

TECHNICAL REPORT

The Development of the Global Hogan Personality Inventory (HPI), Hogan Development Survey (HDS), and Motives, Values, Preferences Inventory (MVPI) Norms

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EXECUTIVE SUMMARY

This report outlines the development and appropriate use of Hogan's Global Norm. The Global Norm contains data from 46 translations and adaptations of the Hogan Personality Inventory (HPI), Hogan Development Survey (HDS), and Motives, Values, Preferences Inventory (MVPI).

This document contains three main sections and an appendix. The first section describes Hogan's approach to norm creation. The Global Norm is a multi-language norm comprised of data from every available translation for all three assessments. Next, we outline the development of the Global Norm. This section contains information describing the initial sample, the process we used to create the final normative dataset, and the composition of the dataset. Then, we present normative tables based on HPI, HDS, and MVPI data in the Global Normative Dataset and provide demographic information according to gender, age, job category, and assessment purpose. Finally, we present between-scale correlations for the HPI, HDS, and MVPI in the appendix.

1 – HOGAN’S APPROACH TO NORMS

1.1 Overview. If a person received a raw score of 23 on a personality scale measuring Ambition, what would this score mean? Without a basis for comparison, the score means little. Norms provide a context for interpreting scores because they allow us to compare an individual’s scores with those of a relevant group (Nunnally & Bernstein, 1994).

1.2 Types of Norms. Hogan publishes two types of norms: single- and multi-language. Single-language norms represent a cross-section of a specific relevant workforce. Multi-language norms represent data combined from multiple languages and geographic areas.

Single-Language Norms

When Hogan first creates a new translation, we often lack sufficient data to calculate norms that accurately represent a region’s workforce. Consequently, we rely on data from convenience samples and developmental projects to create itinerant norms. We require at least 500 cases to calculate itinerant norms. In keeping with the recommendations outlined by the *Standards for Educational and Psychological Testing* (American Educational Research Association, 2014), we report all available demographic information, including age, gender, job category, and assessment purpose. Although itinerant norms are not as representative as stratified norms, they are useful until we have sufficient data to calculate a single-language stratified norm.

Hogan creates stratified single-language norms when data are available from at least 2,000 cases. This larger dataset is essential because we must select specific cases to represent the labor force as closely as possible. When creating stratified norms, we may lack data for certain industries despite their prevalence in the workforce (e.g., agricultural workers). Therefore, our stratified single-language norms do not always include all segments of the working population, but do include those in which the assessment and norms are most likely to be used.

When developing stratified single-language norms, Hogan uses multiple stratification variables, or characteristics, to organize the data. We create norms that match the target population on each stratification variable as closely as possible. Although stratification variables may vary, job categories are usually the first level of classification. For example, if the Brazilian workforce contains 20% managers, we would create a Brazilian normative sample that also contains 20% managers. Ethnicity commonly forms the second stratum. Some countries have less workforce diversity, fewer concerns over subgroup differences, or legislation with fewer requirements than those in the U.S. Civil Rights Act of 1964 (see Myers et al., 2008, for review). In such cases, stratification by ethnicity may be unnecessary. Finally, we stratify by gender and by assessment purpose (e.g., selection, development).

Multi-Language Norms

Hogan creates multi-language norms by combining data from multiple countries and languages into a single dataset. This appeals to multinational companies that are attracted by the simplicity of using one norm for all applications or need to compare groups of applicants who assess in multiple languages. Our most commonly used multi-language norm is our Global Norm.

The development process for multi-language norms is similar to the process we use for single-language norms but primarily relies on only one stratification variable: assessment language. First, we identify relevant languages. Next, we cap the maximum number of cases for each language. When the number of cases exceeds the cap for a given language, we select cases using job category, gender, and assessment purpose. When a smaller number of cases than the maximum number is available, we include all cases to expand representation for that language.

2 – DEVELOPMENT OF THE GLOBAL NORMATIVE DATASET

The development of the Global Norm began with a sample of over 1.1 million cases of HPI data ($N = 1,164,954$), Hogan’s flagship assessment. These data included representation from 46 different translations and adaptations of the HPI and from 179 countries or territories. We collected these data between January 2013 and August 2017.

We eliminated cases based on three criteria. First, we removed cases missing responses to more than 33% of HPI assessment items. Next, we eliminated cases for which we could not identify the assessment language. Finally, we eliminated all test cases, such as those used for quality assurance or demonstration purposes. The resulting sample contained 1,161,974 cases of data.

