

Are you an adventurous guy ?

Evangéline Tardy
Arthur Maccari
Victoria Tousche

ENAC

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Summary

- I-Data
- II-Models and results
- III-Analysis and critics



Are you an adventurous guy ?

- Is there a link between the adventurous nature of an individual and his propensity to take risks in tourism?
- Can broad risk profiles be established in order to speculate on tourism choices?

Data collection

- $n = 54$
- $k_{max} = 8$
- $21 \leq \text{age of people interviewed} \leq 66$
- All are french people
- 63% are men

Data were collected thanks to a survey, realized in March.

Explanation of the variables used (1/2)

Variables	type	explanations
Sex	binary	1=man
Revenues (net in €per month)	numeric	1=no revenue, 2=[0;1000] 6=[+5000]
Profession	dummy	2=middle manager
Number of Children	numeric	/
Sport_frequency	dummy	1=never or rarely 2=1/week 5=+3/week
Health	dummy	1=very bad 5=very good
BIN_did_financial_investments	binary	1=yes
Investment_horizon (in years)	dummy	1=-3 years 2=[3,5years] 3=+5 years
Bin_would_you_professional_retraining	binary	1=yes
Taking_responsibilities	dummy	1=like 2=don't dare take them 3=no matters 4=don't like
Project	dummy	1=in group 2=alone 3=both

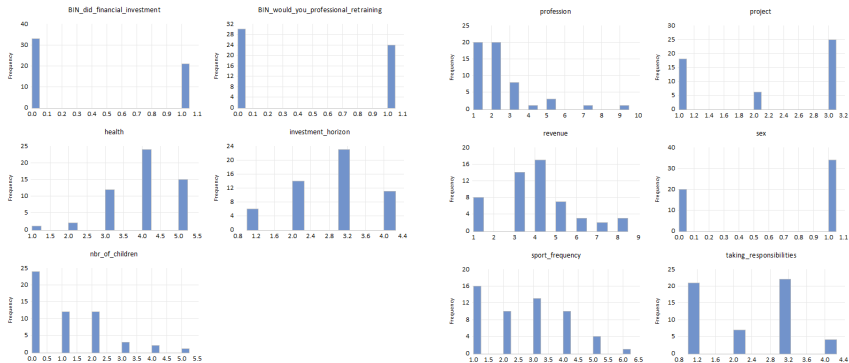
Explanation of the variables used (2/2)

- y_{sport} , y_{finances} , $y_{\text{responsibilities}}$: computed thanks to the answers from the form.
- y_{tourism} : individual's awareness of risky destinations (Insurly ranking).

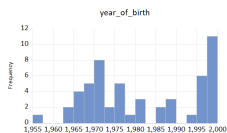
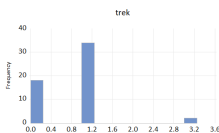
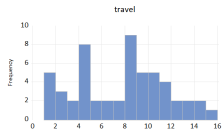
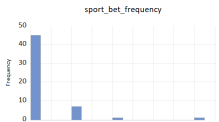
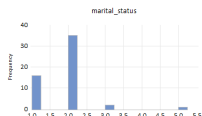
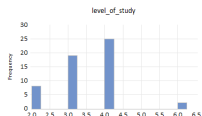
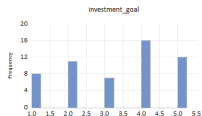
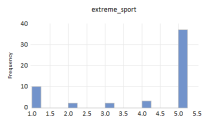
Agregation of tree indicators

- Insurly indicator : ranks countries according to violence (homicide, terrorism), health (epidemic, basic sanitary facilities, air quality) and transport safety.
- GPI indicator (Global Peace Index) : ranks countries according to their pacific degree.
- GTI indicator (Global Terrorism Index) : ranks countries according to their intensity of terrorism activities.

