

Exhibit 12.7: Conditioning Models for PIRLS 2016 Achievement Scales

Country	2016				2011			
	Number of Primary Conditioning Variables	Number of Principal Components Available	Number of Principal Components Retained	Percentage of Variance Explained	Number of Primary Conditioning Variables	Number of Principal Components Available	Number of Principal Components Retained	Percentage of Variance Explained
Australia	2	539	278	90	2	545	286	90
Austria	2	544	218	79	2	543	233	80
Azerbaijan	3	533	299	89	2	546	244	80
Bahrain	3	545	274	85	—	—	—	—
Belgium (Flemish)	2	541	259	85	—	—	—	—
Belgium (French)	2	526	231	82	2	548	186	73
Bulgaria	2	529	214	81	2	527	263	88
Canada	5	521	293	90	6	540	305	90
Chile	2	518	214	79	—	—	—	—
Chinese Taipei	2	542	216	79	2	553	214	77
Czech Republic	2	536	276	88	2	551	227	80
Denmark	2	545	175	71	2	555	229	78
England	2	248	145	90	2	243	137	90
Finland	3	544	244	84	3	550	232	81
France	2	543	238	82	2	547	221	78
Georgia	3	545	287	88	2	551	239	80
Germany	2	541	197	77	2	552	200	75
Hong Kong SAR	2	541	167	71	2	555	193	73
Hungary	2	521	231	82	2	539	260	85
Iran, Islamic Rep. of	2	545	219	80	2	555	287	86
Ireland	2	545	230	82	2	549	226	80
Israel	3	507	202	78	3	525	209	78
Italy	2	539	197	74	3	551	209	75
Kazakhstan	3	527	246	82	—	—	—	—
Latvia	3	545	207	77	—	—	—	—
Lithuania	4	524	215	79	2	547	233	80
Macao SAR	4	545	202	75	—	—	—	—
Malta	2	537	182	71	2	555	177	69
Morocco	2	545	274	86	2	549	324	90
Netherlands	2	539	210	81	2	546	199	76
New Zealand	7	515	278	90	8	549	282	88
Northern Ireland	2	507	184	79	2	544	179	75
Norway (5)	3	526	211	78	—	—	—	—

Exhibit 12.7: Conditioning Models for PIRLS 2016 Achievement Scales (Continued)

Country	2016				2011			
	Number of Primary Conditioning Variables	Number of Principal Components Available	Number of Principal Components Retained	Percentage of Variance Explained	Number of Primary Conditioning Variables	Number of Principal Components Available	Number of Principal Components Retained	Percentage of Variance Explained
Oman	3	545	317	90	3	553	323	90
Poland	2	532	220	81	—	—	—	—
Portugal	2	544	232	81	2	542	204	77
Qatar	3	542	307	90	3	544	206	75
Russian Federation	2	521	228	81	2	527	223	80
Saudi Arabia	3	545	237	80	3	544	225	78
Singapore	2	545	300	90	2	555	307	90
Slovak Republic	3	545	272	87	3	547	281	88
Slovenia	2	540	224	81	2	547	225	80
Spain	8	538	303	90	7	544	304	90
Sweden	2	521	226	82	2	547	231	81
Trinidad and Tobago	2	513	208	77	2	525	197	75
United Arab Emirates	6	545	316	90	5	541	317	90
United States	9	250	147	90	9	237	141	90
Benchmarking Participants								
Buenos Aires, Argentina	2	530	219	80	—	—	—	—
Ontario, Canada	3	519	213	81	3	540	228	82
Quebec, Canada	3	519	158	70	3	540	212	78
Norway (4)	3	527	217	79	3	553	159	69
Moscow City, Russian Fed.	2	521	214	78	—	—	—	—
Eng/Afr/Zulu - RSA (5)	4	539	264	85	—	—	—	—
Andalusia, Spain	2	538	208	77	2	541	216	77
Madrid, Spain	2	537	189	73	—	—	—	—
Abu Dhabi, UAE	3	545	209	76	3	541	207	75
Dubai, UAE	4	545	306	90	3	541	303	90