Appendix Table 1: Output per Hour Growth in the OECD Countries, and the post-1973 Productivity Growth Slow-down

(compound average annual growth rates)

	1950-1973	1973-2003	difference
Australia	2.57	1.78	-0.79
Austria	5.91	2.31	-3.61
Belgium	4.46	2.51	-1.95
Canada	2.86	1.25	-1.61
Denmark	4.11	1.73	-2.37
Finland	5.23	2.33	-2.90
France	5.11	2.31	-2.80
Germany*	5.99	2.72	-3.26
Greece	6.41	2.07	-4.34
Ireland	4.31	4.33	0.02
Italy	5.14	1.96	-3.18
Japan	7.27	2.56	-4.71
Luxembourg	3.39	2.12	-1.27
Netherlands	4.36	1.58	-2.78
Norway	4.24	2.94	-1.29
Portugal	6.71	1.86	-4.85
Spain	6.19	2.55	-3.63
Sweden	4.14	1.66	-2.49
Switzerland	3.26	0.99	-2.26
United Kingdom	2.85	2.23	-0.62
United States	3.03	1.32	-1.70
Unweighted Average	4.64	2.15	-2.50

Source: Groningen Growth and Development Centre and the Conference Board, Total Economy Database, February 2004, http://www.ggdc.net.

* data refer to West Germany only, and the growth rate for the latter period is for 1973-1997, the most recent year for which data are available for West Germany.

Appendix Table 2: Output per Hour Levels in the OECD Countries Relative to the United States, and the post-2000 U.S.-European Productivity Divergence

United States=100

	1950	**1995**	**2000**	**2003**
Australia	79.4	80.5	81.4	82.0
Austria	39.2	95.7	102.2	98.9
Belgium	55.8	**111.0**	115.9	109.0
Canada	89.1	86.4	85.3	84.0
Denmark	69.8	**101.4**	100.0	100.2
Finland	40.9	84.4	89.6	89.5
France	49.5	**109.7**	106.7	104.9
All Germany		**103.5**	104.9	103.9
West Germany	43.3	**116.8**		
Greece	23.7	56.5	59.1	62.2
Ireland	33.6	85.1	102.6	107.6
Italy	49.7	**106.3**	101.8	95.5
Japan	20.9	74.3	75.9	76.1
Luxembourg	89.4	**130.5**	137.4	122.5
Netherlands	72.5	**116.3**	109.3	105.2
Norway	56.9	**117.4**	119.6	119.7
Portugal	20.1	53.9	55.5	52.8
Spain	24.9	85.2	76.5	71.8
Sweden	62.1	86.6	88.2	88.0
Switzerland	89.4	90.6	89.4	85.3
United Kingdom	67.8	85.7	86.5	85.3
United States	100	100	100	100
Unweighted Average*	53.9	93.1	94.4	92.2

Source: Groningen Growth and Development Centre and the Conference Board, Total Economy Database, February 2004, http://www.ggdc.net.
* average excludes the United States. For 1950, West Germany is included and All Germany is not included. For 1995, 2000 and 2003, All Germany is included and West Germany is not included.

Appendix Table 3: Industry Contributions to the post-2000 Productivity Growth Acceleration in the United States, NAICS-based

