



The VSQ Belgian Standard Group «BE2013»

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What is a Standard Group?

A standard group is used as an indication of how a population will typically score on one of the scales of the VSQ. The indication is a range of typical scores. jobEQ uses this range on its feedback reports in order to give a relative indication of where a person scores in comparison to others. The standard group can be any group, such as a team of sales people, all employees of a certain organization, or the population of a country. In this case the standard group represents the working population of Belgium.

Once we know how a group typically scores, we can determine, in relative terms, whether a person's score is lower than, the same as, or higher than that of a particular population.

A VSQ standard group is calculated by taking the means of a sample of a group, adding one standard deviation to these means to find the upper limit of the standard group and subtracting one standard deviation from the mean to find the lower limit. If we presuppose that the population is approximately normally distributed, we know by definition that approximately two-thirds of the population will fall within the standard group range for the scale. In addition, we can assume that 1 out of 6 individuals will score higher than the standard group and 1 out of 6 will score lower.

Purpose of a Standard Group?

Standard groups are not intended to add statistical validity. Rather, standard groups help people understand the test results by showing how individuals compare to a given population or group. We use a standard group in VSQ reports to generate visual charts and/or textual explanations of a person's scores as those in the standard group would experience them.

Purpose of this paper

This paper will explain how the VSQ Standard Group 2013 of Belgium is constructed. First the used sample is documented with essential demographics like country, gender, age and occupation. Furthermore, the descriptive statistics of the value systems and social pattern variables and their difference with the previous standard group and the world standard group is explained.

About the population

Based on studies of the National Institute of Statistics, a department of Federal Government Service of Economics (www.statbel.fgov.be), one can conclude that Belgium has a working population of circa 4.5 million people containing 21.5% blue collar workers and 78.5% white collar workers. The latter is the population we want to map.

This white collar work force consists out of 53.6% male workers and 46.4% female employees. Three age categories are represented as following: 15 to 24 year olds 7.0%, 25 to 49 year olds 69.1% and 50 to 64 year olds 23.9%.

The government institute also provided a list of 372 occupation categories (272 white collar categories and 100 blue collar categories).

About the sample

The 2013 Standard Group is based on 308 persons working in Belgium, who completed the VSQ questionnaires between December 2001 and February 2013.

Filters

The following filters were used to construct the standard group:

- First a test criteria filter was used: people who left more than 7 items of 30 unchanged in the questionnaire were not used because of reliability reasons: the test administration of people who leave more 20% of the items unchanged is considered as not valid;
- Students were filtered out because they have almost no experience in a work environment;
- The following occupation categories were deleted as well cause of 'not representative for the Belgian working population': 'Homemaker', 'Retired' and 'Unemployed/between jobs';
- Also people from the occupation category 'Not specified' were deleted from the sample to match the sample with the population distribution of occupations.

Gender

Concerning gender, the sample represents closely the working population in Belgium. The sample has a 52/48 male-female ratio whereas the population has a 54/46 ratio. A chi-square test ($\chi^2(1) = 0.356, p = 0.55$) shows that the sample distribution is not significantly different to the population distribution.

Table 1: Comparison of VSQ Standard Group 2013 and working population

VSQ Standard Group 2013 Belgium	n	%	Working population	N	%
Male	160	51.9	Male	1.891.061	53.6
Female	148	48.1	Female	1.634.201	46.4
Total	308	100.0	Total	3.525.262	100.0

Age

The average age is 44.2 years old (SD=9.5). Table 2 shows the distribution in age categories. Approximately 4% of the respondents are Young Professionals, almost half of the standard group (49%) is in their Mid-Career while almost 40 percent (i.e. 39%) of the sample is in their Late Career. Seniors represent 7% of the norm group while a small fraction (1%) is has no age indication. Note that there are no respondents under 21 years old in this standard group.

