

**Appendix**

**C**

**Predictors of  
School  
Effectiveness in  
Mathematics**



## Exhibit C.1

## Predictors of School Effectiveness in Mathematics, Eighth Grade\*, Australia

Models of School Effectiveness															
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7								
<b>Variance Decomposition</b>															
Between Schools	50%														
Within Schools	50%														
<b>Total</b>	<b>100%</b>														
<b>Percentage of Between School Variance Explained by Model</b>	71%	71%	71%	71%	81%	81%	50%								
<b>Model 1</b>	<b>Classroom Characteristics</b>	<b>Model 2</b>	<b>Model 2 with Teacher Characteristics</b>	<b>Model 3</b>	<b>Model 3 with School Location and Size</b>	<b>Model 4</b>	<b>Model 4 with Home-School Interaction</b>								
<b>Model 5</b>	<b>Model 5 with Home Background Index</b>	<b>Model 6</b>	<b>Model 6 with Home Background Index Only</b>												
<b>Regression Coefficient Estimates (With Probabilities Indicating Significance Levels)</b>	<b>Coeff.</b>	<b>Prob.</b>	<b>Coeff.</b>	<b>Prob.</b>	<b>Coeff.</b>	<b>Prob.</b>	<b>Coeff.</b>	<b>Prob.</b>							
Intercept	140	0.00	13	0.00	15	0.00	17	0.00	20	0.01	21	0.01	53	0.00	
Homework (3 Subjects)	79	0.00	7	0.00	7	0.00	7	0.00	4	0.00	3	0.00			
Homework (Amount)	-101	0.00	-100	0.00	-95	0.00	-92	0.00	-78	0.00	-69	0.00			
Homework (In Class Checking)	16	0.00	1	0.00	1	0.00	1	0.00	1	0.00	1	0.01			
Attitude to Mathematics	23	0.09	2	0.07	2	0.09	2	0.15	-1	0.96	4	0.77			
Classroom Environment	50	0.00	4	0.00	5	0.00	5	0.00	4	0.00	4	0.00			
Math Class Size	2	0.00	2	0.00	2	0.00	2	0.00	1	0.03	1	0.03			
Teaching Experience			0	0.42	0	0.33	0	0.33	0	0.26	0	0.32			
Student Admin. Violations			-9	0.04	-9	0.05	-9	0.05	-9	0.02	-7	0.10			
Serious Student Misbehaviors			6	0.32	6	0.32	6	0.32	1	0.02	1	0.01			
Urban Location							-5	0.28	-7	0.08	-7	0.06			
Class Size							0	0.81	0	0.63	0	0.75			
Future Aspirations									3	0.00	2	0.00			
Self Press									-20	0.40	-29	0.22			
Mother's Press									2	0.95	1	0.49			
Home Background Index											3	0.01	15	0.00	

SOURCE: IEA Third International Mathematics and Science Study (TIMSS), 1994-95.

\*Eighth grade in most countries; see Exhibit 1 for information about the grades tested in each country.

## Exhibit C.2

## Predictors of School Effectiveness in Mathematics, Eighth Grade\*, Belgium (Flemish)

Models of School Effectiveness							
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
<b>Variance Decomposition</b>							
Between Schools	53%						
Within Schools	47%						
<b>Total</b>	<b>100%</b>						
<b>Percentage of Between School Variance Explained by Model</b>	46%	45%	44%	43%	66%	69%	38%
<b>Regression Coefficient Estimates (With Probabilities Indicating Significance Levels)</b>							
<b>Intercept</b>	141	139	139	115	132	174	572
	0.06	0.07	0.10	0.10	0.20	0.19	0.07
<b>Homework (3 Subjects)</b>	63	63	63	66	12	14	14
	0.01	0.01	0.01	0.01	0.01	0.59	0.52
<b>Homework (Amount)</b>	-43	-44	-44	-43	-12	-4	-4
	0.00	0.00	0.00	0.00	0.32	0.72	0.72
<b>Homework (in Class Checking)</b>	-6	-6	-6	-7	-10	-7	-7
	0.48	0.45	0.46	0.40	0.14	0.26	0.26
<b>Attitude to Mathematics</b>	26	25	25	25	23	15	15
	0.13	0.16	0.16	0.17	0.14	0.32	0.32
<b>Classroom Environment</b>	59	58	59	59	42	44	44
	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Math Class Size</b>	4	5	5	5	3	3	3
	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Teaching Experience</b>		0	0	0	0	0	0
		0.57	0.57	0.57	0.58	0.45	0.42
<b>Student Admin. Violations</b>			-1	-3	0	5	5
			0.94	0.78	0.96	0.54	0.54
<b>Serious Student Misbehaviors</b>			0	2	11	7	7
			0.96	0.86	0.11	0.34	0.34
<b>Urban Location</b>				5	6	1	1
				0.34	0.14	0.83	0.83
<b>Class Size</b>				0	0	-1	-1
				0.99	0.91	0.45	0.45
<b>Future Aspirations</b>					26	20	20
					0.00	0.00	0.00
<b>Self Press</b>					44	39	39
					0.15	0.18	0.18
<b>Mother's Press</b>					-2	11	11
					0.96	0.70	0.70
<b>Home Background Index</b>						80	186
						0.00	0.00
							0.00

SOURCE: IEA Third International Mathematics and Science Study (TIMSS), 1994-95.

\*Eighth grade in most countries; see Exhibit 1 for information about the grades tested in each country.