	1998-2000			
	Output per Hour Growth, 1998-2000, % per year	Output Share in the Total Economy, 1998	Absolute Contribution to 1998-2000 Total Economy Average Annual Output per Hour Growth, percentage points	Relative Contribution to 1998-2000 Total Economy Average Annual Output per Hour Growth, %
	[1]	[2]	[3]=[1]*[2]	[4]=[3]/2.00
Total Economy	**2.00**	100	2.00	100
Agriculture, forestry, fishing, and hunting	5.04	0.93	0.05	2.35
Mining	4.06	1.36	0.06	2.76
Construction	-3.82	4.66	-0.18	-8.89
Manufacturing	6.59	14.21	0.94	**46.81**
Durable goods	9.89	8.04	0.80	39.74
Nondurable goods	2.44	6.16	0.15	7.52
Services	1.68	66.00	1.11	**55.51**
Utilities	6.37	1.89	0.12	6.00
Wholesale trade	0.91	6.22	0.06	2.82
Retail trade	3.23	6.60	0.21	10.64
Transportation and warehousing	3.47	3.04	0.11	5.27
Information (publishing, broadcasting, etc.)	3.58	4.15	0.15	7.42
FIRE	3.90	19.20	0.75	37.42
Finance and insurance	6.82	6.99	0.48	23.83
Real estate and rental and leasing	2.12	12.21	0.26	12.96
Professional and business services	-0.86	11.58	-0.10	-5.00
Professional, scientific, and technical services	1.37	6.45	0.09	4.42
Management of companies and enterprises	-1.27	2.03	-0.03	-1.29
Administrative and waste management services	-4.76	3.10	-0.15	-7.37
Education, health care and social assistance	0.00	7.15	0.00	0.01
Educational services	-1.89	0.83	-0.02	-0.79
Health care and social assistance	0.37	6.31	0.02	1.16
Arts, entertainment, recreation, accomodation and food	0.80	3.60	0.03	1.45
Arts, entertainment, and recreation	-0.88	0.93	-0.01	-0.41
Accommodation and food services	1.29	2.67	0.03	1.72
Other services, except government	-2.60	2.57	-0.07	-3.34
Government	0.36	12.84	0.05	2.33
Compositional Shifts			-0.18	-8.88

Appendix Table 3: Industry Contributions to the post-2000 Productivity Growth Acceleration in the United States, NAICS-based (cont.)

	2000-2003			
	Output per Hour Growth, 2000-2003, % per year	Output Share in the Total Economy, 2000	Absolute Contribution to 2000-2003 Total Economy Average Annual Output per Hour Growth, percentage points	Relative Contribution to 2000-2003 Total Economy Average Annual Output per Hour Growth, %
	[5]	[6]	[7]=[5]*[6]	[8]=[7]/3.06
Total Economy	**3.06**	100	3.06	100
Agriculture, forestry, fishing, and hunting	0.31	1.00	0.00	0.10
Mining	-0.64	1.24	-0.01	-0.26
Construction	-0.71	4.44	-0.03	-1.03
Manufacturing	6.53	14.53	0.95	**31.02**
Durable goods	8.09	8.81	0.71	23.32
Nondurable goods	4.07	5.71	0.23	7.60
Services	3.28	66.55	2.18	**71.43**
Utilities	1.58	1.93	0.03	0.99
Wholesale trade	6.84	6.03	0.41	13.47
Retail trade	7.81	6.75	0.53	17.22
Transportation and warehousing	2.06	3.07	0.06	2.07
Information (publishing, broadcasting, etc.)	11.55	4.67	0.54	17.64
FIRE	1.77	19.67	0.35	11.38
Finance and insurance	3.09	7.54	0.23	7.62
Real estate and rental and leasing	0.86	12.13	0.10	3.42
Professional and business services	3.52	11.62	0.41	13.38
Professional, scientific, and technical services	2.36	6.88	0.16	5.31
Management of companies and enterprises	9.01	1.87	0.17	5.50
Administrative and waste management services	2.27	2.88	0.07	2.14
Education, health care and social assistance	-0.17	6.91	-0.01	-0.39
Educational services	-1.64	0.81	-0.01	-0.43
Health care and social assistance	-0.03	6.10	0.00	-0.06
Arts, entertainment, recreation, accomodation and food	1.50	3.57	0.05	1.75
Arts, entertainment, and recreation	1.95	0.90	0.02	0.58
Accommodation and food services	1.34	2.66	0.04	1.17
Other services, except government	0.05	2.33	0.00	0.03
Government	0.20	12.25	0.02	0.79
Compositional Shifts			-0.22	-7.19

Appendix Table 3: Industry Contributions to the post-2000 Productivity Growth Acceleration in the United States, NAICS-based (cont.)

