

MAINE BUSINESS INSIDE OUT

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Maine Job Creation from the In- or Out-Migration of Establishments

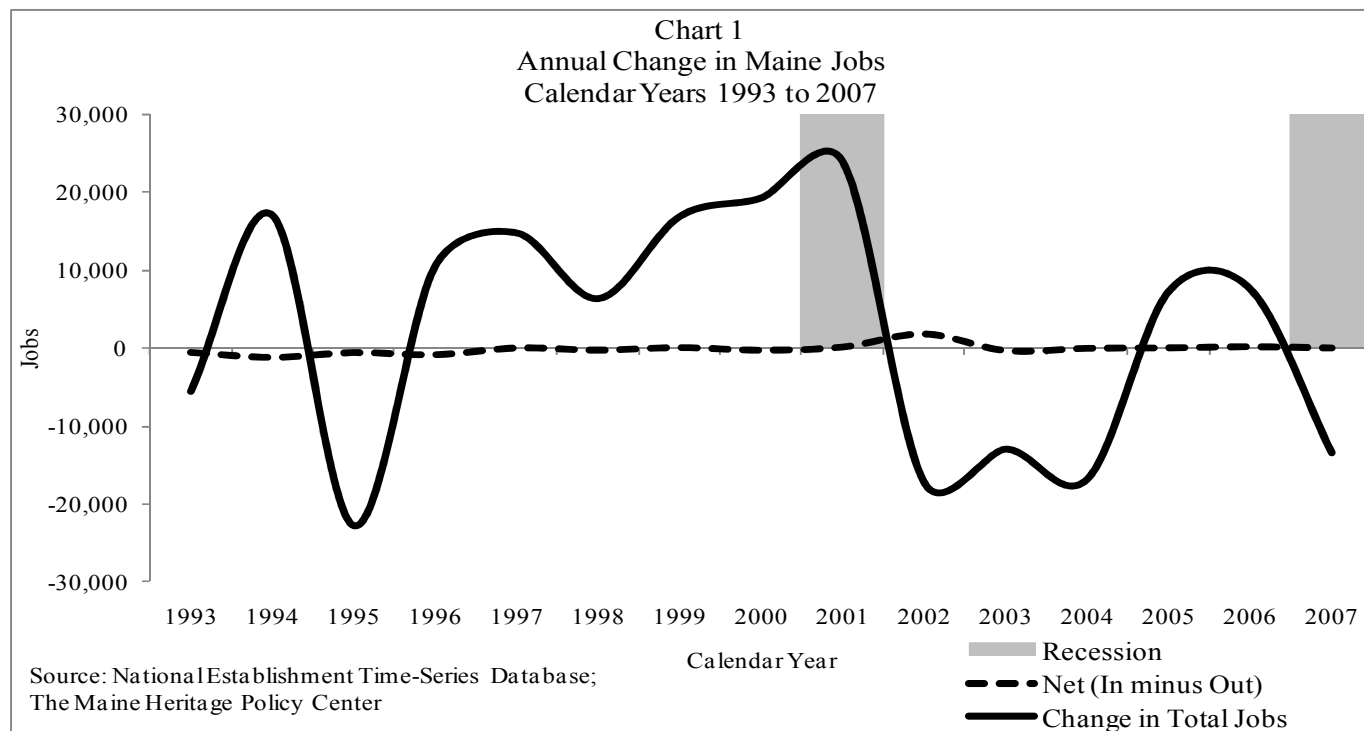
By J. Scott Moody

What is Maine's business climate? That is an age-old question usually answered with one anecdote or another. Depending on one's vantage point, Maine's business climate could be too hot, too cold or just about right. Unfortunately, creating public policy using anecdotes often leads to a "shotgun" approach to legislation where a lot of tiny problems gets addressed but no one is able to put together a view of the bigger picture. A large part of the problem has been a lack of detailed empirical data on Maine's businesses—until now.

This study is the fourth of many studies that will use a powerful new database of Maine's businesses called the National Establishment Time-Series (NETS) Database.[1] NETS is based on the far-reaching Duns & Bradstreet Marketing Information file that has nationally tracked more than 36.5 million establishments between 1989 and 2007. The file tracks businesses via an assigned "DUNS number," the business equivalent of a personal Social Security number. As such, the NETS database is the most comprehensive establishment-level census available.