We then examined representation across languages. Some languages and well-established translations were overrepresented (e.g., U.S. English, Latin American Spanish). Other newer and less frequently used translations were underrepresented. To ensure that the normative dataset did not overly represent cases from any one language, we set a maximum threshold of 5,000 cases per language. We included all cases for languages with fewer than 5,000 cases. When more than 5,000 cases of data were available, we used three stratification variables to attempt to create a representative labor force sample for that language area: job category, assessment reason, and gender. For job category, we relied on the Hogan job family classification system, which divides the labor force into seven major categories: (a) Managers and Executives, (b) Professionals, (c) Technicians and Specialists, (d) Operations and Trades, (e) Sales and Customer Support, (f) Service and Support, and (g) Administrative and Clerical. We relied primarily on national labor statistics from the International Labour Organization (ILO, 2018) to determine the appropriate proportions of individuals to include for each job category and gender. We supplemented any missing information using labor statistics from national statistical organizations, including the Australian Bureau of Statistics (2017), the Japanese Statistics Bureau (2017), and the U.S. Bureau of Labor Statistics (2017). The resulting dataset included 171,132 cases. We present language and country-of-origin data in Tables 1 and 2, respectively.

Table 1. Global Norm Sample Distribution by Assessment Language

Language	Sample N	Sample Percentage
Arabic	2,318	1.35
Bulgarian	565	0.33
Chinese (Simplified)	5,000	2.92
Chinese (Traditional)	5,000	2.92
Croatian	1,353	0.79
Czech	5,000	2.92
Danish	5,000	2.92
Dutch	4,538	2.65
English (Australian/New Zealand)	5,000	2.92
English (Indian)	5,000	2.92
English (Kenyan)	4,501	2.63

Note. Sample N – Number of cases in the Global Normative Dataset; Sample Percentage – Percentage of cases in the Global Normative Dataset. Sample percentages may not sum to 100 due to rounding. “Other” includes Albanian, Bosnian, English (Greek), Macedonian, and Portuguese (European) languages.

Table 1. Global Norm Sample Distribution by Assessment Language

Language	Sample N	Sample Percentage
English (Middle Eastern)	5,000	2.92
English (South African)	5,000	2.92
English (U.K.)	5,000	2.92
English (U.S.)	5,000	2.92
Estonian	278	0.16
Finnish	3,382	1.98
French (Canadian)	5,000	2.92
French (Parisian)	5,000	2.92
German	5,000	2.92
Greek	3,815	2.23
Hungarian	5,000	2.92
Icelandic	2,068	1.21
Indonesian	5,000	2.92
Italian	5,000	2.92
Japanese	5,000	2.92
Korean	5,000	2.92
Malay	102	0.06
Norwegian	5,000	2.92
Polish	5,000	2.92
Portuguese (Brazilian)	5,000	2.92
Romanian	5,000	2.92
Russian	5,000	2.92
Serbian	4,101	2.40
Slovak	3,988	2.33
Spanish (Castilian)	5,000	2.92
Spanish (Latin American)	5,000	2.92
Swedish	5,000	2.92
Thai	4,380	2.56
Turkish	5,000	2.92
Vietnamese	325	0.19
Other	418	0.24
TOTAL	171,132	100.00

Note. Sample N – Number of cases in the Global Normative Dataset; Sample Percentage – Percentage of cases in the Global Normative Dataset. Sample percentages may not sum to 100 due to rounding. “Other” includes Albanian, Bosnian, English (Greek), Macedonian, and Portuguese (European) languages.

Table 2. Global Norm Sample Distribution by Country or Territory of Origin

Country of Origin	Sample N	Sample Percentage
Afghanistan	9	0.01
Albania	22	0.01
Algeria	36	0.02
Andorra	2	0.00
Angola	6	0.00
Antigua and Barbuda	4	0.00
Argentina	449	0.26
Armenia	6	0.00
Australia	2,210	1.29
Austria	198	0.12
Azerbaijan	14	0.01
Bahamas	2	0.00
Bahrain	25	0.01
Bangladesh	16	0.01
Barbados	4	0.00
Belarus	45	0.03
Belgium	568	0.33
Benin	9	0.01
Bolivia	10	0.01
Bosnia and Herzegovina	143	0.08
Botswana	13	0.01
Brazil	2,110	1.23
Brunei	1	0.00
Bulgaria	236	0.14
Burkina Faso	11	0.01
Burma	11	0.01
Burundi	7	0.00
Cambodia	12	0.01
Cameroon	27	0.02
Canada	2,531	1.48
Central African Republic	5	0.00
Chad	8	0.00
Chile	678	0.40
China	2,446	1.43
Colombia	180	0.11
Costa Rica	12	0.01
Croatia	703	0.41
Cuba	1	0.00
Cyprus	17	0.01
Czech Republic	1,543	0.90
Democratic Republic of the Congo	16	0.01

Note. Sample N – Number of cases in the Global Normative Dataset; Sample Percentage – Percentage of cases in the Global Normative Dataset. Percentages may not sum to 100 due to rounding.