	Difference Between Periods	
	Absolute Change in Contribu-tions, 1998-2000 to 2000-2003	Relative Contribution to the post-2000 Output per Hour Growth Acceleration
	[9]=[7]-[3]	[10]=[9]/1.06
Total Economy	**1.06**	100
Agriculture, forestry, fishing, and hunting	-0.04	-4.15
Mining	-0.06	-5.96
Construction	0.15	13.84
Manufacturing	0.01	**1.16**
Durable goods	-0.08	-7.72
Nondurable goods	0.08	7.76
Services	1.07	**101.52**
Utilities	-0.09	-8.48
Wholesale trade	0.36	**33.59**
Retail trade	0.31	**29.65**
Transportation and warehousing	-0.04	-3.99
Information (publishing, broadcasting, etc.)	0.39	**36.94**
FIRE	-0.40	-37.86
Finance and insurance	-0.24	-23.03
Real estate and rental and leasing	-0.15	-14.60
Professional and business services	0.51	**48.14**
Professional, scientific, and technical services	0.07	6.99
Management of companies and enterprises	0.19	18.34
Administrative and waste management services	0.21	20.11
Education, health care and social assistance	-0.01	-1.13
Educational services	0.00	0.23
Health care and social assistance	-0.03	-2.37
Arts, entertainment, recreation, accomodation and food	0.02	2.32
Arts, entertainment, and recreation	0.03	2.44
Accommodation and food services	0.00	0.12
Other services, except government	0.07	6.42
Government	-0.02	-2.12
Compositional Shifts	-0.04	-4.01

Sources: GDP data from the Bureau of Economic Analysis. GDP estimates for the total economy and sub-aggregates were calculated as the sum of chained-dollar GDP in all component industries to ensure additivity. Hours data for all industries except government and agriculture, forestry, fishing and hunting from the Bureau of Labor Statistics, Current Employment Statistics establishment-based estimates of average hours of production workers multiplied by total employees. For government and agriculture, total hours data were taken from the Bureau of Economic Analysis and were extended to 2003 by applying the 2002-2003 growth rate of Current Employment Statistics total employees estimates for natural resources industries and the government sector respectively to the 2002 estimates. It is therefore implicitly assumed that the average hours of managers grow at the same rate as average hours of production workers in each industry, and that total hours of the self-employed grow at the same rate as total hours of employees. Total economy hours are calculated as the sum of hours in each industry at the most detailed level.

Notes: absolute contributions are calculated by multiplying the output per hour growth rate of each industry by its share of total economy output in the first year of the growth rate. The contributions of sub-aggregates are not identically the sum of contributions of the component industries, but the contributions of industries at the most detailed level plus the contribution of compositional shifts do sum identically to the growth rate of output per hour in the total economy. The contribution of compositional shifts can hence be calculated as the difference between actual total economy output per hour growth and the sum of all the industry contributions at the most detailed level. It can also be calculated as the sum of the compositional shift effects for each industry at the most detailed level. Industry-specific compositional effects can be calculated as the difference in hours shares between the two end years for that industry, multiplied by the result of dividing the difference between the levels of output per hour of the given industry and some reference industry in the last year of the growth rate by the level of total economy output per hour in the first year of the growth rate. In 2000-2003, for example, the largest positive compositional effect was in the real estate and rental and leasing industry (above-average level of output per hour in 2003 and an increased hours share over the period), but this was offset by large negative compositional effects in the durable goods manufacturing and information industries (above-average levels of output per hour in 2003 but falling hours shares over the period) and in the health care and social assistance industry (below-average level of output per hour in 2003 and a rising hours share over the period). In 1998-2000, the largest negative compositional effect was in mining, and the largest positive compositional effect was in information.