## Exhibit C.3

## Predictors of School Effectiveness in Mathematics, Eighth Grade\*, Belgium (French)

Models of School Effectiveness							
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
<b>Variance Decomposition</b>	Classroom Characteristics	Model 1 with Teacher Characteristics	Model 2 with School Climate	Model 3 with School Location and Size	Model 4 with Home-School Interaction	Model 5 with Home Background Index	Model 6 with Home Background Index Only
Between Schools	32%						
Within Schools	68%						
<b>Total</b>	<b>100%</b>						
<b>Percentage of Between School Variance Explained by Model</b>	42%	41%	44%	47%	78%	81%	59%
<b>Regression Coefficient Estimates (With Probabilities Indicating Significance Levels)</b>							
<b>Intercept</b>	Coeff. 154 Prob. 0.09	Coeff. 142 Prob. 0.13	Coeff. 181 Prob. 0.06	Coeff. 203 Prob. 0.03	Coeff. 24 Prob. 0.79	Coeff. 183 Prob. 0.13	Coeff. 539 Prob. 0.00
<b>Homework (3 Subjects)</b>							
Homework (Amount)	Coeff. 79 Prob. 0.02	Coeff. 77 Prob. 0.03	Coeff. 65 Prob. 0.06	Coeff. 59 Prob. 0.09	Coeff. 22 Prob. 0.40	Coeff. 5 Prob. 0.87	
Homework (In Class Checking)	Coeff. -46 Prob. 0.03	Coeff. -48 Prob. 0.03	Coeff. -47 Prob. 0.03	Coeff. -49 Prob. 0.02	Coeff. -29 Prob. 0.08	Coeff. -31 Prob. 0.06	
Attitude to Mathematics	Coeff. 14 Prob. 0.13	Coeff. 13 Prob. 0.16	Coeff. 14 Prob. 0.15	Coeff. 12 Prob. 0.21	Coeff. 8 Prob. 0.24	Coeff. 10 Prob. 0.13	
Classroom Environment	Coeff. 20 Prob. 0.27	Coeff. 23 Prob. 0.22	Coeff. 23 Prob. 0.21	Coeff. 10 Prob. 0.60	Coeff. 5 Prob. 0.73	Coeff. -1 Prob. 0.97	
Math Class Size	Coeff. 20 Prob. 0.16	Coeff. 20 Prob. 0.16	Coeff. 22 Prob. 0.11	Coeff. 28 Prob. 0.05	Coeff. 28 Prob. 0.01	Coeff. 31 Prob. 0.01	Coeff. 0 Prob. 0.78
Teaching Experience	Coeff. 4 Prob. 0.02	Coeff. 4 Prob. 0.01	Coeff. 4 Prob. 0.01	Coeff. 1 Prob. 0.50	Coeff. 0 Prob. 0.86	Coeff. 0 Prob. 0.94	
Student Admin. Violations		Coeff. 0 Prob. 0.40	Coeff. 1 Prob. 0.28	Coeff. 0 Prob. 0.39	Coeff. 0 Prob. 0.96	Coeff. 0 Prob. 0.94	
Serious Student Misbehaviors			Coeff. -10 Prob. 0.08	Coeff. -10 Prob. 0.10	Coeff. -7 Prob. 0.14	Coeff. -7 Prob. 0.09	
Urban Location			Coeff. 4 Prob. 0.63	Coeff. 4 Prob. 0.58	Coeff. 5 Prob. 0.38	Coeff. 5 Prob. 0.37	
Class Size				Coeff. -5 Prob. 0.40	Coeff. -4 Prob. 0.28	Coeff. -2 Prob. 0.55	
Future Aspirations				Coeff. 4 Prob. 0.05	Coeff. 3 Prob. 0.08	Coeff. 2 Prob. 0.14	
Self Press					Coeff. 42 Prob. 0.00	Coeff. 29 Prob. 0.00	
Mother's Press					Coeff. 75 Prob. 0.06	Coeff. 36 Prob. 0.40	
Home Background Index					Coeff. 7 Prob. 0.88	Coeff. 23 Prob. 0.59	Coeff. 54 Prob. 0.04
							Coeff. 137 Prob. 0.00

SOURCE: IEA Third International Mathematics and Science Study (TIMSS), 1994-95.

\*Eighth grade in most countries; see Exhibit 1 for information about the grades tested in each country.

## Exhibit C.4 Predictors of School Effectiveness in Mathematics, Eighth Grade\*, Canada

Models of School Effectiveness							
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
<b>Variance Decomposition</b>							
Between Schools	20%						
Within Schools	80%						
<b>Total</b>	<b>100%</b>						
<b>Percentage of Between School Variance Explained by Model</b>	25%	25%	27%	29%	39%	39%	8%
<b>Regression Coefficient Estimates (With Probabilities Indicating Significance Levels)</b>							
<b>Intercept</b>	505	511	509	498	491	497	523
	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Homework (3 Subjects)</b>	26	0.01	24	0.01	15	0.12	13
	0.02	0.02	0.04	0.03	0.07	0.09	0.18
<b>Homework (Amount)</b>	-29	-28	-25	-25	-21	-20	-20
	0.98	0.99	0.96	0.99	0.68	0.66	0.66
<b>Homework (In Class)</b>	0	0	0	0	2	2	2
	0.00	0.00	0.00	0.00	0.03	0.03	0.03
<b>Attitude to Mathematics</b>	-43	-44	-40	-41	-28	-27	-27
	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Classroom Environment</b>	39	39	37	38	32	33	33
	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Math Class Size</b>	0	0	0	0	0	0	0
	0.56	0.60	0.55	0.81	0.39	0.40	0.40
<b>Teaching Experience</b>		0	0	0	0	0	0
		0.29	0.38	0.47	0.39	0.34	0.34
<b>Student Admin. Violations</b>			7	6	5	6	6
			0.04	0.09	0.12	0.09	0.09
<b>Serious Student Misbehaviors</b>			-11	-12	-9	-9	-9
			0.02	0.01	0.07	0.07	0.07
<b>Urban Location</b>				-1	-1	-2	-2
				0.81	0.63	0.57	0.57
<b>Class Size</b>				1	1	1	1
				0.09	0.06	0.07	0.07
<b>Future Aspirations</b>					10	9	9
					0.08	0.13	0.13
<b>Self Press</b>					60	58	58
					0.02	0.02	0.02
<b>Mother's Press</b>					-101	-99	-99
					0.00	0.00	0.00
<b>Home Background Index</b>						9	23
						0.45	0.05

SOURCE: IEA Third International Mathematics and Science Study (TIMSS), 1994-95.

\*Eighth grade in most countries; see Exhibit 1 for information about the grades tested in each country.

## Exhibit C.5 Predictors of School Effectiveness in Mathematics, Eighth Grade\*, Czech Republic

Models of School Effectiveness														
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7							
<b>Variance Decomposition</b>														
Between Schools	21%													
Within Schools	79%													
<b>Total</b>	<b>100%</b>													
<b>Percentage of Between School Variance Explained by Model</b>	43%	43%	43%	43%	71%	71%	29%							
<b>Regression Coefficient Estimates (With Probabilities Indicating Significance Levels)</b>														
<b>Intercept</b>	288	0.00	288	0.00	320	0.00	319	0.00	255	0.00	257	0.00	560	0.00
<b>Homework (3 Subjects)</b>	72	0.00	72	0.00	67	0.00	69	0.00	45	0.00	46	0.00		
Homework (Amount)	-65	0.01	-65	0.01	-58	0.02	-60	0.02	-45	0.03	-47	0.03		
Homework (In Class Checking)	2	0.70	2	0.70	2	0.68	4	0.55	-1	0.82	-1	0.81		
Attitude to Mathematics	-13	0.45	-13	0.45	-16	0.35	-19	0.27	-15	0.28	-15	0.30		
Classroom Environment	29	0.04	29	0.04	28	0.05	31	0.04	26	0.03	26	0.03		
Math Class Size	4	0.00	4	0.00	4	0.00	5	0.00	2	0.15	2	0.15		
<b>Teaching Experience</b>			0	0.99	0	0.92	0	0.95	0	0.92	0	0.94		
<b>Student Admin. Violations</b>			-12	0.11	-12	0.11	-12	0.11	-1	0.84	-2	0.80		
<b>Student Serious Misbehaviors</b>			3	0.69	3	0.66	3	0.66	-3	0.68	-2	0.70		
<b>Urban Location</b>									2	0.60	0	0.97		
Class Size									-2	0.14	0	0.85		
<b>Future Aspirations</b>									30	0.00	29	0.00		
Self Press									25	0.38	23	0.44		
Mother's Press									7	0.83	8	0.80		
<b>Home Background Index</b>											5	0.78	72	0.00

SOURCE: IEA Third International Mathematics and Science Study (TIMSS), 1994-95.

