,838	1,413
		5-10 years		1,000	n/a	70,000	0,725	1,856
		10-20 years		1,000	n/a	61,000	0,797	1,671

Source: own calculations, using SPSS

Based on the statistical performance of the variables CHANGE\_INCOME, QUALIFICATION, LABOUR\_CONDITIONS, DURATION, SATISFACTION, and in correlation with the explanatory variables AGE, GENDER, STUDIES, INCOME, SENIORITY, we obtained the results presented in Table 19 and in Table 20.

For each explanatory variable, we made a hierarchy for the odds of every dependent variable based on a grading system. The grades were granted based on the place of each category of the explanatory variable in a classification made based on the assessed odds:

- for the variable CHANGE\_INCOME: grade 1 (lowest odd) up to grade 6 (highest odd);
- for the variable QUALIFICATION: grade 1 (lowest odd) up to grade 3 (highest odd);
- for the variable LABOUR\_CONDITIONS: grade 1 (lowest odd) up to grade 3 (highest odd);
- for the variable DURATION: grade 1 (lowest probability) up to grade 5 (highest odd);
- for the variable SATISFACTION: grade 1 (lowest odd) up to grade 5 (highest odd).

Table 19. Quantification of the explanatory variables AGE, GENDER, STUDIES for the performance of the depending variables

		AGE					GENDER		STUDIES			
		18-25 years	26-35 years	36-45 years	46-55 years	More than 55 years	Male	Female	10 grades/ vocational school	Average studies (high school)=	University studies (Bachelor)	University studies (MA/PhD)
CHANGE_INCOME	Less Than in the country	2	2	1	1	2	1	1	2	1	1	2
	50% higher	6	5	6	5	4	6	5	6	4	2	1
	100% higher	5	6	5	6	5	4	6	4	6	4	4
	150% higher	4	4	4	4	6	5	4	5	5	6	6
	200% higher	3	3	3	3	3	3	3	3	3	5	5
	200% higher	1	1	2	2	1	2	2	1	2	3	3
QUALIFICATION	Inferior	1	1	1	1	1	1	1	1	1	1	1
	Equal	3	3	3	3	3	3	3	3	3	3	3
	Superior	2	2	2	2	2	2	2	2	2	2	2
LABOUR_C ONDITIONS	Easier	1	1	1	1	1	1	1	2	1	1	2
	Same	3	3	3	3	3	3	3	1	3	3	3
	More difficult	2	2	2	2	2	2	2	3	2	2	1
DURATION	Seasonal (below 1 year)	2	2	2	2	2	2	3	1	2	1	1
	1-2 years	1	1	1	1	1	1	1	2	1	2	2
	2-5 years	3	3	3	3	4	3	2	4	3	3	3
	5-10 years	4	5	4	4	3	4	4	3	4	4	4
	Definite	5	4	5	5	5	5	5	5	5	5	5
SATISFACTION	Totally unsatisfied	1	1	1	1	1	1	1	1	1	1	1
	Unsatisfied	2	2	2	2	2	2	2	2	2	2	2
	Less satisfied	3	3	3	3	3	3	3	3	3	3	3
	Satisfied	5	5	5	4	5	5	5	5	4	5	4
	Really satisfied	4	4	4	5	4	4	4	4	5	4	5

Table 20. Quantification of the explanatory variables INCOME, SENIORITY for the performance of the dependent variables

		INCOME				SENIORITY			
		Less than de 2000 lei	2001 lei – 2500 lei	2501 lei – 3500 lei	More than 3501 lei	0-5 years	5-10 years	10-20 years	More than 20 years
CHANGE_INCOME	Less than in the country	1	1	1	1	1	1	1	1
	50% higher	6	5	5	3	6	5	4	4
	100% higher	5	6	6	5	5	6	5	6
	150% higher	3	3	3	4	4	4	6	5
	200% higher	4	4	4	6	3	3	3	3
	200% higher	2	2	2	2	2	2	2	2
QUALIFICATION	Inferior	1	1	1	1	1	1	1	1
	Equal	3	3	3	3	3	3	3	3
	Superior	2	2	2	2	2	2	2	2
LABOUR_CONDITIONS	Easier	1	2	2	1	2	1	2	2
	Same	3	3	3	3	3	3	3	3
	More difficult	2	1	1	2	1	2	1	1
DURATION	Seasonal (under 1 year)	4	4	1	1	2	2	2	2
	1-2 years	1	1	2	2	1	1	1	1
	2-5 years	2	2	3	3	3	3	4	3
	5-10 years	3	3	4	4	4	4	3	4
	Definite	5	5	5	5	5	5	5	5
SATISFACTION	Totally unsatisfied	1	1	1	1	1	1	1	1
	Unsatisfied	2	2	2	2	2	2	2	2
	Less satisfied	3	3	3	3	3	3	3	3
	Satisfied	5	5	5	4	5	5	5	5
	Very satisfied	4	4	4	5	4	4	4	4

Source: own calculations, using SPSS

### Conclusion

From the analysis of the results obtained, we can extract a series of relevant conclusions regarding the expectations of the Romanian migrants. Therefore, if we were to sketch a general robot portrait of a Romanian migrant, this would likely have the age between 25 - 36 years, masculine with average studies, with an income level of 2000 lei and a seniority in work of 0-5 years.

