Appendix 1 – Supplementary Table 1. Percent of usual vitamin D intakes above the Tolerable Upper Intake Level (UL) stratified by sex and age subgroups based on modeling both full fortification (FF) and mature market (MM) scenarios*.

		Model 1†	Model 2‡		Model 3§		Model 4‖		Model 5¶	
Sex	Age (y)	FF	FF	MM	FF	MM	FF	MM	FF	MM
Both	1 to 3	0	0	0	0	0	0	0	0	0
	4 to 8	0	0	0	0	0	0	0	0	0
Male										
	9 to 13	0	0	0	0	0	0	0	0	0
	14 to 18	0	0	0	0	0	0	0	0	0
	19 to 30	0	0	0	0	0	0	0	0	0
	31 to 50	0	0	0	0	0	0	0	0	0
	51 to 70	0	0	0	0	0	0	0	0	0
	>70	0	0	0	0	0	0	0	0	0
	≥19	0	0	0	0	0	0	0	0	0
Female										
	9 to 13	0	0	0	0	0	0	0	0	0
	14 to 18	0	0	0	0	0	0	0	0	0
	19 to 30	0	0	0	0	0	0	0	0	0
	31 to 50	0	0	0	0	0	0	0	0	0
	51 to 70	0	0	0	0	0	0	0	0	0
	>70	0	0	0	0	0	0	0	0	0
	≥19	0	0	0	0	0	0	0	0	0

* Model 1 is the comparison model and therefore based on full fortification scenario; in Models 2-5, mature market scenarios were used assuming fortification of 33% of cheeses and yogurts; model scenarios were conducted using Schedule M reference amounts[33] as the serving size. Standard errors are zero for all estimates and therefore not shown.

†This model served as the baseline model and it included current vitamin D fortification practices and the 2011 Interim Market Authorization, i.e. simulation of yeast-leavened bakery products to contain 2.25 µg of vitamin D per 100g of product.

‡Milk was simulated at 2.7 µg of vitamin D per 250 mL serving, and cheeses and yogurts were simulated to contain 1.25 µg of vitamin D per serving.

§Milk, cheeses and yogurts were simulated to contain 3.75 µg of vitamin D per serving.

||Milk was simulated at 6.75 µg of vitamin D per 250 mL serving, and cheeses and yogurts were simulated to contain 3.75 µg of vitamin D per serving.

¶Milk, cheeses and yogurts were simulated to contain 6.75 µg of vitamin D per serving.

Appendix 1 – Supplementary Table 2. Distribution of vitamin D intakes for Model 1* stratified by sex and age subgroups based on modeling full fortification scenario.

			Percentile of Intake						
Sex	Age	n	5th (SE†)	10th (SE)	25th (SE)	50th (SE)	75th (SE)	90th (SE)	95th (SE)
Both	1 to 3	2193	2.7 (0.2)	3.5 (0.2)	5.1 (0.2)	7.0 (0.2)	9.2 (0.2)	11.7 (0.3)	13.5 (0.5)
	4 to 8	3343	3.4 (0.1)	4.0 (0.1)	5.2 (0.1)	6.6 (0.1)	8.5 (0.2)	10.6 (0.3)	12.2 (0.4)
Male									
	9 to 13	2149	4.1 (0.2)	4.8 (0.2)	6.2 (0.2)	8.0 (0.2)	10.3 (0.3)	12.6 (0.4)	14.3 (0.5)
	14 to 18	2397	3.9 (0.2)	4.7 (0.2)	6.4 (0.2)	8.7 (0.3)	11.7 (0.4)	15.2 (0.5)	17.8 (0.8)
	19 to 30	1897	3.2 (0.3)	3.8 (0.3)	5.0 (0.3)	6.5 (0.3)	8.8 (0.4)	11.5 (0.6)	13.6 (0.9)
	31 to 50	2750	3.3 (0.2)	3.9 (0.2)	5.1 (0.2)	6.7 (0.2)	9.1 (0.3)	12.0 (0.6)	14.2 (0.9)
	51 to 70	2725	3.6 (0.2)	4.2 (0.2)	5.5 (0.3)	7.7 (0.4)	11.0 (0.7)	15.5 (1.2)	19.2 (1.7)
	>70	1601	3.4 (0.2)	3.9 (0.3)	5.1 (0.3)	6.9 (0.4)	9.4 (0.6)	13.0 (0.9)	16.0 (1.3)
	19+	8973	3.3 (0.1)	4.0 (0.1)	5.1 (0.1)	6.9 (0.2)	9.6 (0.3)	13.0 (0.5)	15.8 (0.7)
Female									
	9 to 13	2043	3.2 (0.2)	3.8 (0.2)	4.9 (0.2)	6.3 (0.2)	8.3 (0.3)	10.5 (0.4)	12.0 (0.5)
	14 to 18	2346	2.2 (0.2)	2.8 (0.2)	4.1 (0.2)	5.7 (0.2)	7.9 (0.3)	10.5 (0.5)	12.5 (0.6)
	19 to 30	1915	2.4 (0.2)	2.9 (0.2)	3.8 (0.2)	5.1 (0.2)	6.8 (0.3)	8.9 (0.4)	10.5 (0.6)
	31 to 50	2851	2.8 (0.2)	3.3 (0.2)	4.2 (0.2)	5.6 (0.3)	7.8 (0.5)	10.8 (1.0)	13.1 (1.4)
	51 to 70	3407	2.6 (0.2)	3.0 (0.2)	4.0 (0.2)	5.4 (0.2)	7.6 (0.4)	10.6 (0.8)	13.0 (1.2)
	>70	2769	3.1 (0.3)	3.6 (0.3)	4.6 (0.5)	6.4 (0.8)	8.9 (1.1)	12.1 (2.7)	14.7 (2.9)
	19+	10942	2.7 (0.1)	3.2 (0.1)	4.1 (0.1)	5.5 (0.1)	7.6 (0.2)	10.5 (0.5)	12.7 (0.7)

