

TABLE 7—SUMMARY OF THE EVIDENCE ON RESEARCH PRODUCTIVITY

Scope	Time period	Average annual growth rate (%)	Half-life (years)	Dynamic diminishing returns, β
Aggregate economy	1930–2015	−5.1	14	3.1
Moore’s Law	1971–2014	−6.8	10	0.2
Semiconductor TFP growth	1975–2011	−5.6	12	0.4
Agriculture, US R&D	1970–2007	−3.7	19	2.2
Agriculture, global R&D	1980–2010	−5.5	13	3.3
Corn, version 1	1969–2009	−9.9	7	7.2
Corn, version 2	1969–2009	−6.2	11	4.5
Soybeans, version 1	1969–2009	−7.3	9	6.3
Soybeans, version 2	1969–2009	−4.4	16	3.8
Cotton, version 1	1969–2009	−3.4	21	2.5
Cotton, version 2	1969–2009	+1.3	−55	−0.9
Wheat, version 1	1969–2009	−6.1	11	6.8
Wheat, version 2	1969–2009	−3.3	21	3.7
New molecular entities	1970–2015	−3.5	20	...
Cancer (all), publications	1975–2006	−0.6	116	...
Cancer (all), trials	1975–2006	−5.7	12	...
Breast cancer, publications	1975–2006	−6.1	11	...
Breast cancer, trials	1975–2006	−10.1	7	...
Heart disease, publications	1968–2011	−3.7	19	...
Heart disease, trials	1968–2011	−7.2	10	...
Compustat, sales	3 decades	−11.1	6	1.1
Compustat, market cap	3 decades	−9.2	8	0.9
Compustat, employment	3 decades	−14.5	5	1.8
Compustat, sales/employment	3 decades	−4.5	15	1.1
Census of Manufacturing	1992–2012	−7.8	9	...