Output per hour growth rates are not strictly consistent with those published by the Bureau of Labor Statistics Productivity and Costs program, which are not available to 2003 for many industries and which are not available for all industries. Official Bureau of Labor Statistics estimates show output per hour growth of 4.00 per cent per year in the business sector between 2000 and 2003, 2.93 per cent per year between 1998 and 2000, and 2.75 per cent per year between 1995 and 2000; and 5.07 per cent per year in manufacturing between 2000 and 2003, 4.33 per cent per year between 1998 and 2000, and 4.75 per cent per year between 1995 and 2000. Total economy output per hour, from series calculated by CSLS, was 3.05 per cent per year for 2000-2003, 2.40 per cent per year for 1998-2000, and 2.17 per cent per year for 1995-2000. Average annual growth rates are not compounded, rather they are calculated by dividing the per cent growth rate for the entire period by the number of years in the period. This ensures additivity at the most detailed industry level.

Appendix Table 4: Contributions of Capital Intensity and Total Factor Productivity to the post-2000 Productivity Growth Acceleration in the United States (total economy)

	Output, chained dollars	Total hours worked	End-year net capital stock, chained dollars	Output per Hour	Capital Intensity	Total Factor Productivity
compound average annual growth rates						
1961-1973	4.50	1.83	3.67	2.62	1.81	1.44
1973-1995	2.84	1.59	2.30	1.23	0.70	0.77
1995-2000	4.10	1.94	3.14	2.12	1.17	1.34
1998-2000	4.05	1.63	3.36	2.38	1.70	1.27
2000-2003	1.88	-0.99	2.02	2.90	3.04	0.92
absolute contributions to output per hour growth						
1961-1973	na	na	na	2.62	1.17	1.44
1973-1995	na	na	na	1.23	0.45	0.77
1995-2000	na	na	na	2.12	0.76	1.34
1998-2000	na	na	na	2.38	1.10	1.27
2000-2003	na	na	na	2.90	1.98	0.92
relative contributions to output per hour growth						
1961-1973	na	na	na	100	44.7	54.8
1973-1995	na	na	na	100	36.9	62.9
1995-2000	na	na	na	100	36.1	63.5
1998-2000	na	na	na	100	46.3	53.3
2000-2003	na	na	na	100	68.1	31.6
absolute contributions to output per hour growth acceleration						
95/00-73/95	na	na	na	0.89	0.31	0.57
00/03-95/00	na	na	na	0.79	1.21	-0.43
00/03-98/00	na	na	na	0.52	0.87	-0.35
relative contributions to output per hour growth acceleration						
95/00-73/95	na	na	na	100	35.0	64.4
00/03-95/00	na	na	na	100	154.2	-54.1
00/03-98/00	na	na	na	100	168.7	-68.1

Sources: calculated from the CSLS Aggregate Income and Productivity database (www.csls.ca/data/ipt1.asp).
Notes: capital intensity is defined as capital stock per hour worked.
Capital intensity's contribution to output per hour growth is calculated as growth in capital intensity multiplied by capital's income share.
Labour's (fixed) income share was calculated as 0.35, based on payroll employees and average weekly earnings in 2000 from Current Employment Statistics estimates from the Bureau of Labor Statistics, and GDP in 2000 from the Bureau of Economic Analysis.
The capital share was calculated as unity minus the labour share.
Hence, for the TFP calculation, the simple Cobb-Douglas production function with constant returns to scale was assumed.
Output per hour estimates in this table are not directly consistent with those in Appendix Table 3 due to different source data.

Appendix Table 5: Output per Hour Growth in the OECD Countries, and the post-1995 non-Acceleration in Europe