Histograms of variables used



Histograms of variables excluded



Variables expectations

Variables	y_tourism	y_responsibilites	y_sport	y_finances
Sex = 1	+	+	+/-	+
Revenue (net in €per month)	-	+	+/-	+
Profession = 2	-	+	+/-	+
Number of Children	-	+/-	-	-
Sport_frequency	-	+/-	+	+/-
Health	-	+/-	+	+/-
BIN.did_financial_investments = 1	-	+	+/-	+
Investment_horizon (in years) = 3	+	+	+/-	+
Bin_would_you_professional_retraining = 1	+/-	+/-	+/-	+/-
Taking_responsibilities = 1	-	+	+/-	+
Project = 3	+/-	+/-	+/-	+/-

Table: Prediction on the influence of the coefficients

First regression : y_sport

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.916327	1.060864	1.806384	0.0774
NBR_OF_CHILDREN	0.432545	0.192919	2.242099	0.0298
SEX=1	0.681449	0.655244	1.039992	0.3038
HEALTH=3	2.771227	0.939989	2.948149	0.0050
HEALTH=4	4.695472	0.860680	5.455536	0.0000
HEALTH=5	2.068531	0.842268	2.455906	0.0179
SPORT_FREQUENCY=1	1.157942	0.658599	1.758189	0.0854
SPORT_FREQUENCY=2	1.176038	0.763744	1.539833	0.1305
R-squared	0.491375	Mean dependent var	6.648148	
Adjusted R-squared	0.413975	S.D. dependent var	2.324256	
S.E. of regression	1.779271	Akaike info criterion	4.126238	
Sum squared resid	145.6270	Schwarz criterion	4.420902	
Log likelihood	-103.4084	Hannan-Quinn criter.	4.239878	
F-statistic	6.348550	Durbin-Watson stat	1.987040	
Prob(F-statistic)	0.000031	Wald F-statistic	9.594308	
Prob(Wald F-statistic)	0.000000			

Figure: Regression of y_sport

Variables expectations

Variables	expectation	reality	significant
Sex = 1	+/-	+	no
Number of Children	-	+	yes (90%)
Health=3	$3 \leq 4 \leq 5$	$5 \leq 3 \leq 4$	yes (99%)
Health=4	$3 \leq 4 \leq 5$	$5 \leq 3 \leq 4$	yes (99%)
Health=5	$3 \leq 4 \leq 5$	$5 \leq 3 \leq 4$	yes (95%)
Sport_frequency=1	$1 \leq 2$	$1 \leq 2$	yes (90%)
Sport_frequency=2	$1 \leq 2$	$1 \leq 2$	yes (85%)

Table: Predictions and reality for y_sport

Variance Inflation Factors

Date: 04/29/21 Time: 21:53

Sample: 1 54

Included observations: 54

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
C	1.125432	46.29804	NA
NBR_OF_CHILDREN	0.037218	5.580473	1.759369
SEX=1	0.429345	5.933450	2.152795
HEALTH=3	0.883579	7.679071	4.969509
HEALTH=4	0.740771	8.738796	3.993015
HEALTH=5	0.709416	5.969400	3.804605
SPORT_FREQUEN...	0.433753	3.414274	2.390214
SPORT_FREQUEN...	0.583305	10.68493	5.510352