Table 2. Global Norm Sample Distribution by Country or Territory of Origin

Country of Origin	Sample N	Sample Percentage
Denmark	2,658	1.55
Dominica	1	0.00
Dominican Republic	9	0.01
East Timor	1	0.00
Ecuador	107	0.06
Egypt	143	0.08
El Salvador	17	0.01
Eritrea	2	0.00
Estonia	108	0.06
Ethiopia	4	0.00
Fiji	14	0.01
Finland	722	0.42
France	1,481	0.87
Gabon	2	0.00
Gambia	1	0.00
Georgia	8	0.00
Germany	1,937	1.13
Ghana	22	0.01
Greece	944	0.55
Grenada	2	0.00
Guatemala	21	0.01
Guinea	3	0.00
Guinea-Bissau	1	0.00
Guyana	3	0.00
Haiti	18	0.01
Honduras	3	0.00
Hong Kong	258	0.15
Hungary	1,287	0.75
Iceland	651	0.38
India	2,499	1.46
Indonesia	1,791	1.05
Iran	48	0.03
Iraq	16	0.01
Ireland	276	0.16
Israel	21	0.01
Italy	2,501	1.46
Ivory Coast	112	0.07
Jamaica	12	0.01
Japan	2,598	1.52
Jordan	61	0.04
Kazakhstan	78	0.05

Note. Sample N – Number of cases in the Global Normative Dataset; Sample Percentage – Percentage of cases in the Global Normative Dataset. Percentages may not sum to 100 due to rounding.

Table 2. Global Norm Sample Distribution by Country or Territory of Origin

Country of Origin	Sample N	Sample Percentage
Kenya	1,350	0.79
Kosovo	1	0.00
Kuwait	12	0.01
Kyrgyzstan	19	0.01
Laos	9	0.01
Latvia	26	0.02
Lebanon	62	0.04
Lesotho	3	0.00
Liberia	4	0.00
Liechtenstein	2	0.00
Lithuania	24	0.01
Luxembourg	9	0.01
Macedonia	32	0.02
Madagascar	6	0.00
Malawi	6	0.00
Malaysia	193	0.11
Maldives	19	0.01
Mali	5	0.00
Malta	3	0.00
Mauritania	1	0.00
Mauritius	6	0.00
Mexico	923	0.54
Moldova	16	0.01
Monaco	1	0.00
Mongolia	2	0.00
Montenegro	505	0.30
Morocco	36	0.02
Mozambique	10	0.01
Namibia	22	0.01
Nepal	13	0.01
Netherlands	1,418	0.83
New Zealand	1,501	0.88
Nicaragua	21	0.01
Niger	1	0.00
Nigeria	101	0.06
North Korea	1	0.00
Norway	1,492	0.87
Oman	152	0.09
Pakistan	103	0.06
Palestine	40	0.02
Panama	7	0.00

Note. Sample N – Number of cases in the Global Normative Dataset; Sample Percentage – Percentage of cases in the Global Normative Dataset. Percentages may not sum to 100 due to rounding.

Table 2. Global Norm Sample Distribution by Country or Territory of Origin

Country of Origin	Sample N	Sample Percentage
Portugal	126	0.07
Papua New Guinea	8	0.00
Paraguay	34	0.02
Peru	176	0.10
Philippines	129	0.08
Poland	2,370	1.38
Qatar	31	0.02
Republic of the Congo	4	0.00
Romania	1,956	1.14
Russia	2,422	1.42
Rwanda	11	0.01
Saint Kitts and Nevis	2	0.00
Samoa	2	0.00
Saudi Arabia	323	0.19
Senegal	12	0.01
Serbia	1,127	0.66
Seychelles	6	0.00
Sierra Leone	1	0.00
Singapore	201	0.12
Slovakia	1,165	0.68
Slovenia	59	0.03
Somalia	3	0.00
South Africa	3,048	1.78
South Korea	2,081	1.22
South Sudan	2	0.00
Spain	848	0.50
Sri Lanka	39	0.02
Sudan	11	0.01
Suriname	3	0.00
Swaziland	4	0.00
Sweden	2,991	1.75
Switzerland	424	0.25
Syria	30	0.02
Taiwan	739	0.43
Tajikistan	2	0.00
Tanzania	28	0.02
Thailand	1,867	1.09
Togo	3	0.00
Tonga	1	0.00
Trinidad and Tobago	10	0.01
Tunisia	38	0.02

Note. Sample N – Number of cases in the Global Normative Dataset; Sample Percentage – Percentage of cases in the Global Normative Dataset. Percentages may not sum to 100 due to rounding.