Maine's state level file contains data for 161,351 commercial, not-for-profit and government establishments between 1989 and 2007.[2] As of 2007, approximately half of those establishments (84,326) still exist with the remainder having either closed, moved out-of-state, or consolidated. These Maine establishments, in 2007, employed 702,028 people.[3]

Every year in Maine, establishments move into the state while others move out of the state. Understanding this dynamic process relating to the movement of organizations, hereafter "in- and out-migration," of establishments is vital to ensuring public policy aids rather than hinders job creation.



Maine Jobs

Between 1993 and 2007, Maine establishments, on average, created 754 jobs from in-migration while losing 823 jobs from out-migration—leaving a job deficit of 69.[4] Over the entire 15-year time-period examined in this study, excessive out-migration has eliminated 1,028 jobs.[5]

Additionally, Chart 1 and Table 1 show that out-migration is a very volatile issue with nearly as many years registering net out-migration of jobs (seven) as from net in-migration of jobs (eight) from relocated establishments. As such, it is no surprise that the year-to-year fluctuations in employment show very little correlation with net migration. In fact, the two are 25 percent negatively correlated which means they often move in the opposite direction.

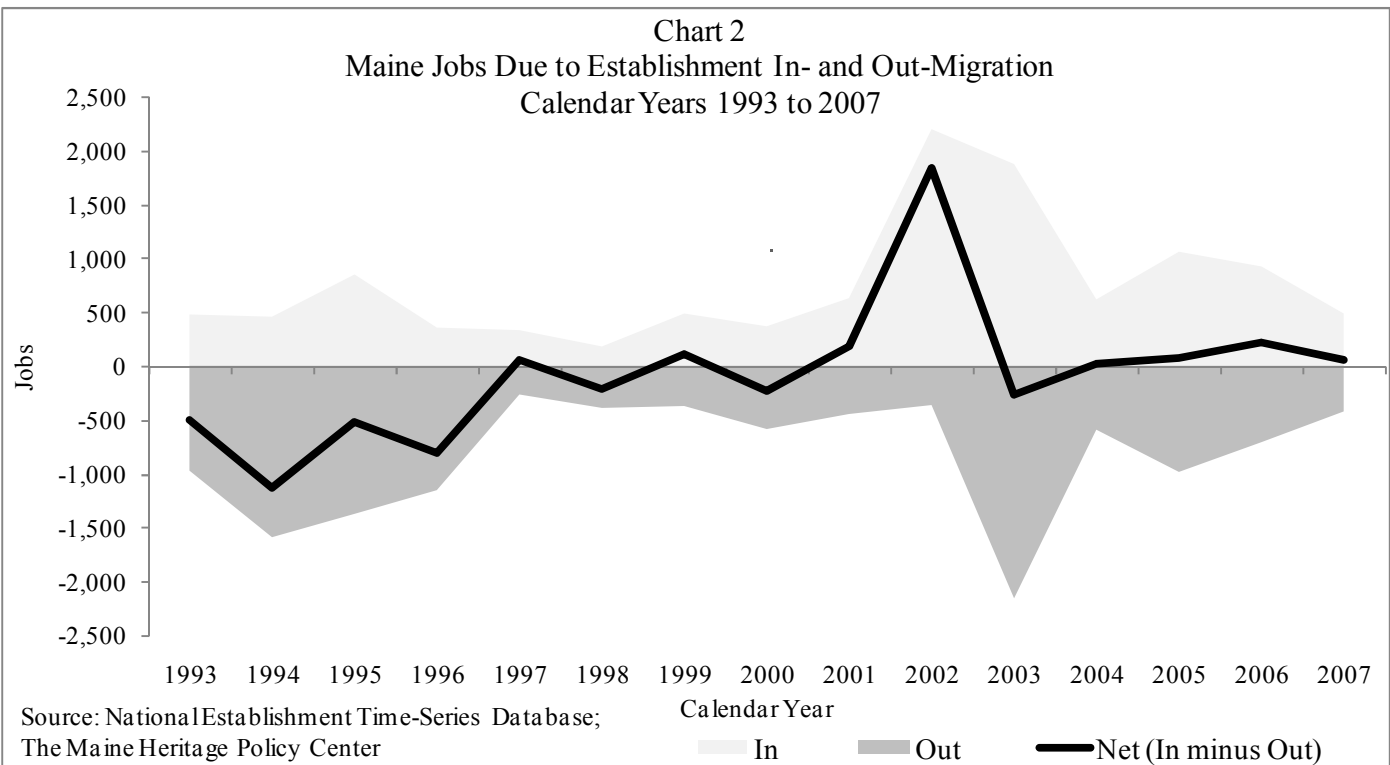
This analysis shows that while the overall number of average yearly jobs lost to out-migration is relatively small, the job losses are also an unpredictable problem that happens in good years and bad years.