Analyzing the dependent variable CHANGE\_INCOME we can notice that based on AGE there is also a higher probability to obtain a higher income than in Romania, variation from a growth of 50% (for the category 18-

25 years and 36 - 45 years), up to a growth of 150% (for migrants above 55 years). Based on GENDER, the masculine persons have the highest probability to obtain a growth of the income after the transfer with 50%, and the females have the highest odd of obtaining a growth of the income with 100%. Based on the variable STUDIES, the migrants can expect to get a growth of the income after the transfer abroad directly proportional with the level of the graduated studies in the country, starting from a plus of 150% for the university graduates (Bachelor and MA/PhD). At the same time the same direct proportionality is in the case of the variable INCOME, the migrants are likely to expect a growth of the income after transfer of 50% for the ones registering a level of the income in the country up to 2000 lei, up to a growth of 200% of the income after transfer for the migrants with an income level of more than 3501 lei. Regarding SENIORITY, the highest growth of the income after transfer (150% higher) goes to the migrant category with a seniority in work of 10-20 years.

Regarding the depending variables QUALIFICATION and LABOUR\_CONDITIONS, we notice the fact that irrespective of the category of the explanatory variables, it is more likely that the migrants in Romania to keep the same level of qualification they had before the transfer abroad and to find the same working conditions after transfer, differences between the explanatory variable categories being minimal, alternating only the secondary probabilities.

Regarding the analysis of the variable DURATION we notice that along with the decision of a transfer abroad, most of the times the duration of the transfer is definite, irrespective of the angle of the analysis of the explanatory variables. For each of these variables there is a series of particularities regarding the estimated level of the odds, but without changing the general trend.

At the same time, regarding the dependent variable SATISFACTION, we notice almost the same degree of satisfaction (that is "satisfied") for the vast majority of the criteria of the explanatory variables, with small exceptions. At the same time, for a detailed analysis, we notice that the satisfaction degree after transfer is maximum (respectively "very satisfied") for the migrants aged between 46-55 years, graduating from 10 grades/vocational school or university studies (Bachelor) and having a higher than 3501 lei level of the income after the transfer abroad.

In consequence we notice significant changes on the level of the perceptions, the life standard, the level of the incomes and especially of the integration and the development perspectives of the individuals deciding that the labor market mobility might provide them in the future a higher living standard. Their profile is also important because it launches challenges for all the important political and organizational factors regarding the creation and implementation of coherent policies which should reduce the negative effects of the mobility phenomenon and of the workforce migration, both for the host countries and for the workforce issuing countries.

## References

- [1] Avram, C., Pîrvu, G., Radu, R.C., and Gruescu, R.C. 2007. *Romania and the Demands of European Integration*, Alma Publishing House, Craiova
- [2] Bădîrcea, R., Manta, A., Pîrvu, R., and Florea, N. 2016. Banking integration in European context. *Amfiteatru Economic Journal*, 18(42): 317-334.
- [3] Bonin, H., Eichhorst, W., Florman, C., Hansen, M.O., Skiöld, L., Stuhler, J., Tatsiramos, K., Thomasen, H., Zimmermann, K., 2008. Geographic mobility in the European Union: Optimizing its economic and social benefits, *Research Reports No 19*, Institute of Labor Economics (IZA).
- [4] Cannizzaro, S., Corinto, G.L., 2012. Can the horticultural district in south-east Sicily benefit from migrant workers to achieve an efficient internationalization pattern? *New Medit no. 3*: 59-65.
- [5] Cojocaru, T.M., et al. 2021. Econometric research regarding the expectations of the Romanian emigrants. Part I, *Journal of Applied Economic Sciences*, Volume XV, Winter, 4(70): 878-892.
- [6] Cojocaru, T.M. 2020. Qualitative research on the social, economic and demographic implications of labor mobility. *Journal of Applied Economic Sciences*, Volume XV, Fall 3(69): 692-714, Fall. DOI: [https://doi.org/10.14505/jaes.v15.3\(69\).17](https://doi.org/10.14505/jaes.v15.3(69).17). Available at: <http://cesmaa.org/Docs/JAES-Volume-XV-Issue-369-Fall-2020.pdf>
- [7] Ederveen, S., Nahuis, R., Parikh, A., 2005. Labor mobility and regional disparities: The role of female labor participation, *Working Papers 05-31, Utrecht School of Economics*, 895-913.
- [8] Gillespie, B.J., 2013. Adolescent behavior and achievement, social capital, and the timing of geographic mobility. *Advances in Life Course Research*, 18: 223-233.

- [9] Kim, Y. 2010. Female individualization? Transnational mobility and media consumption of Asian women. *Media, Culture & Society*, 32(1): 25–43.
- [10] Pîrvu, G., Lolescu, E., Pîrvu, R. C., and Tănasie, A., 2011. *European Economy*. Universitaria Publishing House, Craiova, in *Romanian*.
- [11] Pîrvu, R. 2011. The link between migration and economic development. *Bulletin of University of Agricultural Sciences and Veterinary Medicine Cluj-Napoca. Horticulture*, 68(2).
- [12] Pîrvu, R. 2013. International Labor Movement and the Effects of Migration on the Structural Development of the Economy, in *Romanian*, Universitaria Publishing House, Craiova. ISBN 978-606-14-0653-1. Available at: <https://www.editurauniversitaria.ro/storage/publications/rasfoire/WYZLM85JDHGL5eTs9ZrqZ7k9V.pdf>.
- [13] Tatsiramos, K. 2009. Unemployment insurance in Europe: Unemployment duration and subsequent employment stability, *Journal of the European Economic Association*, 7: 1225-1260.
- [14] Włodarczyk, B., Szturo, M., Ionescu, G.H., Firoiu, D., Pîrvu, R., and Badîrcea, R. 2018. The impact of credit availability on small and medium companies. *Entrepreneurship and Sustainability Issues*, 5(3): 565-580.