Figure: VIF of the coefficient in the regression of y_sport

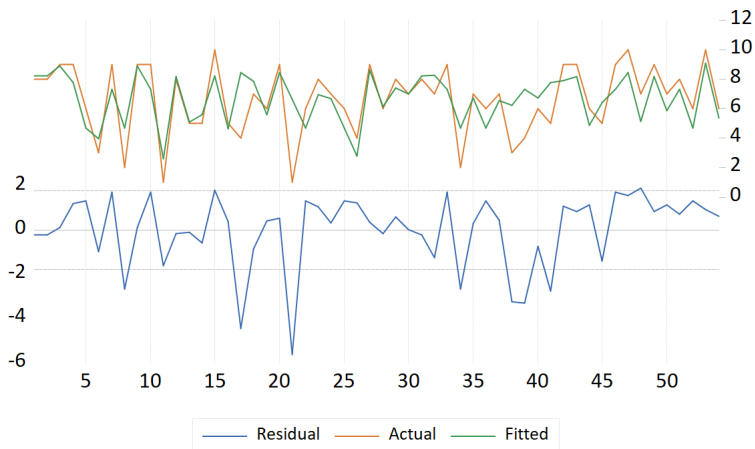


Figure: Residual of the regression of y_sport

Second regression : y_finances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.507100	0.419017	3.596751	0.0008
BIN_DID_FINANCIAL_INVESTMENTS=1	1.486907	0.487638	3.049203	0.0037
BIN_WOULD_YOU_PROFESSIONAL_R...	0.937261	0.416065	2.252678	0.0289
INVESTMENT_HORIZON=3	1.649824	0.421667	3.912626	0.0003
REVENUE=1	2.618129	0.593480	4.411486	0.0001
REVENUE=3	0.643307	0.425751	1.510994	0.1373
R-squared	0.564326	Mean dependent var	3.759259	
Adjusted R-squared	0.518943	S.D. dependent var	1.882744	
S.E. of regression	1.305839	Akaike info criterion	3.476007	
Sum squared resid	81.85030	Schwarz criterion	3.697005	
Log likelihood	-87.85220	Hannan-Quinn criter.	3.561238	
F-statistic	12.43481	Durbin-Watson stat	2.008945	
Prob(F-statistic)	0.000000			

Figure: Regression of y_finances

Variables expectations

Variables	expectation	reality	significant
BIN_did_financial_investments=1	+	+	yes (99%)
BIN_would_do_professional_retraining=1	+	+	yes (95%)
investment_horizon=3	+	+	yes (99%)
revenues=1	$1 \leq 3$	$1 \geq 3$	yes (99%)
revenues=3	$1 \leq 3$	$1 \geq 3$	yes (85%)

Table: Predictions and reality for y_finances

Variance Inflation Factors

Date: 04/29/21 Time: 21:56

Sample: 1 54

Included observations: 54

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
C	0.175575	5.560046	NA
BIN_DID_FINANCIAL...	0.237791	2.928431	1.789597
BIN_WOULD_YOU_...	0.173110	2.436437	1.353576
INVESTMENT_HOR...	0.177803	2.398209	1.376750
REVENUE=1	0.352219	1.652431	1.407626
REVENUE=3	0.181264	1.488194	1.102366

Figure: VIF of the coefficient in the regression of y_finances

Third regression : y_tourism

C	28.29791	1.534403	18.44229	0.0000
NBR_OF_CHILDREN	0.932084	0.534546	1.743694	0.0878
REVENUE=6	-9.359148	1.318213	-7.099878	0.0000
SPORT_FREQUENCY=5	3.990407	1.677212	2.379191	0.0215
HEALTH=5	0.016836	1.451102	0.011602	0.9908
HEALTH=4	-2.742235	1.247022	-2.199026	0.0328
SEX=1	-0.425614	1.029459	-0.413434	0.6812
R-squared	0.387879	Mean dependent var	27.59259	
Adjusted R-squared	0.309735	S.D. dependent var	4.209237	
S.E. of regression	3.497126	Akaike info criterion	5.462183	
Sum squared resid	574.8047	Schwarz criterion	5.720014	
Log likelihood	-140.4789	Hannan-Quinn criter.	5.561618	
F-statistic	4.963692	Durbin-Watson stat	2.005091	
Prob(F-statistic)	0.000523	Wald F-statistic	9.354323	
Prob(Wald F-statistic)	0.000001			

Figure: Regression of y_tourism

Variables expectations

Variables	expectation	reality	significant
number_children	-	+	yes (95%)
revenues=1	+	-	yes (95%)
sport_frequency=5	-	+	yes (95%)
health=4	$4 \leq 5$	$4 \leq 5$	yes (95%)
health=5	$4 \leq 5$	$4 \leq 5$	no
sex=1	+	+	no

Table: Predictions and reality for y_tourism

Variance Inflation Factors

Date: 04/29/21 Time: 22:04

Sample: 1 54

Included observations: 54

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
C	2.354393	16.00445	NA
NBR_OF_CHILDREN	0.285739	4.228086	2.556794
REVENUE=6	1.737684	1.634526	1.350867
SPORT_FREQUEN...	2.813039	1.270891	1.221751
HEALTH=5	2.105698	4.141761	2.597632
HEALTH=4	1.555065	3.846377	2.106262
SEX=1	1.059785	2.897149	1.631159