*This model served as the baseline model and it included current vitamin D fortification practices and the 2011 Interim Market Authorization, i.e. simulation of yeast-leavened bakery products to contain 2.25 µg of vitamin D per 100g of product.

†All standard errors were calculated using the bootstrap method for variance estimation.

Appendix 1 – Supplementary Table 3. Distribution of vitamin D intakes for Model 2* stratified by sex and age subgroups based on modeling full fortification scenario.

			Percentile of Intake						
Sex	Age	n	5th (SE†)	10th (SE)	25th (SE)	50th (SE)	75th (SE)	90th (SE)	95th (SE)
Both	1 to 3	2193	3.6 (0.2)	4.5 (0.2)	6.2 (0.2)	8.1 (0.2)	10.4 (0.2)	13.0 (0.4)	14.8 (0.5)
	4 to 8	3343	4.4 (0.2)	5.1 (0.2)	6.4 (0.1)	7.9 (0.2)	9.9 (0.2)	12.1 (0.3)	13.7 (0.4)
Male									
	9 to 13	2149	5.1 (0.2)	5.9 (0.2)	7.4 (0.2)	9.5 (0.2)	11.9 (0.3)	14.6 (0.5)	16.4 (0.6)
	14 to 18	2397	5.1 (0.3)	6.1 (0.3)	8.0 (0.3)	10.5 (0.3)	13.7 (0.4)	17.5 (0.6)	20. (0.8)
	19 to 30	1897	4.2 (0.3)	5.0 (0.3)	6.3 (0.3)	8.0 (0.3)	10.6 (0.4)	13.6 (0.7)	15.7 (0.9)
	31 to 50	2750	4.0 (0.3)	4.7 (0.3)	6.1 (0.2)	7.9 (0.3)	10.7 (0.4)	14.2 (0.7)	17.0 (1.0)
	51 to 70	2725	4.3 (0.3)	4.9 (0.3)	6.3 (0.3)	8.6 (0.4)	12.1 (0.7)	16.6 (1.2)	20.3 (1.7)
	>70	1601	3.6 (0.3)	4.3 (0.3)	5.6 (0.3)	7.6 (0.4)	10.3 (0.6)	14.2 (1.0)	17.4 (1.4)
	19+	8973	4.0 (0.1)	4.8 (0.1)	6.1 (0.1)	8.1 (0.2)	11.0 (0.3)	14.9 (0.5)	17.9 (0.7)
Female									
	9 to 13	2043	4.1 (0.2)	4.7 (0.2)	6.0 (0.2)	7.6 (0.2)	9.7 (0.3)	11.9 (0.4)	13.5 (0.5)
	14 to 18	2346	3.1 (0.2)	3.8 (0.2)	5.2 (0.2)	7.0 (0.2)	9.3 (0.3)	12.1 (0.5)	14.2 (0.6)
	19 to 30	1915	3.1 (0.2)	3.7 (0.2)	4.8 (0.2)	6.3 (0.2)	8.3 (0.3)	10.5 (0.4)	12.1 (0.6)
	31 to 50	2851	3.5 (0.2)	4.1 (0.2)	5.2 (0.2)	6.8 (0.3)	9.3 (0.5)	12.3 (0.9)	14.6 (1.4)
	51 to 70	3407	3.2 (0.2)	3.8 (0.2)	4.8 (0.2)	6.4 (0.2)	8.7 (0.4)	11.8 (0.8)	14.3 (1.2)
	>70	2769	3.6 (0.3)	4.2 (0.3)	5.4 (0.5)	7.2 (0.8)	10.0 (0.9)	13.6 (1.3)	16.5 (1.7)
	19+	10942	3.4 (0.1)	3.9 (0.1)	5.1 (0.1)	6.6 (0.2)	9.0 (0.3)	12.0 (0.5)	14.3 (0.7)

