

Exhibit 13.12: TIMSS 2015 Conditioning Models for Proficiency Estimation at the Eighth 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	478	245	90	2	363	187	90
Bahrain	3	482	245	89	3	366	197	90
Botswana (9)	2	480	275	90	2	369	212	90
Canada	5	480	247	90	—	—	—	—
Chile	2	481	242	89	2	369	202	90
Chinese Taipei	2	481	231	90	2	369	184	90
Egypt	2	482	276	90	—	—	—	—
England	2	482	240	89	2	368	189	90
Georgia	2	850	201	72	2	825	228	76
Hong Kong SAR	2	482	207	87	2	369	185	90
Hungary	2	850	244	75	2	829	258	78
Iran, Islamic Rep. of	2	482	261	90	2	369	204	90
Ireland	3	482	235	88	—	—	—	—
Israel	3	436	230	90	3	339	181	90
Italy	2	482	224	87	3	369	190	90
Japan	2	480	234	90	2	366	184	90
Jordan	2	482	263	90	2	369	207	90
Kazakhstan	3	849	244	80	3	826	219	77
Korea, Rep. of	2	481	227	90	2	366	182	90
Kuwait	3	474	225	85	—	—	—	—
Lebanon	3	724	193	71	3	677	198	75
Lithuania	4	845	217	73	2	829	237	76
Malaysia	2	473	248	90	2	365	196	90
Malta	2	850	190	70	—	—	—	—
Morocco	2	850	463	90	2	823	412	90
New Zealand	8	478	245	90	7	369	192	90
Norway (9)	3	482	234	89	—	—	—	—
Oman	3	482	271	90	3	366	208	90
Qatar	3	477	244	90	3	358	190	90
Russian Federation	2	849	239	76	2	826	244	77
Saudi Arabia	3	482	187	79	3	365	200	90
Singapore	2	482	246	90	2	369	188	90
Slovenia	2	850	212	74	2	829	220	76
South Africa (9)	3	482	276	90	3	369	214	90

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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
Sweden	2	726	204	77	2	827	278	84
Thailand	2	481	252	90	2	366	198	90
Turkey	2	481	257	90	2	364	200	90
United Arab Emirates	5	482	258	90	5	365	202	90
United States	10	475	248	90	9	363	195	90
Benchmarking Participants								
Buenos Aires, Argentina	2	481	162	75	—	—	—	—
Ontario, Canada	3	480	226	88	3	369	188	90
Quebec, Canada	3	480	197	85	3	369	193	90
Norway (8)	3	482	239	90	3	369	189	90
Abu Dhabi, UAE	3	482	241	89	3	365	197	90
Dubai, UAE	3	482	252	90	3	365	196	90
Florida, US	10	475	103	66	9	363	85	65