

J Balcar Is it better to invest in professional/technical qualifications or in soft skills?

APPENDIX S1: Definition and basic description of variables

Data description	Variable	Mean	Standard deviation	Min	Max
Income					
Gross monthly income from main employment (free answer)	Income	20194.98	8021.188	4267.00	90000.00
	Ln Income	9.84	0.370	8.36	11.41
Education					
Respondent's educational attainment (selection from pre-defined options used as dummies)	No or basic education	0.05	0.210	0	1
	Secondary vocational school	0.38	0.485	0	1
	Secondary technical school or grammar-school	0.38	0.487	0	1
	Higher professional school, no academic degree	0.03	0.161	0	1
	Higher professional school, bachelor degree	0.03	0.157	0	1
	University, bachelor degree	0.04	0.202	0	1
	University, master or doctoral degree	0.10	0.296	0	1
Number of years necessary for reaching respondent's educational attainment (computed)	Years of schooling	13.21	2.090	9.00	21.00
Work experience					
Number of years of employment at current employer (maternity/parental leave and long-term sick leave are not included) (free answer)	Tenure	7.39	6.485	0.08	36.00
	Tenure squared	96.71	166.769	0.01	1296.00
Number of years of self-employment and employment for all employers except the current one (maternity/parental leave, military service, long-term sick leave, periods of unemployment, temporary/summer jobs, contracts of services are not included) (free answer)	Other work experience	9.06	8.056	0.00	35.00
	Other work experience squared	146.95	209.132	0.00	1225.00
Similarity of work / job tasks during respondent's labour market career (i.e. main occupation, self-employment, contracts of services) (selection from pre-defined options used as dummies)	Life-long work career specialization - the same or very similar work / tasks	0.50	0.500	0	1
	Life-long work career specialization - various work / tasks	0.46	0.498	0	1
	Life-long work career specialization - unidentifiable because of beginning of work career (less than 3 years of work experience)	0.04	0.202	0	1

Data description (continue)	Variable	Mean	Standard deviation	Min	Max
Soft skills					
Requirements on soft skills level for current respondent's occupation (added from National System of Occupation)	Effective communication	3.24	0.960	2	5
	Cooperation	3.09	0.741	2	5
	Creativity	3.05	0.731	1	5
	Flexibility	3.24	0.701	1	5
	Consumer orientation	1.93	1.804	0	5
	Efficiency	3.40	0.647	1	5
	Independence	3.47	0.882	1	5
	Problem solving	3.20	0.895	1	5
	Planning and organizing	3.11	0.911	1	5
	Life-long learning	2.67	1.047	1	5
	Proactive approach	3.23	0.815	1	5
	Stress resiliency	3.02	0.684	2	5
	Exploring and orientation in information	2.58	1.049	1	5
	Leadership	0.86	1.543	0	5
	Influencing others	1.84	1.616	0	5
Mean level of 15 soft skills	Mean level of soft skills	2.79	0.846	1.13	4.87
Cognitive skills, psychological traits and preferences					
Grade the respondent got from mathematics in last year of basic school (or corresponding year of the long-term grammar school) <i>Scale from 1 (the best) to 5 (the worst)</i>	Grades from math at age 15 (1 best, 5 worst)	2.37	0.876	1	4
Presence of feeling of a really strong need to excel, be better than others 1. No 2. Rather no 3. Rather yes 4. Yes	Strong need to excel, be better than others	2.55	0.813	1	4
Tendency to leave the goal, when its reaching is difficult 1. Yes 2. Rather yes 3. Rather no 4. No	Persistence in following difficult goals	2.83	0.774	1	4

