

Table 1: *Measured values for the global rate of energy consumption a (TW), global real GDP Y (trillion 1990 MER USD per year), global real wealth K (trillion 1990 MER USD), the ratio $\lambda = a/K$ (mW per 1990 MER USD), and the real growth rate of wealth $\eta = Y/K$ (% per year). Italicized quantities are freely available from the UN or DOE. The value of K in 1970 is estimated using historical statistics from Maddison (2003) (see Garrett, 2011a, Appendix C). **The core of the proposed study is that λ is a constant that links an economic quantity K to a physical quantity a .***

	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
a	7.2	7.5	7.9	8.3	8.4	8.4	8.8	9.1	9.3	9.8
Y	11.5	12.0	12.7	13.5	13.8	13.9	14.6	15.2	15.9	16.5
$K = \int_0^t Y(t') dt'$	821	832	844	857	870	884	898	913	927	944
$\eta = Y/K$	1.40	1.44	1.50	1.57	1.58	1.57	1.63	1.66	1.71	1.75
$\lambda = a/K$	8.8	9.0	9.3	9.7	9.6	9.4	9.8	10.0	10.0	10.4
	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
a	9.6	9.5	9.4	9.5	10.0	10.3	10.6	10.8	11.3	11.5
Y	16.8	17.1	17.3	17.7	18.5	19.2	19.8	20.5	21.4	22.2
$K = \int_0^t Y(t') dt'$	960	977	994	1011	1029	1047	1067	1087	1107	1129
$\eta = Y/K$	1.75	1.75	1.74	1.75	1.80	1.83	1.85	1.88	1.93	1.97
$\lambda = a/K$	10.0	9.7	9.5	9.4	9.7	9.8	9.9	10.0	10.2	10.2
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
a	11.7	11.6	11.6	11.7	11.9	12.2	12.5	12.7	12.9	12.9
Y	22.3	22.6	23.0	23.4	24.1	24.8	25.6	26.6	27.2	28.1
$K = \int_0^t Y(t') dt'$	1151	1173	1196	1219	1242	1266	1291	1317	1343	1370
$\eta = Y/K$	1.93	1.92	1.92	1.92	1.94	1.96	1.99	2.02	2.03	2.05
$\lambda = a/K$	10.2	9.9	9.7	9.6	9.6	9.6	9.7	9.7	9.6	9.4
	2000	2001	2002	2003	2004	2005	2006	2007	2008	
a	13.2	13.4	13.6	14.1	14.9	15.4	15.6	15.9	16.4	
Y	29.3	29.8	30.4	31.2	32.5	33.6	35.0	36.3	37.1	
$K = \int_0^t Y(t') dt'$	1398	1428	1457	1488	1519	1551	1585	1620	1656	
$\eta = Y/K$	2.09	2.08	2.08	2.10	2.14	2.17	2.21	2.24	2.24	
$\lambda = a/K$	9.4	9.4	9.3	9.5	9.8	9.9	9.9	9.8	9.9	