\*Eighth grade in most countries; see Exhibit 1 for information about the grades tested in each country.

## Exhibit C.6 Predictors of School Effectiveness in Mathematics, Eighth Grade\*, Germany

Models of School Effectiveness							
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
<b>Variance Decomposition</b>							
Between Schools	49%						
Within Schools	51%						
<b>Total</b>	<b>100%</b>						
<b>Percentage of Between School Variance Explained by Model</b>	41%	40%	46%	44%	71%	77%	63%
	Classroom Characteristics	Model 1 with Teacher Characteristics	Model 2 with School Climate	Model 3 with School Location and Size	Model 4 with Home-School Interaction	Model 5 with Home Background Index	Model 6 with Home Background Index Only
<b>Regression Coefficient Estimates (With Probabilities Indicating Significance Levels)</b>							
<b>Intercept</b>	Coeff. 408 Prob. 0.00	Coeff. 409 Prob. 0.00	Coeff. 415 Prob. 0.00	Coeff. 407 Prob. 0.00	Coeff. 250 Prob. 0.01	Coeff. 363 Prob. 0.00	Coeff. 525 Prob. 0.00
<b>Homework (3 Subjects)</b>	Coeff. 53 Prob. 0.02	Coeff. 53 Prob. 0.02	Coeff. 43 Prob. 0.05	Coeff. 40 Prob. 0.09	Coeff. 42 Prob. 0.04	Coeff. 40 Prob. 0.03	
<b>Homework (Amount)</b>	Coeff. 31 Prob. 0.59	Coeff. 31 Prob. 0.59	Coeff. 49 Prob. 0.38	Coeff. 53 Prob. 0.36	Coeff. 2 Prob. 0.96	Coeff. -19 Prob. 0.66	
<b>Homework (In Class Checking)</b>	Coeff. 10 Prob. 0.48	Coeff. 9 Prob. 0.51	Coeff. 15 Prob. 0.27	Coeff. 15 Prob. 0.30	Coeff. -2 Prob. 0.88	Coeff. 0 Prob. 0.98	
<b>Attitude to Mathematics</b>	Coeff. -76 Prob. 0.01	Coeff. -77 Prob. 0.01	Coeff. -51 Prob. 0.10	Coeff. -48 Prob. 0.14	Coeff. -27 Prob. 0.30	Coeff. -20 Prob. 0.41	
<b>Classroom Environment</b>	Coeff. 27 Prob. 0.20	Coeff. 27 Prob. 0.20	Coeff. 19 Prob. 0.37	Coeff. 17 Prob. 0.42	Coeff. 13 Prob. 0.48	Coeff. 5 Prob. 0.77	
<b>Math Class Size</b>	Coeff. 3 Prob. 0.05	Coeff. 3 Prob. 0.05	Coeff. 3 Prob. 0.14	Coeff. 3 Prob. 0.27	Coeff. 0 Prob. 0.91	Coeff. 0 Prob. 0.83	
<b>Teaching Experience</b>		Coeff. 0 Prob. 0.92	Coeff. 0 Prob. 0.88	Coeff. 0 Prob. 0.94	Coeff. 0 Prob. 0.99	Coeff. -1 Prob. 0.39	
<b>Student Admin. Violations</b>			Coeff. -29 Prob. 0.02	Coeff. -30 Prob. 0.02	Coeff. -21 Prob. 0.04	Coeff. -20 Prob. 0.03	
<b>Serious Student Misbehaviors</b>			Coeff. 11 Prob. 0.46	Coeff. 12 Prob. 0.46	Coeff. 20 Prob. 0.12	Coeff. 14 Prob. 0.24	
<b>Urban Location</b>				Coeff. 4 Prob. 0.64	Coeff. -6 Prob. 0.40	Coeff. -6 Prob. 0.37	
<b>Class Size</b>				Coeff. 0 Prob. 0.97	Coeff. 1 Prob. 0.75	Coeff. 1 Prob. 0.49	
<b>Future Aspirations</b>					Coeff. 36 Prob. 0.00	Coeff. 14 Prob. 0.21	
<b>Self Press</b>					Coeff. 64 Prob. 0.07	Coeff. 40 Prob. 0.23	
<b>Mother's Press</b>					Coeff. 2 Prob. 0.96	Coeff. 19 Prob. 0.60	
<b>Home Background Index</b>					Coeff. 114 Prob. 0.01	Coeff. 205 Prob. 0.00	

SOURCE: IEA Third International Mathematics and Science Study (TIMSS), 1994-95.

\*Eighth grade in most countries; see Exhibit 1 for information about the grades tested in each country.

**Exhibit C.7 Predictors of School Effectiveness in Mathematics, Eighth Grade\*, France**

Models of School Effectiveness																	
Variance Decomposition		Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7									
Between Schools	29%	Classroom Characteristics	Model 1 with Teacher Characteristics	Model 2 with School Climate	Model 3 with School Location and Size	Model 4 with Home-School Interaction	Model 5 with Home Background Index	Home Background Index Only									
Within Schools	71%																
<b>Total</b>	<b>100%</b>																
<b>Percentage of Between School Variance Explained by Model</b>		43%	42%	50%	52%	57%	56%	24%									
<b>Regression Coefficient Estimates (With Probabilities Indicating Significance Levels)</b>																	
Intercept		197	0.00	199	0.00	232	0.00	248	0.00	281	0.01	279	0.02	540	0.00		
Homework (3 Subjects)		86	0.00	87	0.00	70	0.00	77	0.00	55	0.01	55	0.02				
Homework (Amount)		-25	0.21	-24	0.21	-10	0.59	-16	0.40	-12	0.52	-12	0.53				
Homework (In Class Checking)		9	0.13	10	0.12	14	0.03	14	0.02	9	0.13	9	0.14				
Attitude to Mathematics		-22	0.17	-24	0.16	-13	0.42	-11	0.52	-7	0.69	-7	0.68				
Classroom Environment		42	0.00	44	0.00	35	0.01	35	0.01	26	0.05	27	0.06				
Math Class Size		3	0.00	3	0.00	3	0.01	4	0.00	3	0.02	3	0.02				
Teaching Experience				0	0.66	0	0.72	0	0.54	0	0.98	0	0.98				
Student Admin. Violations						-24	0.00	-20	0.01	-20	0.01	-20	0.01				
Serious Student Misbehaviors						16	0.07	13	0.13	13	0.13	13	0.14				
Intercept								-5	0.16	-6	0.10	-6	0.12				
Intercept								-3	0.12	-2	0.26	-2	0.26				
Future Aspirations								15	0.01	15	0.01	15	0.05				
Self Press								1	0.98	1	0.98	1	0.98				
Mother's Press								-13	0.75	-13	0.75	-13	0.74				
Home Background Index														-2	0.93	72	0.00

SOURCE: IEA Third International Mathematics and Science Study (TIMSS), 1994-95.