Data description (continue)	Variable	Mean	Standard deviation	Min	Max
Being proud of myself 1. <i>No</i> 2. <i>Rather no</i> 3. <i>Rather yes</i> 4. <i>Yes</i>	Self-esteem (proudness of myself)	2.96	0.755	1	4
Persuasion that events in respondent's life are... 1. <i>entirely a consequence of respondent's decisions and actions</i> 2. <i>rather a consequence of respondent's decisions and actions</i> 3. <i>rather a consequence of fortune and coincidence</i> 4. <i>entirely a consequence of fortune and coincidence</i>	Locus of control	2.86	0.771	1	4
General priorities of respondent (selection from pre-defined options used as dummies)	Highest life priority - family	0.56	0.496	0	1
	Highest life priority - work	0.30	0.457	0	1
	Highest life priority - free time, hobbies, charity	0.14	0.346	0	1
Who should have the crucial responsibility for ensuring an adequate income for a family? 1. <i>Almost entirely a partner</i> 2. <i>Rather a partner</i> 3. <i>Partner and respondent equally</i> 4. <i>Rather a respondent</i> 5. <i>Almost entirely a respondent</i>	Feeling of personal responsibility for ensuring an adequate income	3.15	1.038	1	5
Who should have the crucial responsibility for ensuring housework (meal preparation, dish washing, cleaning, shopping, washing and ironing) and taking care of children? 1. <i>Almost entirely a partner</i> 2. <i>Rather a partner</i> 3. <i>Partner and respondent equally</i> 4. <i>Rather a respondent</i> 5. <i>Almost entirely a respondent</i>	Feeling of personal responsibility for ensuring everyday housework and taking care of children	2.90	0.917	1	5
Loss of respondent's entire income (i.e. from your main occupation, secondary occupation and other sources)... 0. <i>...would not lead to significant decrease of your living standard, because other income (your partner's income social benefits, child allowances etc.) is sufficient to cover needs of household's members</i> 1. <i>...would lead to significant decrease of your living standard, because other income (your partner's income social benefits, child allowances etc.) is not sufficient to cover needs of household's members</i>	Loss of individual's income would lead to significant decrease of living standard	0.82	0.388	0	1

Data description (continue)	Variable	Mean	Standard deviation	Min	Max
Preference of job safety and wage level 1. <i>Almost entirely wage level</i> 2. <i>Rather wage level</i> 3. <i>Rather job safety</i> 4. <i>Almost entirely job safety</i>	Preference of job security than wage level	2.89	0.801	1	4
Preference of job flexibility (e.g. housework, part time job, flexitime) and wage level? 1. <i>Almost entirely wage level</i> 2. <i>Rather wage level</i> 3. <i>Rather job flexibility</i> 4. <i>Almost entirely job flexibility</i>	Preference of job flexibility than wage level	1.99	0.774	1	4
Preference of self-fulfilment at a job and wage level 1. <i>Almost entirely wage level</i> 2. <i>Rather wage level</i> 3. <i>Rather the possibility of self-fulfilment at job</i> 4. <i>Almost entirely the possibility of self-fulfilment at job</i>	Preference of individual's self-fulfilment than wage level	2.12	0.768	1	4
Preference of less demanding and stressful work and wage level 1. <i>Almost entirely wage level</i> 2. <i>Rather wage level</i> 3. <i>Rather less demanding and stressful work</i> 4. <i>Almost entirely less demanding and stressful work</i>	Preference of less demanding and stressful work than wage level	2.23	0.774	1	4
Preference of good interpersonal relations at the workplace and wage level 1. <i>Almost entirely wage level</i> 2. <i>Rather wage level</i> 3. <i>Rather good interpersonal relations at workplace</i> 4. <i>Almost entirely good interpersonal relations at workplace</i>	Preference of good interpersonal relations at the workplace than wage level	2.54	0.825	1	4
Physical characteristics					
Gender 0. Male 1. Female	Gender	0.47	0.499	0	1
Evaluation of long-term health condition 0. <i>It does not represent any limitation of work performance at current job</i> 1. <i>It limits work performance at current job</i>	Health limitation of work performance	0.11	0.318	0	1
Difference between individual's height and average height for his/her gender (cm)	Difference between individual's height and average height for his/her gender (cm)	-0.06	6.561	-19.75	25.25

(computed from free answer on individual's height)

Data description (continue)	Variable	Mean	Standard deviation	Min	Max
Body mass index = weight / height squared	BMI	25.36	3.944	16.98	45.97
	BMI squared	658.92	214.387	288.16	2113.31
Family characteristics					
Marital status (selection from pre-defined options used as dummies)	Marital status - single	0.33	0.469	0	1
	Marital status - married	0.48	0.500	0	1
	Marital status - divorced, widow/widower	0.19	0.392	0	1
Number of children in different age categories (free answer)	Number of children 0-2 years of age	0.08	0.279	0	2
	Number of children 3-5 years of age	0.13	0.350	0	2
	Number of children 6-14 years of age	0.33	0.616	0	3
	Number of children 15-18 years of age	0.17	0.423	0	2
	Number of children 19+ years of age	0.45	0.793	0	4
Background characteristics					
Number of siblings (free answer)	Number of siblings	1.09	0.889	0	7
Mother tongue, i.e. language that a respondent was taught by parents since birth (pre-defined options, free answer and subsequent classification)	Mother tongue - Czech	0.97	0.169	0	1
	Mother tongue - Czech and other (bilingualism)	0.02	0.135	0	1
	Mother tongue - other	0.01	0.103	0	1
Occupation (KZAM classification)					
Respondent's occupation (free answer and subsequent classification)	Legislators, senior officials and managers (KZAM 1)	0.03	0.183	0	1
	Professionals (KZAM 2)	0.10	0.300	0	1
	Technicians and associate professionals (KZAM 3)	0.22	0.412	0	1
	Clerks (KZAM 4)	0.16	0.367	0	1
	Service workers and shop and market sales workers (KZAM 5)	0.14	0.350	0	1
	Skill agricultural, forestry and fishery workers (KZAM 6)	0.01	0.085	0	1
	Craft and related workers (KZAM 7)	0.15	0.359	0	1
	Plant and machine operators and assemblers (KZAM 8)	0.12	0.320	0	1