Table 2. Global Norm Sample Distribution by Country or Territory of Origin

Country of Origin	Sample N	Sample Percentage
Turkey	3,917	2.29
Turkmenistan	3	0.00
Uganda	85	0.05
Ukraine	260	0.15
United Arab Emirates	371	0.22
United Kingdom	2,463	1.44
United States	3,687	2.15
Uruguay	15	0.01
Uzbekistan	12	0.01
Vanuatu	2	0.00
Venezuela	44	0.03
Vietnam	155	0.09
Yemen	2	0.00
Zambia	54	0.03
Zimbabwe	41	0.02
Not Reported	94,740	55.36
TOTAL	171,132	100.00

Note. Sample N – Number of cases in the Global Normative Dataset; Sample Percentage – Percentage of cases in the Global Normative Dataset. Percentages may not sum to 100 due to rounding.

3 – THE HOGAN GLOBAL NORM

3.1 HPI Norms. Table 3 displays the characteristics of the cases in the Global Normative Dataset with available and complete HPI Form 1 or Form 3 data. Tables 4 and 5 present normative results for primary and occupational scales, respectively, for HPI Forms 1 and 3.

Table 3. Global HPI Normative Sample – Forms 1 and 3 (N = 171,071)

Variable	Sample N	Sample Percentage
Job Category		
Managers and Executives	37,066	21.67
Professionals	28,178	16.47
Technicians and Specialists	21,539	12.59
Operations and Trades	12,229	7.15
Sales and Customer Support	28,632	16.74
Service and Support	10,292	6.02
Administrative and Clerical	14,515	8.48
Other	165	0.10
Not Reported	18,455	10.79
Gender		
Male	81,120	47.42
Female	63,355	37.03
Not Reported	26,596	15.55
Age		
Under 30	33,748	19.73
30 to 39	52,906	30.93
40 to 49	34,299	20.05
50 and Older	13,149	7.69
Not Reported	36,969	21.61
Assessment Reason		
Selection	81,048	47.38
Development	69,674	40.73
Other	11,942	6.98
Not Reported	8,407	4.91

Note. Sample N – Number of HPI cases in the Global Normative Dataset; Sample Percentage – Percentage of cases in the Global Normative Dataset. Percentages may not sum to 100 due to rounding.

Table 4. Global HPI Forms 1 and 3 Norms (N = 171,071) – Primary Scales

Raw Score	ADJ Norm	AMB Norm	SOC Norm	INP Norm	PRU Norm	INQ Norm	LRN Norm
0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	1
2	0	0	1	0	0	0	2
3	0	0	1	0	0	0	4
4	0	0	2	0	0	1	7
5	0	0	4	0	0	1	12
6	0	0	6	0	0	3	18
7	0	0	10	0	0	4	26
8	0	1	14	0	0	7	36
9	1	1	18	1	0	10	48
10	1	2	24	1	0	14	61
11	1	2	31	2	1	19	74
12	2	3	38	2	2	25	85
13	2	4	46	4	3	32	94
14	3	5	54	6	5	40	100
15	4	7	62	9	7	48	
16	6	9	70	14	11	56	
17	7	11	77	22	16	64	
18	9	14	84	34	22	72	
19	11	18	89	52	30	80	
20	14	22	94	73	38	86	
21	17	28	97	92	48	91	
22	20	34	99	100	58	95	
23	24	42	100		68	97	
24	29	51	100		77	99	
25	34	61			85	100	
26	40	73			91		
27	46	85			95		
28	53	95			98		
29	60	100			99		
30	67				100		
31	74				100		
32	81						
33	87						
34	93						
35	97						
36	99						
37	100						

Note. ADJ – Adjustment; AMB – Ambition; SOC – Sociability; INP – Interpersonal Sensitivity; PRU – Prudence; INQ – Inquisitive; LRN – Learning Approach.