*Milk was simulated at 2.7 µg of vitamin D per 250 mL serving, and cheeses and yogurts were simulated to contain 1.25 µg of vitamin D per serving.

†All standard errors were calculated using the bootstrap method for variance estimation.

Appendix 1 – Supplementary Table 4. Distribution of vitamin D intakes for Model 2* stratified by sex and age subgroups based on modeling mature market scenario†.

			Percentile of Intake						
Sex	Age	n	5th (SE‡)	10th (SE)	25th (SE)	50th (SE)	75th (SE)	90th (SE)	95th (SE)
Both	1 to 3	2193	3.1 (0.2)	3.9 (0.2)	5.5 (0.2)	7.3 (0.2)	9.6 (0.2)	12.2 (0.4)	14.0 (0.5)
	4 to 8	3343	3.9 (0.2)	4.5 (0.2)	5.7 (0.1)	7.1 (0.1)	9.0 (0.2)	11.1 (0.3)	12.6 (0.4)
Male									
	9 to 13	2149	4.6 (0.2)	5.3 (0.2)	6.7 (0.2)	8.5 (0.2)	10.8 (0.3)	13.2 (0.4)	15.0 (0.6)
	14 to 18	2397	4.3 (0.2)	5.2 (0.2)	6.9 (0.2)	9.3 (0.3)	12.4 (0.4)	16.0 (0.5)	18.6 (0.7)
	19 to 30	1897	3.6 (0.3)	4.3 (0.3)	5.5 (0.3)	7.1 (0.3)	9.4 (0.4)	12.3 (0.6)	14.3 (0.9)
	31 to 50	2750	3.5 (0.2)	4.2 (0.2)	5.4 (0.2)	7.1 (0.3)	9.7 (0.4)	13.1 (0.7)	15.7 (1.1)
	51 to 70	2725	3.8 (0.2)	4.5 (0.2)	5.8 (0.3)	8.0 (0.4)	11.3 (0.7)	15.9 (1.2)	19.6 (1.7)
	>70	1601	3.5 (0.3)	4.1 (0.3)	5.3 (0.3)	7.2 (0.4)	9.9 (0.6)	13.6 (0.9)	16.9 (1.3)
	19+	8973	3.6 (0.1)	4.3 (0.1)	5.5 (0.1)	7.3 (0.2)	10.1 (0.3)	13.8 (0.5)	16.7 (0.7)
Female									
	9 to 13	2043	3.5 (0.2)	4.1 (0.2)	5.2 (0.2)	6.8 (0.2)	8.8 (0.3)	10.9 (0.4)	12.4 (0.5)
	14 to 18	2346	2.5 (0.2)	3.2 (0.2)	4.4 (0.2)	6.1 (0.2)	8.4 (0.3)	11.1 (0.5)	13.1 (0.6)
	19 to 30	1915	2.7 (0.2)	3.2 (0.2)	4.2 (0.2)	5.5 (0.2)	7.3 (0.3)	9.4 (0.4)	10.9 (0.6)
	31 to 50	2851	3.0 (0.2)	3.5 (0.2)	4.5 (0.2)	6.0 (0.3)	8.4 (0.5)	11.4 (0.9)	13.7 (1.4)
	51 to 70	3407	2.8 (0.2)	3.3 (0.2)	4.3 (0.2)	5.8 (0.2)	8.0 (0.4)	11.1 (0.8)	13.6 (1.2)
	>70	2769	3.2 (0.3)	3.8 (0.3)	4.9 (0.4)	6.7 (0.7)	9.4 (0.9)	13.0 (1.3)	16.0 (1.8)
	19+	10942	2.9 (0.1)	3.4 (0.1)	4.4 (0.1)	5.9 (0.2)	8.1 (0.3)	11.1 (0.5)	13.5 (0.7)

*Milk was simulated at 2.7 µg of vitamin D per 250 mL serving, and cheeses and yogurts were simulated to contain 1.25 µg of vitamin D per serving.