\*Eighth grade in most countries; see Exhibit 1 for information about the grades tested in each country.



## Exhibit C.8 Predictors of School Effectiveness in Mathematics, Eighth Grade\*, Hong Kong

Models of School Effectiveness							
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
<b>Variance Decomposition</b>							
Between Schools	47%						
Within Schools	53%						
<b>Total</b>	<b>100%</b>						
<b>Percentage of Between School Variance Explained by Model</b>	64%	64%	66%	67%	69%	78%	42%
	Classroom Characteristics	Model 1 with Teacher Characteristics	Model 2 with School Climate	Model 3 with School Location and Size	Model 4 with Home-School Interaction	Model 5 with Home Background Index	Model 6 with Home Background Index Only
<b>Regression Coefficient Estimates (With Probabilities Indicating Significance Levels)</b>							
<b>Intercept</b>	19	12	66	8	197	133	587
	0.86	0.92	0.54	0.95	0.35	0.46	0.00
<b>Homework (3 Subjects)</b>	153	150	142	131	87	63	
	0.00	0.00	0.00	0.00	0.00	0.02	
<b>Homework (Amount)</b>	-18	-14	-23	-13	-10	-31	
	0.67	0.74	0.57	0.75	0.81	0.39	
<b>Homework (In Class Checking)</b>	14	14	17	19	7	5	
	0.36	0.37	0.28	0.22	0.64	0.73	
<b>Attitude to Mathematics</b>	53	54	49	40	24	40	
	0.13	0.12	0.15	0.24	0.51	0.20	
<b>Classroom Environment</b>	-7	-6	1	8	9	37	
	0.72	0.77	0.98	0.68	0.66	0.04	
<b>Math Class Size</b>	1	1	1	1	1	1	
	0.14	0.14	0.10	0.36	0.47	0.41	
<b>Teaching Experience</b>		0	0	0	0	0	
		0.44	0.48	0.49	0.67	0.49	
<b>Student Admin. Violations</b>			-9	-9	-9	-8	
			0.24	0.27	0.25	0.25	
<b>Serious Student Misbehaviors</b>			-8	-10	-7	-8	
			0.52	0.41	0.56	0.42	
<b>Urban Location</b>				11	15	10	
				0.24	0.11	0.21	
<b>Class Size</b>				2	1	1	
				0.26	0.58	0.66	
<b>Future Aspirations</b>					20	20	
					0.13	0.08	
<b>Self Press</b>					-38	-6	
					0.52	0.90	
<b>Mother's Press</b>					-26	-14	
					0.63	0.76	
<b>Home Background Index</b>						108	
					0.00	197	
					0.00	0.00	
					0.00	0.00	

SOURCE: IEA Third International Mathematics and Science Study (TIMSS), 1994-95.

\*Eighth grade in most countries; see Exhibit 1 for information about the grades tested in each country.

**Exhibit C.9**

**Predictors of School Effectiveness in Mathematics, Eighth Grade\*, Iceland**

Models of School Effectiveness							
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Variance Decomposition	Classroom Characteristics	Model 1 with Teacher Characteristics	Model 2 with School Climate	Model 3 with School Location and Size	Model 4 with Home-School Interaction	Model 5 with Home Background Index	Model 7
Between Schools	15%						
Within Schools	85%						
<b>Total</b>	<b>100%</b>						
<b>Percentage of Between School Variance Explained by Model</b>	54%	52%	49%	52%	67%	70%	31%
<b>Regression Coefficient Estimates (With Probabilities Indicating Significance Levels)</b>							
Intercept	Coeff. 301 Prob. 0.00	Coeff. 305 Prob. 0.00	Coeff. 257 Prob. 0.02	Coeff. 307 Prob. 0.01	Coeff. 192 Prob. 0.18	Coeff. 190 Prob. 0.17	Coeff. 491 Prob. 0.00
Homework (3 Subjects)	47 0.04	46 0.05	46 0.05	43 0.07	42 0.05	47 0.03	
Homework (Amount)	-43 0.01	-44 0.02	-38 0.07	-41 0.06	-28 0.18	-29 0.16	
Homework (In Class Checking)	11 0.19	11 0.19	12 0.17	8 0.36	8 0.35	7 0.38	
Attitude to Mathematics	-10 0.63	-12 0.59	-8 0.73	-7 0.76	-8 0.72	6 0.80	
Classroom Environment	39 0.01	42 0.03	44 0.02	38 0.05	26 0.17	12 0.54	
Math Class Size	1 0.38	1 0.37	1 0.34	2 0.08	2 0.10	2 0.13	
Teaching Experience		0 0.78	0 0.90	0 0.88	0 0.53	0 0.69	
Student Admin. Violations			7 0.45	5 0.56	6 0.44	2 0.82	
Serious Student Misbehaviors			5 0.75	2 0.91	4 0.80	7 0.60	
Urban Location				2 0.71	1 0.83	0 0.92	
Class Size				-2 0.15	-2 0.27	-2 0.24	
Future Aspirations					21 0.02	19 0.03	
Self Press					-44 0.31	-48 0.26	
Mother's Press					68 0.16	78 0.11	
Home Background Index						61 0.08	87 0.01

SOURCE: IEA Third International Mathematics and Science Study (TIMSS), 1994-95.

\*Eighth grade in most countries; see Exhibit 1 for information about the grades tested in each country.