(compound average annual growth rates)

				differences	
	1973-1995	**1989-1995**	**1995-2003**	**95/03-73/95**	**95/03-89/95**
Australia	1.66	1.81	2.11	0.46	0.30
Austria	2.32	1.92	2.28	-0.04	0.36
Belgium	2.83	2.09	1.64	-1.20	-0.45
Canada	1.15	1.47	1.51	0.36	0.05
Denmark	1.74	2.22	1.72	-0.02	-0.50
Finland	2.22	2.51	2.62	0.40	0.11
France	2.68	1.35	1.29	-1.39	-0.06
Germany*		3.50	1.92		-1.59
Greece	1.70	0.29	3.09	1.39	2.79
Ireland	4.13	3.62	4.89	0.77	1.28
Italy	2.49	2.00	0.51	-1.98	-1.49
Japan	2.71	2.34	2.17	-0.54	-0.18
Luxembourg	2.50	1.53	1.07	-1.43	-0.46
Netherlands	1.94	1.13	0.60	-1.34	-0.53
Norway	3.24	3.57	2.12	-1.12	-1.45
Portugal	1.96	2.58	1.59	-0.37	-0.99
Spain	3.61	2.20	-0.30	-3.91	-2.50
Sweden	1.51	1.84	2.07	0.57	0.23
Switzerland	0.95	0.27	1.11	0.16	0.84
United Kingdom	2.38	2.53	1.81	-0.57	-0.71
United States	1.12	1.03	1.87	0.75	0.84
Europe**	2.39	2.07	1.77	-0.63	-0.30

Source: Groningen Growth and Development Centre and the Conference Board, Total Economy Database, February 2004, http://www.ggdc.net.

* data refer to all of Germany.

** unweighted average of all countries except Australia, Canada, Japan and the United States. Germany has also been excluded where no data are available.

Appendix Table 6: Conventional and Alternative Measures of Output in the University Sector in Canada, 1987-2003

	Output, millions of 1997 constant dollars	Number of employed persons, thousands	Total annual hours worked, thousands	Output per worker, 1997 constant dollars	Output per hour, 1997 constant dollars
1987	7,416	152	251,924	48,824	29.44
1988	7,373	156	259,262	47,294	28.44
1989	7,460	152	255,226	49,242	29.23
1990	7,498	151	247,421	49,756	30.31
1991	7,685	160	267,452	48,118	28.73
1992	7,825	163	263,458	48,125	29.70
1993	8,040	178	291,652	45,091	27.57
1994	8,259	174	287,498	47,491	28.73
1995	8,293	166	273,874	49,840	30.28
1996	8,230	155	260,088	53,232	31.64
1997	8,084	164	264,030	49,412	30.62
1998	7,933	159	254,114	50,019	31.22
1999	8,129	165	276,406	49,297	29.41
2000	8,231	162	264,061	50,968	31.17
2001	8,341	162	262,642	51,427	31.76
2002	8,566	177	284,294	48,480	30.13
2003	8,774	191	303,051	45,983	28.95
compound average annual growth rates					
1987-2003	1.06	1.44	1.16	-0.37	-0.10
1987-1998	0.61	0.39	0.08	0.22	0.53
1998-2003	2.03	3.77	3.59	-1.67	-1.50

Sources: Output from GDP by Industry; employment and hours from unpublished Labour Force Survey data, Statistics Canada.
Number of degrees, diplomas and certificates from Statistics Canada's *Education in Canada* , catalogue number 81-229, 1999 and 2000 editions.

Appendix Table 6: Conventional and Alternative Measures of Output in the University Sector in Canada, 1987-2003 (cont.)

	Under-graduate diplomas and certificates	Graduate diplomas and certificates	Bachelor's degrees	Master's degrees	Earned doctorates	Total university degrees granted	Total degrees per thousand workers	Total degrees per thousand hours
1987	17,568	1,673	103,078	15,968	2,375	140,662	926	0.558
1988	19,235	1,635	103,606	16,320	2,418	143,214	919	0.552
1989	19,922	1,883	104,981	16,750	2,573	146,109	964	0.572
1990	20,815	1,877	109,777	17,653	2,673	152,795	1,014	0.618
1991	21,791	2,215	114,820	18,033	2,947	159,806	1,001	0.598
1992	23,316	2,240	120,745	19,435	3,136	168,872	1,039	0.641
1993	24,044	2,430	123,202	20,818	3,356	173,850	975	0.596
1994	24,341	2,351	126,538	21,292	3,552	178,074	1,024	0.619
1995	23,472	2,191	127,331	21,356	3,716	178,066	1,070	0.650
1996	22,293	2,348	127,989	21,558	3,928	178,116	1,152	0.685
1997	20,501	2,355	125,796	21,319	3,966	173,937	1,063	0.659
1998	18,821	2,392	124,861	22,026	3,976	172,076	1,085	0.677
1999								
2000								
2001								
2002								
2003								
compound average annual growth rates								
1987-2003								
1987-1998	0.63	3.30	1.76	2.97	4.80	1.85	1.45	1.77
1998-2003								