†Under mature market scenario, 33% of cheeses and yogurts were assumed to be vitamin D fortified.

‡All standard errors were calculated using the bootstrap method for variance estimation.

Appendix 1 – Supplementary Table 5. Distribution of vitamin D intakes for Model 3* stratified by sex and age subgroups based on modeling full fortification scenario.

			Percentile of Intake						
Sex	Age	n	5th (SE†)	10th (SE)	25th (SE)	50th (SE)	75th (SE)	90th (SE)	95th (SE)
Both	1 to 3	2193	5.6 (0.4)	6.9 (0.3)	9.5 (0.3)	12.2 (0.3)	15.8 (0.4)	19.9 (0.6)	22.7 (0.8)
	4 to 8	3343	6.6 (0.3)	7.7 (0.3)	9.6 (0.2)	12.1 (0.3)	15.2 (0.4)	18.5 (0.6)	20.8 (0.7)
Male									
	9 to 13	2149	7.2 (0.4)	8.4 (0.4)	10.7 (0.4)	13.9 (0.4)	17.8 (0.5)	21.9 (0.7)	24.7 (0.8)
	14 to 18	2397	7.6 (0.5)	9.2 (0.5)	12.0 (0.5)	15.8 (0.5)	20.6 (0.6)	25.8 (0.9)	29.4 (1.1)
	19 to 30	1897	6.0 (0.5)	7.1 (0.5)	9.3 (0.5)	12.4 (0.5)	16.2 (0.7)	20.4 (1.1)	23.4 (1.4)
	31 to 50	2750	5.4 (0.4)	6.5 (0.4)	8.6 (0.4)	11.5 (0.4)	15.6 (0.5)	20.5 (0.9)	24.2 (1.3)
	51 to 70	2725	5.6 (0.4)	6.5 (0.4)	8.5 (0.4)	11.6 (0.5)	15.8 (0.7)	21.1 (1.2)	25.0 (1.7)
	>70	1601	4.4 (0.3)	5.3 (0.4)	7.1 (0.4)	9.7 (0.5)	13.4 (0.8)	18.0 (1.1)	21.7 (1.6)
	19+	8973	5.4 (0.2)	6.4 (0.2)	8.5 (0.2)	11.5 (0.2)	15.7 (0.4)	20.7 (0.6)	24.5 (0.9)
Female									
	9 to 13	2043	6.1 (0.4)	7.0 (0.4)	9.0 (0.4)	11.5 (0.4)	14.6 (0.5)	17.7 (0.6)	19.8 (0.8)
	14 to 18	2346	4.7 (0.3)	5.8 (0.3)	7.8 (0.3)	10.6 (0.3)	14.1 (0.4)	18.0 (0.6)	20.7 (0.8)
	19 to 30	1915	4.6 (0.3)	5.5 (0.3)	7.2 (0.3)	9.6 (0.4)	12.6 (0.5)	15.9 (0.7)	18.1 (0.9)
	31 to 50	2851	4.9 (0.4)	5.9 (0.4)	7.6 (0.4)	10.1 (0.4)	13.7 (0.6)	17.7 (1.0)	20.6 (1.3)
	51 to 70	3407	4.4 (0.3)	5.2 (0.3)	6.8 (0.3)	9.1 (0.3)	12.2 (0.4)	15.9 (0.8)	18.7 (1.1)
	>70	2769	4.7 (0.4)	5.5 (0.4)	7.1 (0.5)	9.6 (0.7)	13.0 (0.9)	17.3 (1.3)	20.6 (1.8)
	19+	10942	4.7 (0.2)	5.5 (0.2)	7.2 (0.2)	9.6 (0.2)	13.0 (0.3)	16.9 (0.5)	19.7 (0.7)

*Milk, cheeses and yogurts were simulated to contain 3.75 µg of vitamin D per serving.

†All standard errors were calculated using the bootstrap method for variance estimation.

Appendix 1 – Supplementary Table 6. Distribution of vitamin D intakes for Model 3* stratified by sex and age subgroups based on modeling mature market scenario†.