Unskilled workers (KZAM 9)	0.07	0.256	0	1
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Data description (continue)	Variable	Mean	Standard deviation	Min	Max
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Prevailing economic activity (NACE classification)

Economic activity of respondent's employer (added from Albertina Database)	Agriculture, forestry and fishing (NACE A)	0.02	0.131	0	1
	Mining and quarrying (NACE B)	0.01	0.081	0	1
	Manufacturing (NACE C)	0.26	0.437	0	1
	Electricity, gas, steam and air conditioning supply (NACE D)	0.01	0.073	0	1
	Water supply, sewerage, waste management (NACE E)	0.01	0.100	0	1
	Construction (NACE F)	0.07	0.251	0	1
	Wholesale and retail trade (NACE G)	0.17	0.373	0	1
	Transporting and storage (NACE H)	0.07	0.248	0	1
	Accommodation and food service activities (NACE I)	0.04	0.204	0	1
	Information and communication (NACE J)	0.03	0.159	0	1
	Financial and insurance activities (NACE K)	0.03	0.161	0	1
	Real estate activities (NACE L)	0.02	0.155	0	1
	Professional, scientific and technical activities (NACE M)	0.04	0.196	0	1
	Administrative and support service activities (NACE N)	0.03	0.169	0	1
	Public administration and defence, compulsory social security (NACE O)	0.05	0.217	0	1
	Education (NACE P)	0.07	0.262	0	1
	Human health and social work activities (NACE Q)	0.04	0.201	0	1
	Arts, entertainment and recreation (NACE R)	0.02	0.128	0	1
	Other services activities (NACE S)	0.03	0.174	0	1

Other job characteristics

Extent of work load (scheduled working hours) (free answer, subsequently categorised)	Work load - full time, 40 hours per week	0.89	0.315	0	1
	Work load - full time, 37.5 hours per week (three-shift system)	0.05	0.217	0	1
	Work load - part time	0.06	0.241	0	1
Difference in number of hours really devoted to a work (incl. paid and non-paid overtime, deducted time for lunch-breaks, smoking etc.) and official work load (hours per week) (computed from free answer on real working hours and official work load)	Difference in number of hours really devoted to a work and official work load (hours per week)	2.65	6.088	-30.50	40.00

Data description (continue)	Variable	Mean	Standard deviation	Min	Max
How often are you absent in work (illness, medical examination, care of an ill child etc.)? 1. <i>Never or nearly never</i> 2. <i>Sometimes I am absent, but still less than my colleagues</i> 3. <i>I am absent as often as my colleagues</i> 4. <i>I am absent more often than my colleagues</i>	Absenteeism	1.51	0.744	1	4
Correspondence of job with field of study 1. <i>It does not correspond at all (I am doing something else)</i> 2. <i>It does not much</i> 3. <i>It does partly</i> 4. <i>It does entirely</i>	Field of education and job match	2.61	1.181	1	4
Dependence of work performance on co-workers' work 1. <i>Entirely independent</i> 2. <i>Rather independent</i> 3. <i>Rather dependent</i> 4. <i>Entirely dependent</i>	Work performance dependence on co-workers	2.51	0.944	1	4
Prevalent way of performing the job tasks 0. <i>The working process is precisely defined and have to be followed by respondent</i> 1. <i>The working process, more or less, depends on respondent's decision (e.g. can create and try new ones)</i>	Not strictly defined working process (freedom to create / try new working processes)	0.46	0.499	0	1
Way of rewarding job performance 1. <i>Entirely objective, measurable way</i> 2. <i>Rather objective, measurable way</i> 3. <i>Rather subjective, immeasurable way</i> 4. <i>Entirely subjective, immeasurable way</i>	Rate of subjectivity in wage-system	2.13	0.903	1	4
Relationship with immediate superior (selection from pre-defined options used as dummies)	Relation with boss - unfriendly	0.01	0.081	0	1
	Relation with boss - reserved	0.08	0.269	0	1
	Relation with boss - neutral	0.36	0.481	0	1
	Relation with boss - positive / friendly (only within the workplace)	0.42	0.494	0	1
	Relation with boss - friendly (also out the workplace, e.g. common sport or hobby activities, go for a drink, family trips etc.)	0.11	0.313	0	1
	Relation with boss - no boss	0.02	0.126	0	1