**Exhibit C.10** Predictors of School Effectiveness in Mathematics, Eighth Grade\*, Ireland

Models of School Effectiveness							
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
<b>Variance Decomposition</b>							
Between Schools	51%						
Within Schools	49%						
<b>Total</b>	<b>100%</b>						
<b>Percentage of Between School Variance Explained by Model</b>	67%	67%	67%	67%	76%	80%	52%
	Classroom Characteristics	Model 1 with Teacher Characteristics	Model 2 with School Climate	Model 3 with School Location and Size	Model 4 with Home-School Interaction	Model 5 with Home Background Index	Model 6 with Home Background Index Only
<b>Regression Coefficient Estimates (With Probabilities Indicating Significance Levels)</b>							
<b>Intercept</b>	164 0.01	161 0.01	172 0.02	211 0.01	93 0.43	158 0.16	524 0.00
<b>Homework (3 Subjects)</b>	84 0.00	84 0.00	83 0.00	87 0.00	69 0.00	57 0.00	
<b>Homework (Amount)</b>	-35 0.14	-34 0.15	-32 0.20	-33 0.18	-17 0.45	-21 0.30	
<b>Homework (In Class Checking)</b>	2 0.82	2 0.86	2 0.86	0 0.98	2 0.78	5 0.57	
<b>Attitude to Mathematics</b>	-9 0.63	-8 0.66	-8 0.68	-10 0.59	8 0.69	12 0.52	
<b>Classroom Environment</b>	27 0.04	26 0.05	26 0.05	24 0.07	4 0.74	13 0.26	
<b>Math Class Size</b>	4 0.00	4 0.00	4 0.00	5 0.00	3 0.00	3 0.00	
<b>Teaching Experience</b>		0 0.59	0 0.63	0 0.78	0 0.34	0 0.77	
<b>Student Admin. Violations</b>			-7 0.17	-6 0.25	-2 0.61	-4 0.33	
<b>Serious Student Misbehaviors</b>			6 0.52	3 0.76	14 0.12	11 0.19	
<b>Urban Location</b>				3 0.49	0 0.97	-3 0.47	
<b>Class Size</b>				-2 0.20	-3 0.04	-4 0.01	
<b>Future Aspirations</b>					32 0.00	20 0.00	
<b>Self Press</b>					45 0.20	48 0.13	
<b>Mother's Press</b>					-16 0.68	0 1.00	
<b>Home Background Index</b>						81 0.00	174 0.00

SOURCE: IEA Third International Mathematics and Science Study (TIMSS), 1994-95.

\*Eighth grade in most countries; see Exhibit 1 for information about the grades tested in each country.

## Exhibit C.11 Predictors of School Effectiveness in Mathematics, Eighth Grade\*, Netherlands

Models of School Effectiveness																
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7									
<b>Variance Decomposition</b>																
Between Schools	54%															
Within Schools	46%															
<b>Total</b>	<b>100%</b>															
<b>Percentage of Between School Variance Explained by Model</b>	<b>62%</b>	<b>61%</b>	<b>66%</b>	<b>65%</b>	<b>79%</b>	<b>83%</b>	<b>54%</b>									
	Classroom Characteristics	Model 1 with Teacher Characteristics	Model 2 with School Climate	Model 3 with School Location and Size	Model 4 with Home-School Interaction	Model 5 with Home Background Index	Home Background Index Only									
<b>Regression Coefficient Estimates (With Probabilities Indicating Significance Levels)</b>	<b>Coeff.</b>	<b>Prob.</b>	<b>Coeff.</b>	<b>Prob.</b>	<b>Coeff.</b>	<b>Prob.</b>	<b>Coeff.</b>	<b>Prob.</b>								
<b>Intercept</b>	27	0.84	39	0.78	129	0.33	77	0.59	3	0.98	70	0.55	551	0.00		
<b>Homework (3 Subjects)</b>	124	0.00	119	0.01	102	0.01	105	0.01	95	0.01	95	0.00				
Homework (Amount)	-113	0.01	-114	0.01	-136	0.00	-139	0.00	-100	0.01	-77	0.02				
Homework (In Class Checking)	31	0.00	30	0.00	27	0.01	24	0.02	12	0.17	6	0.43				
Attitude to Mathematics	31	0.11	32	0.11	30	0.12	34	0.09	36	0.03	29	0.06				
Classroom Environment	-18	0.30	-19	0.29	-11	0.50	-11	0.56	-8	0.59	-3	0.86				
Math Class Size	5	0.00	5	0.00	5	0.00	4	0.01	4	0.01	4	0.00				
<b>Teaching Experience</b>			0	0.63	0	0.42	1	0.36	0	0.97	0	0.99				
<b>Student Admin. Violations</b>			-23	0.01	-22	0.01	-22	0.01	-22	0.00	-14	0.05				
<b>Serious Student Misbehaviors</b>			7	0.44	7	0.44	10	0.34	9	0.29	6	0.43				
<b>Urban Location</b>							2	0.81	-1	0.84	-4	0.53				
<b>Class Size</b>							2	0.43	0	0.98	-2	0.37				
<b>Future Aspirations</b>									33	0.00	25	0.00				
Self Press									41	0.41	36	0.44				
Mother's Press									-7	0.88	-3	0.95				
<b>Home Background Index</b>													89	0.00	204	0.00

SOURCE: IEA Third International Mathematics and Science Study (TIMSS), 1994-95.

\*Eighth grade in most countries; see Exhibit 1 for information about the grades tested in each country.

## Exhibit C.12 Predictors of School Effectiveness in Mathematics, Eighth Grade\*, New Zealand

Models of School Effectiveness														
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7							
<b>Variance Decomposition</b>														
Between Schools	48%													
Within Schools	52%													
<b>Total</b>	<b>100%</b>													
<b>Percentage of Between School Variance Explained by Model</b>	52%	52%	53%	53%	65%	69%	53%							
	Classroom Characteristics	Model 1 with Teacher Characteristics	Model 2 with School Climate	Model 3 with School Location and Size	Model 4 with Home-School Interaction	Model 5 with Home Background Index	Home Background Index Only							
<b>Regression Coefficient Estimates (With Probabilities Indicating Significance Levels)</b>														
<b>Intercept</b>	217	0.00	222	0.00	256	0.00	254	0.00	179	0.07	200	0.04	508	0.00
<b>Homework (3 Subjects)</b>	76	0.00	76	0.00	73	0.00	73	0.00	38	0.01	25	0.07		
<b>Homework (Amount)</b>	-65	0.01	-65	0.01	-66	0.01	-61	0.02	-54	0.02	-35	0.12		
<b>Homework (In Class Checking)</b>	0	0.97	0	0.99	-3	0.69	-3	0.71	-3	0.62	-4	0.51		
<b>Attitude to Mathematics</b>	-3	0.90	-3	0.90	0	0.99	0	1.00	8	0.73	18	0.43		
<b>Classroom Environment</b>	22	0.15	23	0.15	20	0.19	24	0.14	16	0.27	13	0.36		
<b>Math Class Size</b>	4	0.00	4	0.00	4	0.00	4	0.00	2	0.01	2	0.01		
<b>Teaching Experience</b>			0	0.55	0	0.48	0	0.51	0	0.45	0	0.66		
<b>Student Admin. Violations</b>			-10	0.05	-10	0.06	-10	0.06	-7	0.14	-4	0.44		
<b>Serious Student Misbehaviors</b>			2	0.80	2	0.80	1	0.84	6	0.37	6	0.33		
<b>Urban Location</b>							-4	0.43	-6	0.23	-7	0.16		
<b>Class Size</b>							0	0.83	0	0.77	0	0.87		
<b>Future Aspirations</b>									35	0.00	26	0.00		
<b>Self Press</b>									-2	0.94	-4	0.89		
<b>Mother's Press</b>									14	0.71	29	0.42		
<b>Home Background Index</b>											62	0.00	135	0.00

SOURCE: IEA Third International Mathematics and Science Study (TIMSS), 1994-95.