			Percentile of Intake						
Sex	Age	n	5th (SE‡)	10th (SE)	25th (SE)	50th (SE)	75th (SE)	90th (SE)	95th (SE)
Both	1 to 3	2193	4.1 (0.3)	5.2 (0.2)	7.4 (0.2)	10.0 (0.2)	13.1 (0.3)	16.7 (0.5)	19.3 (0.8)
	4 to 8	3343	4.9 (0.2)	5.8 (0.2)	7.4 (0.2)	9.5 (0.2)	12.0 (0.3)	14.9 (0.4)	16.8 (0.5)
Male									
	9 to 13	2149	5.6 (0.3)	6.6 (0.3)	8.5 (0.3)	11.2 (0.3)	14.5 (0.4)	18.1 (0.6)	20.6 (0.8)
	14 to 18	2397	5.4 (0.3)	6.6 (0.3)	9.0 (0.3)	12.3 (0.4)	16.5 (0.5)	21.3 (0.7)	24.7 (1.0)
	19 to 30	1897	4.4 (0.4)	5.2 (0.4)	6.9 (0.4)	9.2 (0.4)	12.3 (0.5)	15.8 (0.8)	18.3 (1.1)
	31 to 50	2750	4.3 (0.3)	5.1 (0.3)	6.7 (0.3)	9.0 (0.3)	12.2 (0.5)	16.3 (0.9)	19.4 (1.3)
	51 to 70	2725	4.4 (0.3)	5.2 (0.3)	6.8 (0.3)	9.4 (0.4)	13.2 (0.7)	18.1 (1.2)	22.0 (1.7)
	>70	1601	3.9 (0.3)	4.7 (0.3)	6.2 (0.4)	8.5 (0.5)	11.8 (0.7)	16.2 (1.0)	19.8 (1.4)
	19+	8973	4.2 (0.2)	5.0 (0.2)	6.6 (0.2)	9.0 (0.2)	12.4 (0.3)	16.8 (0.5)	20.2 (0.8)
Female									
	9 to 13	2043	4.6 (0.3)	5.4 (0.3)	6.9 (0.3)	9.0 (0.3)	11.5 (0.4)	14.2 (0.5)	16.0 (0.7)
	14 to 18	2346	3.3 (0.2)	4.1 (0.3)	5.8 (0.3)	8.1 (0.3)	11.1 (0.4)	14.4 (0.6)	16.8 (0.7)
	19 to 30	1915	3.3 (0.3)	4.0 (0.3)	5.2 (0.3)	7.0 (0.3)	9.2 (0.4)	11.6 (0.6)	13.3 (0.7)
	31 to 50	2851	3.5 (0.3)	4.2 (0.3)	5.6 (0.3)	7.7 (0.3)	10.7 (0.5)	14.3 (0.9)	17.0 (1.4)
	51 to 70	3407	3.5 (0.2)	4.1 (0.2)	5.3 (0.2)	7.2 (0.3)	9.7 (0.4)	12.9 (0.8)	15.3 (1.1)
	>70	2769	3.9 (0.3)	4.6 (0.3)	6.0 (0.5)	8.3 (0.7)	11.5 (0.9)	15.5 (1.3)	18.5 (1.7)
	19+	10942	3.4 (0.1)	4.1 (0.1)	5.4 (0.1)	7.4 (0.2)	10.2 (0.3)	13.7 (0.5)	16.4 (0.7)

*Milk, cheeses and yogurts were simulated to contain 3.75 µg of vitamin D per serving.

†Under mature market scenario, 33% of cheeses and yogurts were assumed to be vitamin D fortified.

‡All standard errors were calculated using the bootstrap method for variance estimation.

Appendix 1 – Supplementary Table 7. Distribution of vitamin D intakes for Model 4* stratified by sex and age subgroups based on modeling full fortification scenario.