Table 2: age categories

VSQ Standard Group 2013 Belgium	n	%
Young Professional 21-30 years	12	3.9
Mid-Career 31-44 years	151	49.0
Late Career 45-60 years	120	39.0
Senior > 60 years	22	7.14
Unknown	3	1.0
Total	308	100.0

If we compare age categories with de data obtained from the Belgian population (7% between 15-24 years old, 69% between 25-49 and 24% 50-64) we can conclude that the age categories 25-49 and 50-64 are well represented. Analogue to 7% of the young people (15-24) of the working population in Belgium, the sample has also a small portion of Young Professionals (4%).

Occupation

To compare the distribution of the occupation categories of the 2013 Standard Group with the information provided by the National Institute of Statistics, we were forced to combine some categories in order to represent the Belgian work culture. Furthermore the categories 'computer related (other)' and 'computer related 'internet' were combined in the VSQ Standard Group. The category 'Consulting' (7%) was a category which could not be found in the government's occupation list.

The representation of the categories (Table 3) is illustrated with a color code: dark green shows a margin within 1%, green within 3%, yellow within 5% and orange within 10%, red above 10%.

The occupations list of the standard group is quite heterogeneous: 16 categories are present. Compared with the Belgian working population, we find that 6 categories ('Accounting/finance', 'Customer Service/support', 'Education/training', 'Other', 'Professional' and 'Research and Development') are in the range of 3% or less. Six categories ('Computer related (other) / Computer related (internet)', 'Engineering', 'Executive/senior management', 'Government/military', 'Sales/marketing' and 'Self-employed/owner' are within a range of 5% and 2 ('General administrative/supervisory' and 'Manufacturing/production/operation') are within 10%. No category shows a red code implicating that the category is over- or represented showing a 10% gap or more. No 'trades or craftsman' are included in the standard group.

Table 3: Occupation categories

VSQ Standard Group 2013 Belgium	n	%	Working Population Belgium	N	%
Accounting/Finance	14	4.55	Accounting/Finance	119.447	3.39
Computer related (other + internet)	25	8.12	Computer related (other)	116.197	3.30
Consulting	22	7.14			
Customer service/support	4	1.30	Customer service/support	131.118	3.72
Education/training	18	5.84	Education/training	287.270	8.15
Engineering	23	7.47	Engineering	147.225	4.18
Executive/senior management	24	7.79	Executive/senior management	149.847	4.25
General administrative/supervisory	30	9.74	General administrative/supervisory	681.258	19.33
Government/military	20	6.49	Government/military	376.517	10.68
Manufacturing/production/operation	4	1.30	Manufacturing/production/operation	299.205	8.49
Other	50	16.23	Other	576.669	16.36
Professional (medical,legal, etc.)	10	3.25	Professional (medical,legal, etc.)	176.201	5.00
Research and development	10	3.25	Research and development	52.134	1.48
Sales/marketing/advertising	38	12.34	Sales/marketing/advertising	291.574	8.27
Self-employed/owner	16	5.19	Self-employed/owner	43.690	1.24
Tradesman/craftsman	-	-	Tradesman/craftsman	76.909	2.18
Total	308	100.00	Total	3.525.262	100.00

Value Systems and Social Pattern Variables

Table 4 represents the absolute averages, standard deviations and standard errors of each parameter. Also the absolute difference with the previous Belgian Standard Group (2005) and the World Standard Group (2013) is given. All parameters show a sufficient variation in scores (standard deviations ranging from 10% to 17%). The standard error of the parameters varies from 0.66% to 0.99% with an average 0.80%. When .95 confidence intervals (i.e. mean \pm 1.96 SEM) are constructed around the sample means, one can conclude that in 95% of the cases the mean will fall within a margin less than 1% implicating that the estimation of the population means for the 18 variables using the standard group (n=308) is quite accurate.

The differences in means with the previous standard group range from 0% up to 3%. In comparison to the previous standard group the value system Obedience makes a downwards shift resulting in an absolute difference of 3% (small effect size .30), also Right Brain shows a small shift downwards reflecting a 3% difference (small effect size .20). Another significant downward discrepancy is found in Efficiency (3%), Particularism shows an upwards difference of 3%. These 2 differences are significant but have no meaningful effect sizes (i.e. lower than .20).