\*Eighth grade in most countries; see Exhibit 1 for information about the grades tested in each country.

## Exhibit C.13 Predictors of School Effectiveness in Mathematics, Eighth Grade\*, Russian Federation

Models of School Effectiveness														
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7							
<b>Variance Decomposition</b>	<b>Classroom Characteristics</b>	<b>Model 1 with Teacher Characteristics</b>	<b>Model 2 with School Climate</b>	<b>Model 3 with School Location and Size</b>	<b>Model 4 with Home-School Interaction</b>	<b>Model 5 with Home Background Index</b>	<b>Model 6 with Home Background Index Only</b>							
Between Schools	39%	34%	34%	35%	37%	45%	34%							
Within Schools	61%													
<b>Total</b>	<b>100%</b>													
<b>Percentage of Between School Variance Explained by Model</b>	35%	34%	34%	35%	37%	45%	34%							
<b>Regression Coefficient Estimates (With Probabilities Indicating Significance Levels)</b>	<b>Coeff.</b>	<b>Prob.</b>	<b>Coeff.</b>	<b>Prob.</b>	<b>Coeff.</b>	<b>Prob.</b>	<b>Coeff.</b>	<b>Prob.</b>						
Intercept	61	0.48	60	0.49	28	0.77	29	0.76	-27	0.85	76	0.57	530	0.00
Homework (3 Subjects)	104	0.00	104	0.00	107	0.00	104	0.00	102	0.00	93	0.00		
Homework (Amount)	-23	0.22	-23	0.23	-26	0.18	-27	0.16	-27	0.15	-33	0.07		
Homework (In Class Checking)	7	0.52	7	0.53	7	0.54	6	0.63	3	0.83	0	0.98		
Attitude to Mathematics	26	0.31	26	0.33	32	0.25	33	0.23	34	0.22	26	0.32		
Classroom Environment	22	0.19	22	0.21	20	0.26	19	0.29	16	0.37	19	0.27		
Math Class Size	2	0.01	2	0.01	2	0.01	1	0.42	1	0.48	1	0.33		
Teaching Experience			0	0.98	0	0.98	0	0.85	0	0.88	0	0.90		
Student Admin. Violations					-6	0.33	-6	0.36	-6	0.29	-5	0.34		
Serious Student Misbehaviors					17	0.16	16	0.19	20	0.11	24	0.04		
Urban Location							8	0.17	9	0.15	2	0.69		
Class Size							0	0.83	0	0.99	-1	0.53		
Future Aspirations									9	0.08	2	0.72		
Self Press									-42	0.34	-30	0.48		
Mother's Press									68	0.13	68	0.11		
Home Background Index											89	0.00	117	0.00

SOURCE: IEA Third International Mathematics and Science Study (TIMSS), 1994-95.

\*Eighth grade in most countries; see Exhibit 1 for information about the grades tested in each country.

## Exhibit C.14 Predictors of School Effectiveness in Mathematics, Eighth Grade\*, Singapore

Models of School Effectiveness														
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7							
<b>Variance Decomposition</b>	<b>Classroom Characteristics</b>	<b>Model 1 with Teacher Characteristics</b>	<b>Model 2 with School Climate</b>	<b>Model 3 with School Location and Size</b>	<b>Model 4 with Home-School Interaction</b>	<b>Model 5 with Home Background Index</b>	<b>Model 6 with Home Background Index Only</b>							
Between Schools	39%													
Within Schools	61%													
<b>Total</b>	<b>100%</b>													
<b>Percentage of Between School Variance Explained by Model</b>	52%	53%	56%	56%	79%	82%	57%							
<b>Regression Coefficient Estimates (With Probabilities Indicating Significance Levels)</b>	<b>Coeff.</b>	<b>Prob.</b>	<b>Coeff.</b>	<b>Prob.</b>	<b>Coeff.</b>	<b>Prob.</b>	<b>Coeff.</b>	<b>Prob.</b>						
Intercept	166	0.05	158	0.07	212	0.01	240	0.01	118	0.26	232	0.02	639	0.00
Homework (3 Subjects)	80	0.01	90	0.01	92	0.00	92	0.00	52	0.04	33	0.17		
Homework (Amount)	-50	0.00	-50	0.00	-42	0.01	-42	0.01	-42	0.00	-26	0.05		
Homework (In Class Checking)	-14	0.28	-14	0.28	-14	0.28	-14	0.27	-15	0.11	-16	0.08		
Attitude to Mathematics	21	0.35	16	0.47	10	0.65	9	0.67	-4	0.83	-12	0.46		
Classroom Environment	95	0.00	89	0.00	81	0.00	81	0.00	47	0.00	51	0.00		
Math Class Size	0	0.54	0	0.49	1	0.35	1	0.57	0	0.74	1	0.33		
Teaching Experience			0	0.12	1	0.04	1	0.04	0	0.10	1	0.04		
Student Admin. Violations			-3	0.54	-4	0.46	-4	0.46	2	0.65	2	0.52		
Serious Student Misbehaviors			-21	0.06	-21	0.06	-21	0.06	-16	0.05	-14	0.08		
Urban Location							-6	0.45	-6	0.28	-5	0.35		
Class Size							0	0.97	1	0.59	1	0.53		
Future Aspirations									62	0.00	42	0.00		
Self Press									4	0.92	-7	0.85		
Mother's Press									12	0.74	30	0.40		
Home Background Index											59	0.00	148	0.00

SOURCE: IEA Third International Mathematics and Science Study (TIMSS), 1994-95.

\*Eighth grade in most countries; see Exhibit 1 for information about the grades tested in each country.