Table 5. Global HPI Forms 1 and 3 Norms (N = 171,071) – Occupation Scales

Raw Score	VAL Norm	SERV Norm	ST Norm	REL Norm	CLR Norm	SALE Norm	MNGR Norm
0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0
4	0	1	0	1	0	0	0
5	0	1	0	2	0	0	0
6	0	3	0	4	0	0	0
7	0	7	1	7	0	0	0
8	0	13	1	12	0	0	0
9	1	23	2	18	0	0	0
10	2	36	4	26	1	0	0
11	5	53	5	37	2	0	0
12	16	73	7	49	4	0	0
13	44	90	10	62	6	0	0
14	100	100	14	75	11	0	0
15			18	86	17	0	1
16			24	94	25	0	1
17			31	99	35	0	1
18			39	100	47	0	2
19			48		61	1	3
20			59		74	1	4
21			70		86	1	5
22			81		94	1	7
23			90		99	2	10
24			97		100	2	13
25			100			3	17
26						3	22
27						4	28
28						5	36
29						6	45
30						7	54
31						9	65
32						10	75
33						12	85
34						14	92
35						17	97
36						19	99
37						22	100
38						25	
39						29	
40						33	
41						37	
42						41	
43						46	
44						50	
45						55	
46						60	
47						65	
48						70	

Note. VAL – Validity; SERV – Service Orientation; ST – Stress Tolerance; REL – Reliability; CLR – Clerical, SALE – Sales; MNGR – Manager. The Validity norms were calculated on the sample of all 1,161,974 available individuals.

Table 5. Global HPI Forms 1 and 3 Norms (N = 171,071) – Occupation Scales

Raw Score	VAL Norm	SERV Norm	ST Norm	REL Norm	CLR Norm	SALE Norm	MNGR Norm
49						74	
50						78	
51						82	
52						86	
53						89	
54						92	
55						94	
56						96	
57						97	
58						98	
59						99	
60						100	
61						100	
62						100	
63						100	
64						100	
65						100	
66						100	
67						100	

Note. VAL – Validity; SERV – Service Orientation; ST – Stress Tolerance; REL – Reliability; CLR – Clerical, SALE – Sales; MNGR – Manager. The Validity norms were calculated on the sample of all 1,161,974 available individuals.

3.2 HDS Norms. Table 6 displays the characteristics of the HDS cases in the Global Normative Dataset. Table 7 presents normative results for the HDS Form 5 scales.

Table 6. Global HDS Normative Sample (N = 83,580)

Variable	Sample N	Sample Percentage
Job Category		
Managers and Executives	24,727	29.58
Professionals	15,956	19.09
Technicians and Specialists	8,933	10.69
Operations and Trades	3,380	4.04
Sales and Customer Support	11,227	13.43
Service and Support	3,548	4.25
Administrative and Clerical	6,969	8.34
Other	63	0.08
Not Reported	8,777	10.50
Gender		
Male	38,860	46.49
Female	31,832	38.09
Not Reported	12,888	15.42

Note. Sample N – Number of HDS Form 5 cases in the Global Normative Dataset; Sample Percentage - Percentage of cases in the Global Normative Dataset. Percentages may not sum to 100 due to rounding.

Table 6. Global HDS Normative Sample (N = 83,580)

Variable	Sample N	Sample Percentage
Age		
Under 30	10,854	12.99
30 to 39	25,972	31.07
40 to 49	19,588	23.44
50 and Older	7,505	8.98
Not Reported	19,661	23.52
Assessment Reason		
Selection	31,339	37.50
Development	41,335	49.46
Other	6,776	8.11
Not Reported	4,130	4.94

Note. Sample N – Number of HDS Form 5 cases in the Global Normative Dataset; Sample Percentage - Percentage of cases in the Global Normative Dataset. Percentages may not sum to 100 due to rounding.

Table 7. Global HDS Norms (N = 83,580)

Raw Score	EXC Norm	SKE Norm	CAU Norm	RES Norm	LEI Norm	BOL Norm	MIS Norm	COL Norm	IMA Norm	DIL Norm	DUT Norm
0	6	4	2	3	4	0	1	1	1	0	0
1	21	14	13	11	13	2	3	3	2	0	1
2	39	29	28	23	26	4	7	8	6	1	2
3	55	45	44	38	43	8	14	15	11	2	5
4	69	59	58	53	59	14	23	25	18	4	10
5	79	71	69	65	73	21	35	36	28	8	17
6	86	80	78	76	83	30	47	48	38	12	27
7	92	87	85	84	91	40	60	60	50	19	39
8	95	92	90	90	95	51	72	72	62	27	53
9	97	95	94	94	98	63	82	82	73	38	68
10	98	97	97	97	99	74	90	89	83	52	81
11	99	99	98	98	100	84	95	95	91	68	91
12	100	99	99	99	100	92	98	99	96	84	97
13	100	100	100	100	100	98	100	100	99	96	99
14	100	100	100	100	100	100	100	100	100	100	100

