Appendix B: Estimated Capital Depreciation Equations

To measure depreciation charges for capital, data are available and reported only for 1977-85. Depreciation charges for the remaining period 1986-97 are projected on the basis of a log-linear regression by fitting the depreciation charges (D_t) at time t as a function of beginning-of-year structure and equipment assets (K_t) for 1977-85. That is,

$$ln\ D_t = \alpha + \beta\ ln\ K_t.$$

A complete listing of fitted depreciation equations for the food manufacturing sector and all individual food manufacturing industries is listed in the following table:

Appendix table B—Estimation results of capital depreciation equations

	Estimated constant	Estimated slope	R-square	D.W.
Food sector	-3.3203	1.0630	0.99	2.60
	(0.3156)	(0.0292)		
Meat products	-2.5058	1.0028	0.87	2.61
	(1.2503)	(0.1460)		
Dairy products	-2.9143	1.0412	2.61	1.68
	(0.7790)	(0.0927)		
Preserved fruits and vegetables	-3.2090	1.0591	0.98	1.86
	(0.4354)	(0.0497)		
Grain mill products	-3.8491	1.1222	0.94	1.70
	(0.9448)	(0.1076)		
Bakery products	-3.4243	1.1039	0.96	2.18
	(0.7369)	(0.0891)		
Sugar and confections	-2.8632	1.0051	0.96	1.92
	(0.6141)	(0.0737)		
Fats and oils	-4.0580	1.1716	0.99	3.16
	(0.3755)	(0.0473)		
Beverages	-3.7038	1.1149	0.99	1.84
	(0.4264)	(0.0457)		
Miscellaneous foods	-1.1906	0.8327	0.89	1.34
	(0.9152)	(0.1108)		

Notes: The depreciation equation is a log-linear form by fitting the depreciation charges as a function of the assets at the beginning-of-year. For each pair of estimates, the upper part is the estimated coefficient, and the lower part in parentheses is the standard error. D.W. = Durbin-Watson statistic.

Source: USDA/Economic Research Service.