Figure: VIF of the coefficient in the regression of y_tourism

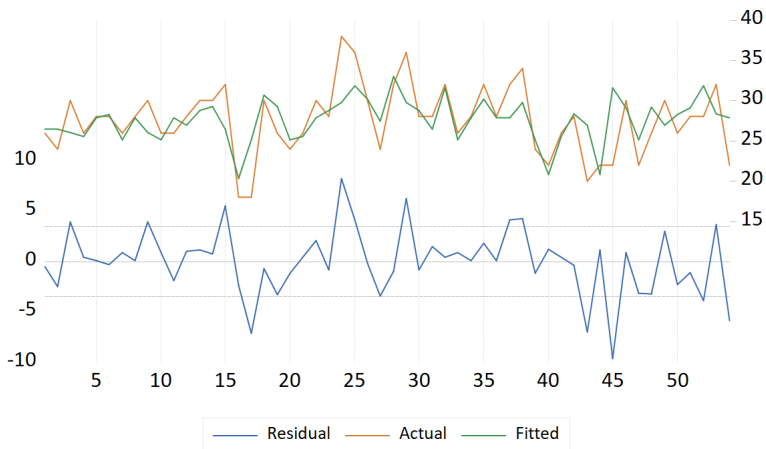


Figure: Residual of the regression of y_tourism

Fourth regression : y_responsibilities

C	4.305268	0.483832	8.898261	0.0000
PROFESSION=2	-0.805516	0.412733	-1.951665	0.0578
TAKING_RESPONSIBILITIES...	1.786746	0.410010	4.357815	0.0001
SEX=1	-0.562329	0.377991	-1.487678	0.1445
PROJECT=1	0.987162	0.389507	2.534387	0.0152
REVENUE=1	0.453804	0.662709	0.684772	0.4973
REVENUE=3	0.810826	0.539890	1.501836	0.1408
REVENUE=4	0.426374	0.495334	0.860781	0.3944
R-squared	0.479911	Mean dependent var	5.204082	
Adjusted R-squared	0.391116	S.D. dependent var	1.554290	
S.E. of regression	1.212828	Akaike info criterion	3.372070	
Sum squared resid	60.30905	Schwarz criterion	3.680938	
Log likelihood	-74.61570	Hannan-Quinn criter.	3.489254	
F-statistic	5.404674	Durbin-Watson stat	1.667601	
Prob(F-statistic)	0.000192			

Figure: Regression of y_responsibilities

Variables expectations

Variables	expectation	reality	significant
profession=2	+	-	yes (95%)
taking_responsibilities=1	+	+	yes (99%)
sex=1	+	-	yes (85%)
project=1	-	+	yes (99%)
revenue=1	$1 \leq 3 \leq 4$	$4 \leq 1 \leq 3$	no
revenue=3	$1 \leq 3 \leq 4$	$4 \leq 1 \leq 3$	yes (85%)
revenue=4	$1 \leq 3 \leq 4$	$4 \leq 1 \leq 3$	no

Table: Predictions and reality for y_responsibilities

Variance Inflation Factors

Date: 04/29/21 Time: 22:07

Sample: 1 54

Included observations: 49

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
C	0.234094	7.798077	NA
PROFESSION=2	0.170348	1.968739	1.285707
TAKING_RESPONSI...	0.168108	2.285701	1.352762
SEX=1	0.142877	2.816842	1.149732
PROJECT=1	0.151716	1.856543	1.174548
REVENUE=1	0.439183	2.089992	1.791422
REVENUE=3	0.291481	2.576053	1.892610
REVENUE=4	0.245356	2.668810	1.797362

Figure: VIF of the coefficient in the regression of y_responsibilities

Correlation between these variables

	Y_FINANCES	Y_RESPON...	Y_SPORT	Y_TOURISME
Y_FIN...	1.000000	0.186287	-0.088709	-0.069750
Y_RES...	0.186287	1.000000	-0.209470	0.165824
Y_SP...	-0.088709	-0.209470	1.000000	0.073786
Y_TO...	-0.069750	0.165824	0.073786	1.000000

Figure: Correlogram

- y_tourism is only correlated with y_responsibilities.

Drawbacks

- The size of our sample : 54 is too small !
- Working from our intuition and not with a general way.
- Some disturbing results prevent us from an efficient analysis.
- Lack of time to perform a temporal analysis.

At last but not least...

- Here, don't achieve to show a strong link between the different risk-taking.
- Increase the size of our study.