Note. EXC – Excitable; SKE – Skeptical; CAU – Cautious; RES – Reserved; LEI – Leisurely; BOL – Bold; MIS – Mischievous; COL – Colorful; IMA – Imaginative; DIL – Diligent; DUT – Dutiful.

3.3 MVPI Norms. Table 8 displays the characteristics of the MVPI cases in the Global Normative Dataset. Table 9 presents normative results for the MVPI Form 1 scales.

Table 8. Global MVPI Normative Sample (N = 81,376)

Variable	Sample N	Sample Percentage
Job Category		
Managers and Executives	21,426	26.33
Professionals	15,859	19.49
Technicians and Specialists	8,835	10.86
Operations and Trades	3,694	4.54
Sales and Customer Support	13,413	16.48
Service and Support	3,428	4.21
Administrative and Clerical	6,992	8.59
Other	59	0.07
Not Reported	7,670	9.43
Gender		
Male	36,266	44.57
Female	32,712	40.20
Not Reported	12,398	15.24
Age		
Under 30	11,187	13.75
30 to 39	25,623	31.49
40 to 49	19,050	23.41
50 and Older	7,204	8.85
Not Reported	18,312	22.50
Assessment Reason		
Selection	31,246	38.40
Development	38,627	47.47
Other	7,602	9.34
Not Reported	3,901	4.79

Note. Sample N – Number of MVPI cases in the Global Normative Dataset; Sample Percentage – Percentage of cases in the Global Normative Dataset. Percentages may not sum to 100 due to rounding.

Table 9. Global MVPI Norms (N = 81,376)

Raw Score	AES Norm	AFF Norm	ALT Norm	COM Norm	HED Norm	POW Norm	REC Norm	SCI Norm	SEC Norm	TRA Norm
20	0	0	0	0	0	0	0	0	0	0
21	1	0	0	0	0	0	0	0	0	0
22	2	0	0	0	0	0	0	0	0	0
23	3	0	0	0	0	0	1	0	0	0
24	7	0	0	0	1	0	2	1	1	0
25	9	0	0	1	1	0	2	1	1	0
26	14	0	0	1	2	0	4	2	2	0
27	18	0	0	1	2	1	5	3	3	0
28	24	0	1	2	4	1	7	4	4	0
29	29	0	1	3	5	1	8	5	6	1
30	35	0	1	4	8	2	11	7	8	1
31	39	0	2	5	10	3	13	9	10	2
32	45	1	2	6	13	4	17	11	13	3
33	49	1	3	8	16	4	20	13	15	4
34	54	1	4	10	21	6	25	16	19	5
35	58	2	5	13	24	7	28	19	22	7
36	62	2	6	16	30	9	33	23	26	10
37	66	3	8	19	34	11	37	26	30	12
38	70	4	10	23	41	14	42	30	35	16
39	73	4	11	27	46	16	46	33	39	19
40	76	6	14	32	53	20	52	38	45	25
41	79	7	16	36	57	23	56	41	48	29
42	82	9	20	42	64	27	61	46	55	36
43	84	11	23	46	68	30	65	50	59	41
44	86	14	27	53	75	36	70	55	65	49
45	88	17	31	57	78	39	73	58	69	54
46	90	22	35	64	83	45	78	63	74	62
47	92	26	40	68	86	49	80	67	78	67
48	93	34	45	75	90	56	84	72	83	74
49	94	39	50	79	92	60	86	76	86	78
50	96	48	56	84	95	66	89	80	90	84
51	97	54	61	87	96	71	91	83	92	87
52	97	65	67	91	98	77	93	87	95	91
53	98	70	71	93	98	81	94	90	96	93
54	99	80	78	96	99	86	96	93	98	96
55	99	84	82	97	99	89	97	95	99	97
56	100	92	87	99	100	94	98	97	99	99
57	100	94	90	99	100	95	99	98	100	99
58	100	98	95	100	100	98	100	99	100	100
59	100	99	97	100	100	99	100	100	100	100
60	100	100	100	100	100	100	100	100	100	100

Note. AES - Aesthetic; AFF - Affiliation; ALT - Altruism; COM - Commerce; HED - Hedonism; POW - Power; REC - Recognition; SCI - Science; SEC - Security; TRA - Tradition.

