

Exhibit 13.11: TIMSS 2015 Conditioning Models for Proficiency Estimation at the Fourth Grade

Country	2015				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	633	302	89	2	233	129	90
Bahrain	3	637	207	75	3	239	139	90
Belgium (Flemish)	2	629	270	84	2	235	129	90
Bulgaria	2	617	211	78	—	—	—	—
Canada	5	619	321	90	—	—	—	—
Chile	2	610	237	80	2	239	138	90
Chinese Taipei	2	636	214	78	2	237	128	90
Croatia	3	637	199	76	2	235	128	90
Cyprus	2	637	206	74	—	—	—	—
Czech Republic	2	636	260	84	2	239	129	90
Denmark	2	628	185	73	2	239	132	90
England	2	336	179	90	2	239	131	90
Finland	3	634	250	83	3	237	125	90
France	2	637	243	81	—	—	—	—
Georgia	2	637	195	74	2	235	137	90
Germany	2	637	197	76	2	239	130	90
Hong Kong SAR	3	637	180	73	3	239	128	90
Hungary	2	613	251	82	2	239	131	90
Indonesia	2	617	201	75	—	—	—	—
Iran, Islamic Rep. of	2	637	191	73	2	239	139	90
Ireland	3	637	217	78	3	237	129	90
Italy	2	631	218	77	3	239	132	90
Japan	2	635	219	79	2	239	129	90
Kazakhstan	3	608	235	81	3	239	133	90
Korea, Rep. of	2	636	233	81	2	239	127	90
Kuwait	3	629	179	71	2	239	148	90
Lithuania	4	630	226	79	2	239	131	90
Morocco	2	637	253	80	2	239	146	90
Netherlands	2	619	225	82	2	227	129	90
New Zealand	8	633	314	90	7	239	134	90
Northern Ireland	3	589	155	71	3	239	129	90
Norway (5)	3	636	216	80	—	—	—	—
Oman	3	637	353	90	3	239	142	90
Poland	2	616	237	81	—	—	—	—

Exhibit 13.11: TIMSS 2015 Conditioning Models for Proficiency Estimation at the Fourth Grade (Continued)

Country	2015				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
Portugal	2	636	234	79	2	235	127	90
Qatar	3	632	259	83	3	231	136	90
Russian Federation	2	613	246	81	2	239	132	90
Saudi Arabia	3	637	216	75	3	239	138	90
Serbia	2	628	201	76	2	227	125	90
Singapore	2	637	322	90	2	239	129	90
Slovak Republic	3	633	288	86	3	235	129	90
Slovenia	2	636	222	81	2	236	129	90
Spain	5	628	319	90	5	229	130	90
Sweden	2	611	207	78	2	237	128	90
Turkey	2	612	322	89	2	237	139	90
United Arab Emirates	5	637	346	90	5	235	138	90
United States	10	330	184	90	9	233	133	90
Benchmarking Participants								
Buenos Aires, Argentina	2	630	155	77	—	—	—	—
Ontario, Canada	3	619	228	80	3	239	133	90
Quebec, Canada	3	619	139	68	3	239	130	90
Norway (4)	3	636	208	79	3	239	129	90
Abu Dhabi, UAE	3	637	250	81	3	235	136	90
Dubai, UAE	3	637	333	90	3	235	134	90
Florida, US	10	330	101	72	—	233	130	90