## Exhibit C.15 Predictors of School Effectiveness in Mathematics, Eighth Grade\*, Slovak Republic

Models of School Effectiveness																
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7									
<b>Variance Decomposition</b>	<b>Model 1</b>	<b>Model 2</b>	<b>Model 3</b>	<b>Model 4</b>	<b>Model 5</b>	<b>Model 6</b>	<b>Model 7</b>									
Between Schools	Classroom Characteristics	Model 1 with Teacher Characteristics	Model 2 with School Climate	Model 3 with School Location and Size	Model 4 with Home-School Interaction	Model 5 with Home Background Index	Home Background Index Only									
Within Schools	20%	32%	34%	32%	54%	55%	32%									
Total	80%	100%														
	32%	32%	34%	32%	54%	55%	32%									
<b>Percentage of Between School Variance Explained by Model</b>	32%	32%	34%	32%	54%	55%	32%									
<b>Regression Coefficient Estimates (With Probabilities Indicating Significance Levels)</b>	<b>Coeff.</b>	<b>Prob.</b>	<b>Coeff.</b>	<b>Prob.</b>	<b>Coeff.</b>	<b>Prob.</b>	<b>Coeff.</b>	<b>Prob.</b>								
Intercept	266	0.00	270	0.00	285	0.00	265	0.00	89	0.38	116	0.26	544	0.00		
Homework (3 Subjects)	44	0.03	41	0.05	32	0.14	36	0.10	27	0.17	30	0.12				
Homework (Amount)	-37	0.14	-33	0.19	-26	0.31	-25	0.34	5	0.83	6	0.81				
Homework (In Class Checking)	3	0.74	3	0.77	0	1.00	0	0.99	4	0.64	4	0.63				
Attitude to Mathematics	43	0.04	46	0.03	56	0.01	52	0.03	41	0.05	41	0.05				
Classroom Environment	10	0.53	7	0.68	4	0.80	7	0.68	21	0.17	21	0.17				
Math Class Size	1	0.21	1	0.24	1	0.21	0	0.88	-1	0.67	-1	0.64				
Teaching Experience			0	0.35	0	0.30	0	0.29	0	0.54	0	0.67				
Student Admin. Violations			8	0.45	8	0.45	7	0.52	11	0.25	11	0.26				
Serious Student Misbehaviors			-16	0.05	-16	0.05	-14	0.08	-12	0.09	-13	0.08				
Urban Location							1	0.82	-5	0.28	-7	0.15				
Class Size							2	0.41	1	0.56	1	0.59				
Future Aspirations									27	0.00	23	0.00				
Self Press									57	0.12	56	0.12				
Mother's Press									-3	0.94	-6	0.88				
Home Background Index													30	0.12	55	0.00

SOURCE: IEA Third International Mathematics and Science Study (TIMSS), 1994-95.

\*Eighth grade in most countries; see Exhibit 1 for information about the grades tested in each country.



## Exhibit C.16 Predictors of School Effectiveness in Mathematics, Eighth Grade\*, Slovenia

Models of School Effectiveness							
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
<b>Variance Decomposition</b>							
Between Schools	12%						
Within Schools	88%						
<b>Total</b>	<b>100%</b>						
<b>Percentage of Between School Variance Explained by Model</b>	42%	40%	38%	36%	51%	51%	32%
	Classroom Characteristics	Model 1 with Teacher Characteristics	Model 2 with School Climate	Model 3 with School Location and Size	Model 4 with Home-School Interaction	Model 5 with Home Background Index	Model 6 with Home Background Index Only
<b>Regression Coefficient Estimates (With Probabilities Indicating Significance Levels)</b>							
<b>Intercept</b>	Coeff. 540 Prob. 0.00	Coeff. 542 Prob. 0.00	Coeff. 541 Prob. 0.00	Coeff. 530 Prob. 0.00	Coeff. 449 Prob. 0.00	Coeff. 425 Prob. 0.00	Coeff. 542 Prob. 0.00
<b>Homework (3 Subjects)</b>	-12 0.57	-12 0.56	-12 0.58	-11 0.63	1 0.96	0 0.99	
<b>Homework (Amount)</b>	-50 0.00	-50 0.00	-50 0.00	-54 0.00	-47 0.01	-47 0.01	
<b>Homework (In Class Checking)</b>	-1 0.93	-1 0.92	-1 0.87	-1 0.88	0 0.97	-1 0.91	
<b>Attitude to Mathematics</b>	1 0.94	1 0.96	2 0.94	3 0.88	-2 0.91	-3 0.88	
<b>Classroom Environment</b>	16 0.12	16 0.12	16 0.13	17 0.11	16 0.12	15 0.14	
<b>Math Class Size</b>	2 0.08	2 0.08	2 0.16	1 0.42	1 0.33	1 0.30	
<b>Teaching Experience</b>		0 0.77	0 0.77	0 0.70	0 0.63	0 0.55	
<b>Student Admin. Violations</b>			0 1.00	0 0.95	-2 0.78	1 0.93	
<b>Serious Student Misbehaviors</b>			2 0.83	3 0.70	5 0.53	5 0.56	
<b>Urban Location</b>				-3 0.47	-4 0.24	-4 0.25	
<b>Class Size</b>				1 0.47	0 0.80	0 0.72	
<b>Future Aspirations</b>					13 0.02	16 0.01	
<b>Self Press</b>					38 0.22	43 0.17	
<b>Mother's Press</b>					-26 0.42	-26 0.42	
<b>Home Background Index</b>						-26 0.28	32 0.06

SOURCE: IEA Third International Mathematics and Science Study (TIMSS), 1994-95.

\*Eighth grade in most countries; see Exhibit 1 for information about the grades tested in each country.

