

Exhibit 13.9: TIMSS Advanced 2015 Conditioning Models for Advanced Mathematics Proficiency Estimation

Country	2015				2008			
	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
France	2	349	180	90	—	—	—	—
Armenia	—	—	—	—	2	271	42	52
Iran, Islamic Rep. of	—	—	—	—	2	279	121	80
Italy	2	355	165	86	2	270	107	78
Lebanon	3	354	58	56	3	277	80	63
Netherlands	—	—	—	—	2	269	76	65
Norway	2	355	126	77	2	270	96	74
Portugal	2	354	178	90	—	—	—	—
Russian Federation	3	354	182	90	2	277	157	90
Russian Federation 6hr+	2	354	171	89	—	—	—	—
Slovenia	2	355	146	83	2	270	107	78
Sweden	2	351	182	90	2	268	115	81
United States	10	350	147	86	—	—	—	—