Data description (continue)	Variable	Mean	Standard deviation	Min	Max
Way of getting current employment <i>(selection from pre-defined options used as dummies)</i>	Way of getting the job - answering job advertisement in media	0.09	0.288	0	1
	Way of getting the job - job offered by employer	0.11	0.316	0	1
	Way of getting the job - based on somebody's recommendation	0.30	0.459	0	1
	Way of getting the job - applied for a job on the basis of somebody's information on vacancy	0.25	0.431	0	1
	Way of getting the job - applied for a job on the basis of information from employment office or employment agency	0.06	0.239	0	1
	Way of getting the job - applied for a job, although the employer did not advertised any vacancy	0.16	0.363	0	1
	Way of getting the job - establishment of his/her own company	0.01	0.089	0	1
	Way of getting the job - other	0.02	0.155	0	1
Employer characteristics					
Number of employees <i>(added from Albertina Database)</i>	Employer size - 0 employees	0.02	0.155	0	1
	Employer size - 1-9 employees	0.13	0.341	0	1
	Employer size - 10-49 employees	0.17	0.380	0	1
	Employer size - 50-249 employees	0.22	0.412	0	1
	Employer size - 250 or more employees	0.40	0.489	0	1
	Employer size - not available	0.05	0.227	0	1
Ownership <i>(added from Albertina Database)</i>	Ownership - private	0.62	0.485	0	1
	Ownership - cooperative	0.01	0.118	0	1
	Ownership - state	0.06	0.241	0	1
	Ownership - municipal	0.11	0.319	0	1
	Ownership - association	0.02	0.138	0	1
	Ownership - foreign	0.14	0.346	0	1
	Ownership - international	0.01	0.109	0	1
	Ownership - not available	0.02	0.123	0	1
Natural person <i>(added from Albertina Database)</i>	Natural person (is not legal person)	0.09	0.287	0	1

Age of firm/institution = a year 2011 minus date of origin (added from Albertina Database)	Age of firm/institution (number of years between its origin and the end of year 2011)	16.13	7.594	0.42	55.08
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Data description (continue)	Variable	Mean	Standard deviation	Min	Max
Location					
Region of living (selection from pre-defined options used as dummies)	NUTS 3 - Prague	0.12	0.327	0	1
	NUTS 3 - Central Bohemian region	0.12	0.324	0	1
	NUTS 3 - South Bohemian region	0.06	0.241	0	1
	NUTS 3 - Plzeň region	0.06	0.230	0	1
	NUTS 3 - Karlovy Vary region	0.03	0.169	0	1
	NUTS 3 - Ústí nad Labem region	0.08	0.266	0	1
	NUTS 3 - Liberec region	0.04	0.198	0	1
	NUTS 3 - Hradec Kralové region	0.05	0.221	0	1
	NUTS 3 - Pardubice region	0.05	0.217	0	1
	NUTS 3 - Vysočina region	0.05	0.217	0	1
	NUTS 3 - South Moravian region	0.11	0.313	0	1
	NUTS 3 - Olomouc region	0.06	0.236	0	1
	NUTS 3 - Zlín region	0.06	0.229	0	1
	NUTS 3 - Moravian-Silesian region	0.12	0.325	0	1
Residence town size (selection from pre-defined options used as dummies)	Residence town size - 1-1999 inhabitants	0.21	0.408	0	1
	Residence town size - 2000-4999 inhabitants	0.16	0.369	0	1
	Residence town size - 5000-9999 inhabitants	0.08	0.269	0	1
	Residence town size - 10000-19999 inhabitants	0.11	0.314	0	1
	Residence town size - 20000-49999 inhabitants	0.11	0.311	0	1
	Residence town size - 50000-99999 inhabitants	0.11	0.311	0	1
	Residence town size - 100000+ inhabitants	0.22	0.415	0	1

Source: Author