Sources: Output from GDP by Industry; employment and hours from unpublished Labour Force Survey data, Statistics Canada.
Number of degrees, diplomas and certificates from Statistics Canada's *Education in Canada* , catalogue number 81-229, 1999 and 2000 editions.

Appendix Table 7: Output, Hours and Output per Hour in the Construction Industry in Canada and the United States, 1977-2003, 1997=100

	Canada			United States		
	Real Value Added	Hours Worked	Output per Hour	Real Value Added	Hours Worked	Output per Hour
1977	85.3	87.4	97.9	77.2	64.1	120.4
1978	81.5	83.3	98.1	81.6	71.9	113.6
1979	82.9	85.7	96.9	83.8	76.5	109.5
1980	89.5	87.7	102.2	77.0	73.8	104.3
1981	93.8	91.0	103.3	70.3	71.1	98.8
1982	92.7	80.1	116.0	62.3	67.0	93.0
1983	91.1	78.3	116.6	64.8	68.3	94.8
1984	87.2	79.2	110.3	75.4	76.3	98.9
1985	92.1	82.5	111.9	82.5	82.3	100.3
1986	96.3	85.2	113.3	84.9	83.6	101.7
1987	101.6	95.6	106.6	86.3	84.7	101.8
1988	104.6	103.4	101.5	90.3	89.1	101.4
1989	110.5	110.6	100.1	91.0	90.8	100.2
1990	110.0	109.0	101.0	89.1	91.1	97.8
1991	100.8	96.7	104.2	81.6	84.7	96.4
1992	94.7	94.0	100.8	82.6	82.5	100.1
1993	91.6	93.1	98.4	84.8	86.8	97.7
1994	94.5	97.7	96.8	90.2	90.7	99.4
1995	91.6	94.5	97.0	90.8	92.4	98.3
1996	94.8	95.6	99.3	95.7	96.0	99.7
1997	100.0	100.0	100.0	100.0	100.0	100.0
1998	103.3	100.0	103.3	107.5	104.1	103.2
1999	107.9	102.7	105.1	110.1	109.8	100.3
2000	112.9	106.7	105.8	110.7	114.7	96.6
2001	120.2	110.8	108.4	108.4	113.2	95.7
2002	122.2	115.4	105.9	105.0	110.3	95.2
2003	127.7	120.6	105.8	105.1	111.6	94.2
compound average annual growth rates						
1977-2003	1.56	1.25	0.30	1.19	2.16	-0.94
1981-2003	1.41	1.29	0.11	1.85	2.07	-0.22
1981-1989	2.06	2.47	-0.40	3.28	3.10	0.17
1989-1995	-3.08	-2.60	-0.53	-0.03	0.29	-0.33
1995-2000	4.28	2.47	1.76	4.04	4.40	-0.35
2000-2003	4.19	4.17	0.00	-1.71	-0.90	-0.82

Sources: For Canada, output, hours and output per hour indexes from the Productivity Program Database for 1997-2003, CANSIM series v21575134, v21575078, and v21575202, August 17, 2004. For 1977-1996, indexes are based on the growth rates of the corresponding Aggregate Productivity Measures series, not updated since 2002, CANSIM series v719200, v719866, and v720310. For the United States, all data are from the Bureau of Economic Analysis, August 17, 2004. Data for 1998-2003 are based on the North American Industry Classification System, and take growth rates from Standard Industrial Classification-based series for 1977-1997. For output, data for 1977-1997 consistent with the December 2003 Comprehensive Revision were extended to 1998 with the 1998 growth rate from a corresponding series not consistent with the Comprehensive Revision, in order to link to the NAICS-based series in 1998. For hours, average hours of full time plus part time employees were calculated by dividing total hours of full time plus part time employees by full time plus part time employees, and were applied to full time plus part time employees plus the self employed to calculate total hours of all workers (i.e. it is assumed that the self-employed work the same average hours as employees).