4 – ADDITIONAL RESOURCES

This document outlines the key considerations associated with the Hogan Global Norm. We have outlined Hogan’s approach to norms, the development and composition of the Global Norm, and presented the associated normative tables.

For additional information about the assessments discussed in this document, please refer to technical manuals for the HPI, HDS, and MVPI.

For additional information regarding Hogan’s translation, equivalence, and norm development processes, please refer to *The Development and Technical Review of Translations for the HPI, HDS, and MVPI* (Hogan Assessment Systems, 2008).

For specific information concerning the Hogan Global Norm, please contact your Hogan representative.

5 – REFERENCES

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APPENDIX: CORRELATION TABLES

The following section presents correlations between the HPI, HDS, and MVPI scales.

Table A1. Correlations between the HPI Scales

	ADJ	AMB	SOC	INP	PRU	INQ	LRN
ADJ	–						
AMB	.43**	–					
SOC	.05**	.42**	–				
INP	.42**	.32**	.31**	–			
PRU	.46**	.11**	-.15**	.29**	–		
INQ	.13**	.30**	.40**	.18**	.04**	–	
LRN	.24**	.35**	.19**	.18**	.18**	.38**	–

Note. $N = 171,097$. ADJ – Adjustment; AMB – Ambition; SOC – Sociability; INP – Interpersonal Sensitivity; PRU – Prudence; INQ – Inquisitive; LRN – Learning Approach. ** Statistically significant at the .01 level.

Table A2. Correlations between the HPI and HDS Scales

	EXC	SKE	CAU	RES	LEI	BOL	MIS	COL	IMA	DIL	DUT
ADJ	-.70**	-.54**	-.45**	-.32**	-.38**	-.02**	-.21**	-.02**	-.07**	-.01*	-.05**
AMB	-.41**	-.26**	-.70**	-.36**	-.29**	.31**	.20**	.44**	.28**	.10**	-.19**
SOC	-.13**	-.05**	-.36**	-.36**	-.04**	.32**	.44**	.63**	.39**	.01**	.02**
INP	-.43**	-.33**	-.34**	-.51**	-.19**	.12**	.06**	.24**	.11**	.08**	.12**
PRU	-.36**	-.30**	-.10**	-.24**	-.16**	.05**	-.43**	-.19**	-.21**	.31**	.19**
INQ	-.12**	-.03**	-.24**	-.13**	.01**	.30**	.29**	.28**	.44**	.17**	-.03**
LRN	-.21**	-.12**	-.28**	-.13**	-.07**	.28**	.08**	.20**	.23**	.18**	-.07**

Note. $N = 83,572$. ADJ – Adjustment; AMB – Ambition; SOC – Sociability; INP – Interpersonal Sensitivity; PRU – Prudence; INQ – Inquisitive; LRN – Learning Approach; EXC – Excitable; SKE – Skeptical; CAU – Cautious; RES – Reserved; LEI – Leisurely; BOL – Bold; MIS – Mischievous; COL – Colorful; IMA – Imaginative; DIL – Diligent; DUT – Dutiful. ** Statistically significant at the .01 level.

Table A3. Correlations between the HPI and MVPI Scales

	AES	AFF	ALT	COM	HED	POW	REC	SCI	SEC	TRA
ADJ	-.10**	.22**	.06**	-.04**	-.22**	-.05**	-.25**	.03**	-.11**	-.03**
AMB	-.03**	.38**	.06**	.18**	-.12**	.37**	.16**	.12**	-.19**	.01**
SOC	.16**	.51**	.14**	.21**	.26**	.32**	.45**	.14**	-.24**	-.06**
INP	.06**	.49**	.31**	.03**	.00	.08**	.02**	.01*	-.04**	.08**
PRU	-.09**	.08**	.18**	.06**	-.22**	-.02**	-.16**	.07**	.35**	.23**
INQ	.34**	.19**	.25**	.28**	.03**	.29**	.20**	.57**	-.08**	.07**
LRN	.17**	.17**	.14**	.17**	-.09**	.23**	.07**	.32**	-.02**	.10**

Note. $N = 81,376$. ADJ – Adjustment; AMB – Ambition; SOC – Sociability; INP – Interpersonal Sensitivity; PRU – Prudence; INQ – Inquisitive; LRN – Learning Approach; AES – Aesthetic; AFF – Affiliation; ALT – Altruism; COM – Commerce; HED – Hedonism; POW – Power; REC – Recognition; SCI – Science; SEC – Security; TRA – Tradition. * Statistically significant at the .05 level. ** Statistically significant at the .01 level.