If we compare the Belgian Standard Group to the World Standard Group, the following differences are found: the respondents of the Belgian sample show a higher average score for Specific Boundaries and Mismatch (9% and 8% absolute difference), resulting in medium effect sizes (both .52). This means that the differences between the averages of the two groups are substantial: both parameters reflect discrepancies in averages that have a size of more than a half standard deviation. In other words Belgians score on both parameters a half standard deviation higher than the averages of the world sample.

Furthermore 4 parameters show an absolute difference of at least 5%: Flexibility (6%), Efficiency (7%) and Universalism (6%) reflect lower scores for the Belgian respondents; the value system Functional and Systemic Thinking (5%) is higher in comparison to the world sample (respectively resulting in effect sizes of .41, .40, .36 and .41).

Table 4: descriptive statistics and differences with VSQ BE2005 and World2013

	Pattern	Average	SD	SEM	Difference with BE2005	Difference with World2013
G1	Survival	45.47%	13.48%	0.77%	0%	0%
G2	Safety	29.69%	11.81%	0.67%	+ 1%	- 1%
G3	Use of Power	24.42%	13.30%	0.76%	- 2%	- 1%
G4	Obedience	36.79%	11.63%	0.66%	- 3%	- 2%
G5	Success	58.20%	14.31%	0.82%	+ 1%	+ 1%
G6	Friends & Harmony	56.51%	12.20%	0.70%	- 2%	0%
G7	Functional & Systemic Thinking	67.61%	11.81%	0.67%	- 1%	+ 5%
G8	Global Village	72.94%	10.04%	0.57%	- 1%	- 3%
D1	Specific boundaries	65.46%	17.43%	0.99%	+ 2%	+ 9%
D2	Diffuse boundaries	50.61%	14.88%	0.85%	0%	+ 2%
LB	Left Brain	63.45%	15.48%	0.88%	0%	+ 1%
RB	Right Brain	55.66%	15.11%	0.86%	- 3%	- 4%
M1	Match	42.11%	15.48%	0.88%	+ 2%	+ 1%
M2	Mismatch	45.96%	15.18%	0.86%	- 1%	+ 8%
U1	Universalism	39.89%	16.88%	0.96%	+ 2%	- 6%
U2	Particularism	59.03%	14.68%	0.84%	+ 3%	+ 1%
NM	Efficiency	13.50%	14.71%	0.84%	- 3%	- 7%
FLEX	Flexibility	50.52%	15.56%	0.89%	- 2%	- 6%

Conclusion

A representative standard group for Belgium was created successfully, consisting out of 308 respondents. Socio-economic variables like gender, age and occupation were taken into account to stratify the sample in order to reflect the Belgian working population. This resulted in a well-balanced and heterogeneous standard group for the Belgian workforce.

Looking at the descriptive statistics of the VSQ, we can report two important conclusions. First, we can state that the VSQ scales can measure quite accurately: all standard error measures are below 1%. Second, the scales show enough variation in scores (standard deviations up to 17%) to apprehend the heterogeneity of the standard group.

A comparison to the previous standard group of 2005, shows a downward trend of the blue value system Obedience, indicating that the Belgian people nowadays find order and discipline less important than they did a small decade ago.

In comparison with the World Standard Group 2013, substantial differences are found. The results on Specific Boundaries indicate that Belgian people set clear objective boundaries between work and private life, implicating that on average they tend to differentiate more from context to context. Another major finding is the higher average score on Mismatch showing that Belgian people will focus more on exceptions and counterexamples instead of patterns, correlation, similarities,.. indicating that they are more at ease during conflict situations than average in comparison to the world sample.

Furthermore Belgian respondents –on average- tend to score lower on Flexibility, Efficiency and Universalism than the entire world sample. These findings suggest that Belgian people tend to look less for multiple answers or solutions, don't bother to have longer meetings and discussions at work in comparison to the average of the world group. Belgians seem to act in a less formal way and don't find it important to always conform to proper rules.

In comparison to the world sample, the average score on the yellow value system Functional and Systemic Thinking is higher for the Belgian sample implicating that Belgians find individual competence and the flexibility to adapt to circumstances more important to determine the quality of their lives. Autonomy and freedom are key factors instead of rules and structure.