			Percentile of Intake						
Sex	Age	n	5th (SE†)	10th (SE)	25th (SE)	50th (SE)	75th (SE)	90th (SE)	95th (SE)
Both	1 to 3	2193	6.8 (0.5)	8.9 (0.5)	13.0 (0.4)	17.7 (0.4)	23.6 (0.6)	30.5 (1.0)	35.4 (1.4)
	4 to 8	3343	8.4 (0.4)	10.0 (0.3)	12.8 (0.3)	16.5 (0.4)	21.1 (0.5)	26.1 (0.7)	29.6 (1.0)
Male									
	9 to 13	2149	8.7 (0.5)	10.5 (0.5)	13.9 (0.5)	18.6 (0.6)	24.4 (0.7)	30.7 (0.9)	34.9 (1.2)
	14 to 18	2397	9.0 (0.6)	11.2 (0.6)	15.3 (0.6)	20.6 (0.6)	27.3 (0.8)	34.9 (1.2)	40.4 (1.5)
	19 to 30	1897	6.7 (0.5)	8.1 (0.6)	10.9 (0.6)	15.1 (0.6)	20.4 (0.9)	26.2 (1.3)	30.3 (1.7)
	31 to 50	2750	5.9 (0.4)	7.3 (0.4)	10.1 (0.4)	13.8 (0.5)	19.0 (0.6)	25.5 (1.1)	30.4 (1.7)
	51 to 70	2725	6.0 (0.4)	7.2 (0.4)	9.7 (0.4)	13.6 (0.5)	19.1 (0.8)	25.7 (1.4)	30.5 (1.9)
	>70	1601	5.0 (0.4)	6.2 (0.4)	8.7 (0.5)	12.2 (0.7)	17.3 (1.0)	23.9 (1.5)	29.1 (2.0)
	19+	8973	5.9 (0.2)	7.2 (0.2)	9.9 (0.3)	13.8 (0.3)	19.3 (0.4)	25.9 (0.7)	30.9 (1.0)
Female									
	9 to 13	2043	7.3 (0.5)	8.7 (0.5)	11.5 (0.5)	15.2 (0.5)	19.7 (0.6)	24.4 (0.9)	27.6 (1.1)
	14 to 18	2346	5.3 (0.4)	6.8 (0.4)	9.7 (0.4)	13.7 (0.5)	18.8 (0.6)	24.6 (0.9)	28.6 (1.3)
	19 to 30	1915	5.0 (0.4)	6.2 (0.4)	8.7 (0.4)	12.0 (0.5)	16.2 (0.6)	20.8 (0.9)	24.1 (1.1)
	31 to 50	2851	5.2 (0.4)	6.4 (0.4)	8.8 (0.4)	12.2 (0.5)	16.8 (0.6)	22.1 (1.0)	26.0 (1.4)
	51 to 70	3407	4.9 (0.3)	5.9 (0.3)	7.9 (0.3)	11.0 (0.3)	15.1 (0.5)	19.9 (0.9)	23.4 (1.2)
	>70	2769	5.3 (0.4)	6.3 (0.5)	8.6 (0.6)	12.0 (0.8)	16.7 (1.0)	22.5 (1.5)	26.9 (2.0)
	19+	10942	5.1 (0.2)	6.2 (0.2)	8.5 (0.2)	11.7 (0.3)	16.2 (0.4)	21.4 (0.6)	25.2 (0.8)

*Milk was simulated at 6.75 µg of vitamin D per 250 mL serving, and cheeses and yogurts were simulated to contain 3.75 µg of vitamin D per serving.

†All standard errors were calculated using the bootstrap method for variance estimation.

Appendix 1 – Supplementary Table 8. Distribution of vitamin D intakes for Model 4* stratified by sex and age subgroups based on modeling mature market scenario†.

			Percentile of Intake						
Sex	Age	n	5th (SE‡)	10th (SE)	25th (SE)	50th (SE)	75th (SE)	90th (SE)	95th (SE)
Both	1 to 3	2193	5.2 (0.4)	7.1 (0.4)	10.8 (0.4)	15.5 (0.4)	21.0 (0.5)	27.6 (0.9)	32.6 (1.4)
	4 to 8	3343	6.4 (0.3)	7.8 (0.3)	10.5 (0.3)	13.9 (0.3)	18.2 (0.4)	23.0 (0.6)	26.3 (0.8)
Male									
	9 to 13	2149	7.1 (0.4)	8.6 (0.4)	11.5 (0.5)	15.7 (0.5)	20.9 (0.6)	26.4 (0.9)	30.2 (1.1)
	14 to 18	2397	6.5 (0.5)	8.3 (0.5)	12.0 (0.5)	17.0 (0.6)	23.2 (0.8)	30.6 (1.2)	35.9 (1.5)
	19 to 30	1897	4.8 (0.4)	6.0 (0.5)	8.3 (0.5)	12.0 (0.6)	16.9 (0.8)	22.5 (1.2)	26.6 (1.5)
	31 to 50	2750	4.6 (0.3)	5.6 (0.4)	7.9 (0.4)	11.0 (0.4)	15.5 (0.6)	21.2 (1.0)	25.6 (1.6)
	51 to 70	2725	4.8 (0.3)	5.8 (0.3)	7.9 (0.4)	11.5 (0.5)	16.4 (0.8)	23.0 (1.4)	28.1 (2.0)
	>70	1601	4.4 (0.3)	5.4 (0.4)	7.6 (0.4)	10.9 (0.6)	15.7 (0.9)	22.3 (1.4)	27.6 (2.0)
	19+	8973	4.6 (0.2)	5.6 (0.2)	7.9 (0.2)	11.1 (0.3)	15.9 (0.4)	22.0 (0.7)	26.6 (1.0)
Female									
	9 to 13	2043	5.7 (0.4)	6.9 (0.4)	9.3 (0.4)	12.5 (0.4)	16.6 (0.6)	21.0 (0.8)	24.1 (1.0)
	14 to 18	2346	3.8 (0.3)	4.9 (0.3)	7.4 (0.3)	11.0 (0.4)	15.7 (0.6)	21.0 (0.9)	24.9 (1.3)
	19 to 30	1915	3.6 (0.3)	4.6 (0.3)	6.5 (0.4)	9.4 (0.4)	13.1 (0.6)	17.3 (0.8)	20.3 (1.1)
	31 to 50	2851	3.9 (0.3)	4.8 (0.3)	6.8 (0.4)	9.9 (0.4)	14.1 (0.6)	19.1 (1.0)	22.9 (1.4)
	51 to 70	3407	3.7 (0.2)	4.6 (0.2)	6.3 (0.2)	9.0 (0.3)	12.8 (0.5)	17.6 (0.9)	21.4 (1.3)
	>70	2769	4.4 (0.3)	5.3 (0.4)	7.3 (0.5)	10.5 (0.8)	14.9 (1.0)	20.4 (1.5)	24.7 (1.9)
	19+	10942	3.8 (0.1)	4.7 (0.2)	6.6 (0.2)	9.4 (0.2)	13.4 (0.3)	18.3 (0.5)	21.9 (0.8)