Appendix Table 8:
Output per Hour Growth in Canada and the United States in the Total Economy and the Business Sector, 1981-2003
compound average annual rates of change, per cent

	Canada	United States	United States - Canada
Business Sector	1.48	2.17	0.69
Non-business Sector	1.12	0.13	-0.99
Total Economy	1.36	1.70	0.34
Business Sector - Total Economy	0.12	0.46	

Source: Output estimates for the total economy are expenditure-based GDP estimates for both countries. For the non-business sector, output data are GDP by industry estimates for Canada, and are based on a Laspeyres approximation of a chained dollar series from total economy and business sector series from the national accounts for the United States. Total economy hours are from the Productivity Program Database for Canada and an unpublished series from the Bureau of Labor Statistics for the United States. Business sector series are from the Productivity Program Database for Canada (quarterly data converted to annual averages for 1987-2003, taking growth rates from the corresponding Aggregate Productivity Measures series for 1961-1987) and the Productivity and Costs Program for the United States.

Appendix Table 9: Relative Levels of Output per Hour in Canada, 1961-2003 (United States=100)

	Business Sector	Total Economy	Manu-facturing
1961	81.95	84.80	
1962	81.57	85.09	
1963	81.95	85.17	
1964	82.45	85.24	
1965	82.91	85.68	
1966	81.49	84.94	
1967	80.44	84.14	
1968	82.90	85.79	
1969	85.23	87.74	
1970	86.58	88.81	
1971	86.32	87.92	
1972	87.36	88.61	
1973	87.68	88.65	
1974	88.58	89.67	
1975	86.15	88.50	
1976	88.56	90.12	
1977	89.54	91.57	94.54
1978	88.84	91.63	95.11
1979	88.52	91.02	94.02
1980	89.25	91.55	92.22
1981	89.37	89.92	92.07
1982	90.23	91.46	90.24
1983	89.69	90.94	91.30
1984	91.22	91.91	95.19
1985	89.97	91.33	94.47
1986	86.64	88.76	90.85
1987	86.96	88.66	84.29
1988	86.26	88.47	82.47
1989	85.35	88.32	86.20
1990	82.95	87.18	85.96
1991	81.52	86.88	86.82
1992	80.02	85.94	89.19
1993	80.99	86.92	92.42
1994	82.97	88.00	92.10
1995	84.82	89.38	88.09
1996	82.26	88.26	83.62
1997	82.82	88.05	83.45
1998	81.80	88.49	81.43
1999	82.00	87.65	82.00
2000	82.86	88.97	80.36
2001	81.92	88.21	78.01
2002	80.31	87.33	72.74
2003	77.19	85.06	68.90

Sources: CSLS Aggregate Income and Productivity database (www.csls.ca/data/ipt1.asp). 1999 benchmarks for the business sector and manufacturing from Someshwar Rao, Jianmin Tang and Weimin Wang, "Measuring the Canada-U.S. Productivity Gap: Industry Dimensions," *International Productivity Monitor* Number 9, Fall 2004. Manufacturing data from the Bureau of Labor Statistics Foreign Labor Statistics program, series INU0005CA0 and INU0005US0, November 1, 2004.