## Exhibit C.17 Predictors of School Effectiveness in Mathematics, Eighth Grade\*, Sweden

Models of School Effectiveness														
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7							
<b>Variance Decomposition</b>	<b>Model 1</b>	<b>Model 2</b>	<b>Model 3</b>	<b>Model 4</b>	<b>Model 5</b>	<b>Model 6</b>	<b>Model 7</b>							
Between Schools	Classroom Characteristics	Model 1 with Teacher Characteristics	Model 2 with School Climate	Model 3 with School Location and Size	Model 4 with Home-School Interaction	Model 5 with Home Background Index	Home Background Index Only							
Within Schools	31%	47%	47%	47%	53%	68%	48%							
Total	69%													
	100%													
<b>Percentage of Between School Variance Explained by Model</b>														
	48%	47%	47%	47%	53%	68%	48%							
<b>Regression Coefficient Estimates (With Probabilities Indicating Significance Levels)</b>														
<b>Intercept</b>	Coeff. 222	Prob. 0.00	Coeff. 217	Prob. 0.00	Coeff. 230	Prob. 0.00	Coeff. 195	Prob. 0.00	Coeff. 138	Prob. 0.10	Coeff. 166	Prob. 0.02	Coeff. 518	Prob. 0.00
<b>Homework (3 Subjects)</b>	Coeff. 34	Prob. 0.03	Coeff. 36	Prob. 0.03	Coeff. 33	Prob. 0.04	Coeff. 32	Prob. 0.05	Coeff. 31	Prob. 0.06	Coeff. 26	Prob. 0.07		
<b>Homework (Amount)</b>	Coeff. -59	Prob. 0.01	Coeff. -59	Prob. 0.01	Coeff. -55	Prob. 0.02	Coeff. -49	Prob. 0.04	Coeff. -52	Prob. 0.02	Coeff. -49	Prob. 0.02		
<b>Homework (In Class Checking)</b>	Coeff. 0	Prob. 0.93	Coeff. 0	Prob. 0.96	Coeff. 0	Prob. 0.95	Coeff. -1	Prob. 0.77	Coeff. -2	Prob. 0.65	Coeff. -1	Prob. 0.89		
<b>Attitude to Mathematics</b>	Coeff. 53	Prob. 0.00	Coeff. 54	Prob. 0.00	Coeff. 53	Prob. 0.00	Coeff. 53	Prob. 0.00	Coeff. 43	Prob. 0.01	Coeff. 49	Prob. 0.00		
<b>Classroom Environment</b>	Coeff. 8	Prob. 0.48	Coeff. 6	Prob. 0.60	Coeff. 6	Prob. 0.61	Coeff. 6	Prob. 0.63	Coeff. 3	Prob. 0.83	Coeff. -8	Prob. 0.42		
<b>Math Class Size</b>	Coeff. 4	Prob. 0.00	Coeff. 4	Prob. 0.00	Coeff. 4	Prob. 0.00	Coeff. 3	Prob. 0.00	Coeff. 3	Prob. 0.00	Coeff. 2	Prob. 0.00		
<b>Teaching Experience</b>	Coeff. 0	Prob. 0.56	Coeff. 0	Prob. 0.60	Coeff. 0	Prob. 0.60	Coeff. 0	Prob. 0.50	Coeff. 0	Prob. 0.32	Coeff. 0	Prob. 0.21		
<b>Student Admin. Violations</b>	Coeff. -2	Prob. 0.74	Coeff. -2	Prob. 0.74	Coeff. -2	Prob. 0.74	Coeff. -1	Prob. 0.85	Coeff. 1	Prob. 0.83	Coeff. 3	Prob. 0.48		
<b>Serious Student Misbehaviors</b>	Coeff. -3	Prob. 0.77	Coeff. -3	Prob. 0.77	Coeff. -3	Prob. 0.77	Coeff. -4	Prob. 0.63	Coeff. -6	Prob. 0.48	Coeff. -7	Prob. 0.33		
<b>Urban Location</b>	Coeff. 3	Prob. 0.43	Coeff. 3	Prob. 0.43	Coeff. 3	Prob. 0.43	Coeff. 3	Prob. 0.43	Coeff. 0	Prob. 0.95	Coeff. -1	Prob. 0.70		
<b>Class Size</b>	Coeff. 1	Prob. 0.20	Coeff. 1	Prob. 0.20	Coeff. 1	Prob. 0.20	Coeff. 1	Prob. 0.20	Coeff. 1	Prob. 0.22	Coeff. 1	Prob. 0.10		
<b>Future Aspirations</b>	Coeff. 20	Prob. 0.00	Coeff. 20	Prob. 0.00	Coeff. 20	Prob. 0.00	Coeff. 20	Prob. 0.00	Coeff. 20	Prob. 0.00	Coeff. 13	Prob. 0.00		
<b>Self Press</b>	Coeff. 7	Prob. 0.77	Coeff. 7	Prob. 0.77	Coeff. 7	Prob. 0.77	Coeff. 7	Prob. 0.77	Coeff. 7	Prob. 0.77	Coeff. 7	Prob. 0.77		
<b>Mother's Press</b>	Coeff. 15	Prob. 0.53	Coeff. 15	Prob. 0.53	Coeff. 15	Prob. 0.53	Coeff. 15	Prob. 0.53	Coeff. 15	Prob. 0.53	Coeff. 33	Prob. 0.13		
<b>Home Background Index</b>	Coeff. 83	Prob. 0.00	Coeff. 83	Prob. 0.00	Coeff. 83	Prob. 0.00	Coeff. 83	Prob. 0.00	Coeff. 83	Prob. 0.00	Coeff. 110	Prob. 0.00		

SOURCE: IEA Third International Mathematics and Science Study (TIMSS), 1994-95.

\*Eighth grade in most countries; see Exhibit 1 for information about the grades tested in each country.

**Exhibit C.18** Predictors of School Effectiveness in Mathematics, Eighth Grade\*, United States

Models of School Effectiveness							
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
<b>Variance Decomposition</b>							
Between Schools	52%						
Within Schools	48%						
<b>Total</b>	<b>100%</b>						
<b>Percentage of Between School Variance Explained by Model</b>	52%	55%	54%	54%	61%	73%	64%
	Classroom Characteristics	Model 1 with Teacher Characteristics	Model 2 with School Climate	Model 3 with School Location and Size	Model 4 with Home-School Interaction	Model 5 with Home Background Index	Model 6 with Home Background Index Only
<b>Regression Coefficient Estimates (With Probabilities Indicating Significance Levels)</b>							
<b>Intercept</b>	237	223	232	233	384	442	504
	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Homework (3 Subjects)</b>	62	59	58	59	44	20	
	0.00	0.00	0.00	0.00	0.00	0.06	
<b>Homework (Amount)</b>	-16	-15	-13	-14	-26	-21	
	0.38	0.40	0.46	0.45	0.14	0.16	
<b>Homework (In Class Checking)</b>	20	21	20	20	18	12	
	0.01	0.01	0.01	0.01	0.02	0.07	
<b>Attitude to Mathematics</b>	-24	-16	-15	-14	-22	-12	
	0.13	0.30	0.34	0.41	0.20	0.45	
<b>Classroom Environment</b>	70	63	62	61	54	34	
	0.00	0.00	0.00	0.00	0.00	0.00	
<b>Math Class Size</b>	0	0	0	0	0	0	
	0.19	0.33	0.33	0.33	0.21	0.36	
<b>Teaching Experience</b>		1	1	1	1	1	
		0.00	0.01	0.01	0.01	0.01	
<b>Student Admin. Violations</b>			-2	-1	-4	2	
			0.78	0.80	0.50	0.70	
<b>Serious Student Misbehaviors</b>			-1	-1	2	0	
			0.89	0.93	0.74	0.96	
<b>Urban Location</b>				-4	-4	-4	
				0.40	0.30	0.29	
<b>Class Size</b>				0	0	0	
				0.85	0.65	0.74	
<b>Future Aspirations</b>					13	9	
					0.00	0.03	
<b>Self Press</b>					3	-15	
					0.91	0.58	
<b>Mother's Press</b>					-91	-46	
					0.01	0.12	
<b>Home Background Index</b>						80	
						0.00	
						122	
						0.00	
						0.00	

SOURCE: IEA Third International Mathematics and Science Study (TIMSS), 1994-95.

\*Eighth grade in most countries; see Exhibit 1 for information about the grades tested in each country.

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