*Milk was simulated at 6.75 µg of vitamin D per 250 mL serving, and cheeses and yogurts were simulated to contain 3.75 µg of vitamin D per serving.

†Under mature market scenario, 33% of cheeses and yogurts were assumed to be vitamin D fortified.

‡All standard errors were calculated using the bootstrap method for variance estimation.

Appendix 1 – Supplementary Table 9. Distribution of vitamin D intakes for Model 5* stratified by sex and age subgroups based on modeling full fortification scenario.

			Percentile of Intake						
Sex	Age	n	5th (SE†)	10th (SE)	25th (SE)	50th (SE)	75th (SE)	90th (SE)	95th (SE)
Both	1 to 3	2193	8.4 (0.6)	10.8 (0.6)	15.3 (0.5)	20.4 (0.5)	26.9 (0.7)	34.5 (1.1)	39.8 (1.5)
	4 to 8	3343	10.2 (0.5)	12.0 (0.4)	15.3 (0.4)	19.6 (0.4)	24.9 (0.6)	30.8 (1.0)	34.8 (1.2)
Male									
	9 to 13	2149	10.4 (0.6)	12.4 (0.6)	16.5 (0.6)	22 (0.7)	28.7 (0.8)	35.9 (1.1)	40.8 (1.4)
	14 to 18	2397	11.4 (0.8)	14.0 (0.8)	18.6 (0.7)	24.9 (0.8)	32.8 (1.0)	41.4 (1.4)	47.4 (1.8)
	19 to 30	1897	8.3 (0.7)	10.2 (0.8)	13.8 (0.8)	18.9 (0.9)	25.3 (1.2)	32.3 (1.7)	37.3 (2.2)
	31 to 50	2750	7.2 (0.6)	8.9 (0.6)	12.3 (0.6)	17.1 (0.6)	23.6 (0.8)	31.2 (1.3)	36.8 (1.9)
	51 to 70	2725	7.0 (0.5)	8.4 (0.5)	11.4 (0.6)	16.2 (0.6)	22.4 (0.9)	29.6 (1.4)	34.7 (1.9)
	>70	1601	5.6 (0.5)	6.9 (0.5)	9.6 (0.6)	13.7 (0.8)	19.4 (1.1)	26.5 (1.7)	31.8 (2.2)
	19+	8973	7.0 (0.3)	8.6 (0.3)	11.9 (0.3)	16.8 (0.4)	23.5 (0.5)	31.1 (0.8)	36.6 (1.1)
Female									
	9 to 13	2043	9.0 (0.6)	10.7 (0.6)	14.0 (0.6)	18.3 (0.6)	23.4 (0.8)	28.7 (1.1)	32.3 (1.4)
	14 to 18	2346	6.8 (0.5)	8.6 (0.5)	12.0 (0.5)	16.8 (0.6)	22.7 (0.7)	29.1 (1.1)	33.4 (1.4)
	19 to 30	1915	6.4 (0.6)	7.9 (0.6)	10.9 (0.5)	14.9 (0.6)	20.0 (0.8)	25.5 (1.2)	29.2 (1.5)
	31 to 50	2851	6.7 (0.6)	8.2 (0.6)	11.2 (0.6)	15.3 (0.6)	20.6 (0.8)	26.7 (1.1)	30.9 (1.5)
	51 to 70	3407	5.7 (0.4)	7.0 (0.4)	9.6 (0.4)	13.3 (0.4)	18.1 (0.6)	23.6 (0.9)	27.7 (1.3)
	>70	2769	6.1 (0.5)	7.3 (0.6)	10.0 (0.7)	13.9 (0.8)	18.9 (1.0)	24.9 (1.5)	29.4 (1.9)
	19+	10942	6.3 (0.3)	7.7 (0.3)	10.5 (0.3)	14.4 (0.3)	19.6 (0.4)	25.6 (0.6)	29.8 (0.8)