Appendix Table 10: Machinery and Equipment Capital Intensity and Investment as a Proportion of GDP in Canada and the United States, 1961-2003

	Canada, M&E Capital per Hour, 1999 U.S. dollars	United States, M&E Capital per Hour, 1999 U.S. dollars	Canada as a per cent of the United States, M&E Capital per Hour	Canada, M&E Investment as a proportion of GDP	United States, M&E Investment as a proportion of GDP
1961	3.09	7.79	39.72	6.11	7.78
1962	3.01	7.88	38.24	6.20	8.03
1963	3.00	8.10	37.07	6.40	7.85
1964	3.00	8.23	36.41	7.10	7.96
1965	3.07	8.38	36.70	7.76	8.23
1966	3.17	8.64	36.73	8.47	8.72
1967	3.29	9.03	36.42	7.99	8.58
1968	3.41	9.32	36.64	6.92	8.24
1969	3.47	9.55	36.38	6.90	8.26
1970	3.61	10.09	35.75	6.79	8.00
1971	3.69	10.40	35.49	6.66	7.28
1972	3.77	10.54	35.76	6.69	7.49
1973	3.85	10.76	35.82	7.10	8.01
1974	4.02	11.25	35.69	7.53	8.27
1975	4.28	11.92	35.90	7.81	8.00
1976	4.50	11.95	37.70	7.38	8.10
1977	4.70	12.05	38.98	7.07	8.73
1978	4.81	12.16	39.54	7.17	9.26
1979	4.93	12.55	39.30	7.68	9.63
1980	5.26	13.13	40.08	7.86	9.36
1981	5.74	13.62	42.17	8.83	9.37
1982	6.35	14.15	44.86	7.74	9.10
1983	6.57	14.28	46.02	6.99	9.05
1984	6.67	14.23	46.85	6.91	9.64
1985	6.70	14.57	46.00	7.10	9.70
1986	6.81	14.99	45.44	7.54	9.58
1987	6.96	15.07	46.15	7.70	9.26
1988	7.18	15.11	47.53	8.14	9.17
1989	7.55	15.21	49.66	8.22	9.29
1990	7.93	15.61	50.77	7.71	9.01
1991	8.41	16.15	52.06	7.17	8.64
1992	8.77	16.47	53.22	6.95	8.57
1993	8.84	15.43	57.28	6.71	8.83
1994	8.86	15.49	57.19	7.07	9.06
1995	9.05	15.75	57.43	7.20	9.48
1996	9.28	16.28	56.97	7.29	9.61
1997	9.64	16.66	57.88	8.33	9.82
1998	10.02	17.26	58.04	8.80	10.07
1999	10.37	17.99	57.65	8.87	10.39
2000	10.83	18.87	57.41	8.60	10.53
2001	11.27	19.76	57.02	8.50	9.61
2002	11.49	20.50	56.06	8.03	8.75
2003	11.68	21.13	55.26	7.71	8.75

Sources: M&E capital for Canada from CANSIM table 031-0002, in chained dollars, geometric end-year net stocks. For the United States, data from the Bureau of Economic Analysis are for equipment and software capital (private plus government) in chained dollars, extended backwards using the corresponding chain-type quantity index for 1961-1993 from the September 2002 *Survey of Current Business* . Hours data from the CSLS Aggregate Income and Productivity database. Canadian 1997 dollars converted to 1999 dollars using the implicit price index for M&E capital, calculated from nominal and real M&E capital data. Canadian data converted to U.S. dollars using the 1999 M&E PPP for the private business sector from Someshwar Rao, Jianmin Tang and Weimin Wang, "Measuring the Canada-U.S. Productivity Gap: Industry Dimensions," *International Productivity Monitor* Number 9, Fall 2004. U.S. 2000 dollars converted to 1999 dollars using the implicit price index for M&E capital, calculated from nominal and real M&E capital data. M&E investment for Canada from CANSIM table 031-0002. For the United States, data are for equipment and software investment (private plus government), calculated from NIPA Tables 1.1.5 (line 10, gross private investment) and 3.9.5 (line 5, gross government investment) from the Bureau of Economic Analysis. GDP data from the CSLS Aggregate Income and Productivity database.