Table A4. Correlations between the HDS Scales

	EXC	SKE	CAU	RES	LEI	BOL	MIS	COL	IMA	DIL	DUT
EXC	–										
SKE	.60**	–									
CAU	.41**	.30**	–								
RES	.40**	.38**	.37**	–							
LEI	.39**	.46**	.35**	.30**	–						
BOL	.05**	.22**	-.24**	-.04**	.22**	–					
MIS	.18**	.27**	-.18**	.01	.19**	.39**	–				
COL	-.04**	.02**	-.37**	-.23**	.01*	.41**	.53**	–			
IMA	.05**	.14**	-.24**	-.03**	.14**	.51**	.53**	.50**	–		
DIL	.07**	.17**	-.03**	.03**	.16**	.33**	.00	-.02**	.13**	–	
DUT	.04**	.10**	.19**	-.01**	.13**	.07**	-.07**	-.05**	-.08**	.21**	–

Note. *N* = 83,580. EXC – Excitable; SKE – Skeptical; CAU – Cautious; RES – Reserved; LEI – Leisurely; BOL – Bold; MIS – Mischievous; COL – Colorful; IMA – Imaginative; DIL – Diligent; DUT – Dutiful. * Statistically significant at the .05 level. ** Statistically significant at the .01 level.

Table A5. Correlations between the HDS and MVPI Scales

	AES	AFF	ALT	COM	HED	POW	REC	SCI	SEC	TRA
EXC	.09**	-.26**	-.06**	.07**	.22**	.07**	.21**	-.02**	.17**	.05**
SKE	.09**	-.14**	-.04**	.22**	.28**	.22**	.31**	.07**	.25**	.09**
CAU	.03**	-.36**	-.06**	-.13**	.08**	-.25**	-.06**	-.08**	.20**	.02**
RES	.02**	-.57**	-.22**	.02**	.07**	-.02**	-.04**	.03**	.15**	-.02**
LEI	.12**	-.13**	.05**	.14**	.24**	.15**	.23**	.09**	.23**	.10**
BOL	.20**	.25**	.23**	.42**	.25**	.59**	.53**	.28**	.17**	.22**
MIS	.22**	.24**	.10**	.24**	.33**	.41**	.42**	.12**	-.24**	-.07**
COL	.19**	.36**	.12**	.21**	.18**	.39**	.48**	.09**	-.22**	-.03**
IMA	.31**	.18**	.19**	.26**	.17**	.40**	.36**	.27**	-.14**	.03**
DIL	.06**	.05**	.24**	.30**	.03**	.29**	.14**	.23**	.42**	.30**
DUT	.01**	.02**	.15**	.10**	.12**	-.04**	.09**	.01**	.35**	.14**

Note. *N* = 60,158. EXC – Excitable; SKE – Skeptical; CAU – Cautious; RES – Reserved; LEI – Leisurely; BOL – Bold; MIS – Mischievous; COL – Colorful; IMA – Imaginative; DIL – Diligent; DUT – Dutiful; AES – Aesthetic; AFF – Affiliation; ALT – Altruism; COM – Commerce; HED – Hedonism; POW – Power; REC – Recognition; SCI – Science; SEC – Security; TRA – Tradition. ** Statistically significant at the .01 level.

Table A6. Correlations between the MVPI Scales

	AES	AFF	ALT	COM	HED	POW	REC	SCI	SEC	TRA
AES	–									
AFF	.12**	–								
ALT	.35**	.26**	–							
COM	.11**	.18**	.18**	–						
HED	.27**	.25**	.20**	.22**	–					
POW	.17**	.32**	.23**	.56**	.26**	–				
REC	.23**	.29**	.13**	.40**	.37**	.51**	–			
SCI	.19**	.09**	.25**	.37**	.08**	.36**	.20**	–		
SEC	.01	-.09**	.21**	.24**	.09**	.12**	.08**	.16**	–	
TRA	.12**	.04**	.34**	.21**	.00	.23**	.11**	.18**	.44**	–

Note. *N* = 81,381. AES – Aesthetic; AFF – Affiliation; ALT – Altruism; COM – Commerce; HED – Hedonism; POW – Power; REC – Recognition; SCI – Science; SEC – Security; TRA – Tradition. ** Statistically significant at the .01 level.