*Milk, cheeses and yogurts were simulated to contain 6.75 µg of vitamin D per serving.

†All standard errors were calculated using the bootstrap method for variance estimation.

Appendix 1 – Supplementary Table 10. Distribution of vitamin D intakes for Model 5* stratified by sex and age subgroups based on modeling mature market scenario†.

			Percentile of Intake						
Sex	Age	n	5th (SE‡)	10th (SE)	25th (SE)	50th (SE)	75th (SE)	90th (SE)	95th (SE)
Both	1 to 3	2193	5.8 (0.4)	7.6 (0.4)	11.5 (0.4)	16.2 (0.4)	21.8 (0.5)	28.3 (0.9)	33.2 (1.4)
	4 to 8	3343	7.2 (0.4)	8.6 (0.4)	11.4 (0.3)	14.9 (0.4)	19.4 (0.5)	24.5 (0.8)	28.1 (1.0)
Male									
	9 to 13	2149	7.7 (0.5)	9.3 (0.5)	12.5 (0.5)	16.9 (0.5)	22.3 (0.6)	28.1 (0.9)	32.1 (1.2)
	14 to 18	2397	7.5 (0.5)	9.4 (0.5)	13.2 (0.5)	18.3 (0.6)	24.7 (0.8)	32.0 (1.1)	37.2 (1.5)
	19 to 30	1897	5.7 (0.5)	7.0 (0.5)	9.6 (0.5)	13.3 (0.6)	18.1 (0.8)	23.6 (1.2)	27.5 (1.5)
	31 to 50	2750	5.1 (0.4)	6.2 (0.4)	8.6 (0.5)	12.3 (0.5)	17.4 (0.7)	23.6 (1.1)	28.2 (1.7)
	51 to 70	2725	5.4 (0.4)	6.4 (0.4)	8.7 (0.4)	12.5 (0.5)	17.7 (0.8)	24.3 (1.4)	29.2 (2.0)
	>70	1601	4.9 (0.4)	6.0 (0.4)	8.3 (0.5)	11.7 (0.7)	16.7 (1.0)	23.2 (1.4)	28.1 (1.9)
	19+	8973	5.1 (0.2)	6.2 (0.2)	8.7 (0.3)	12.3 (0.3)	17.6 (0.4)	24.1 (0.7)	29.0 (1.1)
Female									
	9 to 13	2043	6.1 (0.4)	7.5 (0.4)	10.2 (0.4)	13.8 (0.5)	18.2 (0.6)	23.1 (0.9)	26.4 (1.1)
	14 to 18	2346	4.1 (0.3)	5.4 (0.4)	8.1 (0.4)	12.0 (0.4)	16.9 (0.6)	22.4 (0.9)	26.3 (1.2)
	19 to 30	1915	4.0 (0.4)	5.1 (0.4)	7.4 (0.4)	10.6 (0.5)	14.8 (0.6)	19.5 (0.9)	22.9 (1.1)
	31 to 50	2851	4.3 (0.3)	5.3 (0.3)	7.5 (0.4)	10.8 (0.5)	15.3 (0.7)	20.6 (1.0)	24.4 (1.4)
	51 to 70	3407	4.3 (0.3)	5.2 (0.3)	7.2 (0.3)	10.0 (0.4)	14.0 (0.5)	18.8 (0.9)	22.4 (1.3)
	>70	2769	4.8 (0.4)	5.8 (0.4)	7.9 (0.6)	11.3 (0.8)	15.8 (1.0)	21.5 (1.5)	25.8 (1.9)
	19+	10942	4.1 (0.2)	5.1 (0.2)	7.2 (0.2)	10.2 (0.3)	14.5 (0.4)	19.6 (0.6)	23.3 (0.8)

*Milk, cheeses and yogurts were simulated to contain 6.75 µg of vitamin D per serving.

†Under mature market scenario, 33% of cheeses and yogurts were assumed to be vitamin D fortified.

‡All standard errors were calculated using the bootstrap method for variance estimation.