Maine Ranking

Table 2 shows the net change of jobs created by in- and out-migration between 1993 and 2007 as a

Calendar Year	Change in Total Jobs	Jobs Created by Establishment In Migration	Jobs Lost Due to Establishment Out Migration	Net Jobs Created (In Minus Out)
1993	(5,557)	477	970	(493)
1994	17,038	456	1,584	(1,128)
1995	(22,767)	852	1,369	(517)
1996	10,530	355	1,149	(794)
1997	14,760	331	266	65
1998	6,343	181	390	(209)
1999	16,874	487	371	116
2000	19,248	367	586	(219)
2001	23,869	630	445	185
2002	(17,246)	2,205	362	1,843
2003	(12,960)	1,880	2,149	(269)
2004	(16,791)	617	592	25
2005	7,275	1,062	981	81
2006	7,570	926	707	219
2007	(13,409)	488	421	67
Total	34,777	11,314	12,342	(1,028)

Source: National Establishment Time-Series Database; The Maine Heritage Policy Center



percent of employment in 1993. Maine's 1,028 lost jobs due to establishment out-migration equate to a loss of 0.1 percent of Maine's 1993 workforce. In relation to the other U.S. states, Maine's performance ranks an uninspiring 31st in the country. In stark contrast, the state with the largest job growth due to in- and out-migration was Nevada (3 percent).

However, net job destruction in Maine due to in- and out-migration appears to be the neighbor's gain. The one state that borders Maine is a successful net in-migrant state—New Hampshire (1.6 percent, rank 5th).

Jobs by Industry

A state-wide average can hide vast disparities in job creation among the different industries operating in Maine. Table 4 shows the top 30 job creators due to in-migrants exceeding out-migrants between 1993 and 2007 while Table 5 shows the top 30 job losers due to out-migrants exceeding in-migrants between 1993 and 2007.[6]

The top 5 job creating industries are Insurance Agents, Brokers and Service (1,537 jobs), Electric Services (502 jobs), Medical Service and Health Insurance (379 jobs), Poultry and Eggs (349 jobs) and Computer and Data Processing Services (308 jobs). The top 5 job losing industries are Electrical Industrial Apparatus (1,347 jobs), Computer and Office Equipment (466 jobs), Footwear, Except Rubber (350 jobs), Motor Vehicles and Equipment (324 jobs) and Camps and Recreational Vehicle Parks (298 jobs).

Overall, the top 30 job losers lost 4,980 jobs while the top 30 job creators gained 5,393 for a small net job gain of 413 jobs—the opposite of the net job loss of 1,028 for all industries. Interestingly, the top 5 job creators/losers migration patterns reflects the overall shift in Maine's economy away from manufacturing toward services.

Jobs by Region

A state-wide average can also hide vast disparities in job creation among the different regions of the state. Table 3 shows the percent change in jobs due to establishment in- and out-migration in Maine's two major regions between 1993 and 2007.[7]

As shown in Chart 3 and Table 6, the Rim counties fared the best when it comes to migration, losing only 55 jobs to in-state (to Core counties) and out-of-state

Table 3 Percent Change in Jobs Due to Establishment In- and Out-Migration by Region (a) Calendar Years 1993 to 2007		
Region (a)	Percent Change in Jobs	Rank
Maine	-0.1%	--
Core	-0.1%	2
Rim	0.0%	1
(a) Regional migration includes inter- and intra-state migration. Source: National Establishment Time-Series Database; The Maine Heritage Policy Center		

Table 2
Percent Change in Jobs Due to Establishment In- and Out-Migration by State
Calendar Years 1993 to 2007

State	Percent Change in Jobs	Rank
United States	0.1%	--
Alabama	-0.4%	39
Alaska	0.4%	19
Arizona	2.5%	2
Arkansas	0.0%	29
California	-0.8%	49
Colorado	0.8%	12
Connecticut	1.3%	9
Delaware	2.4%	3
Florida	0.5%	16
Georgia	1.5%	6
Hawaii	-0.2%	36
Idaho	0.2%	26
Illinois	-0.2%	33
Indiana	0.5%	17
Iowa	-0.5%	42
Kansas	1.3%	8
Kentucky	0.9%	11
Louisiana	-0.6%	45
Maine	-0.1%	31
Maryland	0.1%	27
Massachusetts	-0.6%	43
Michigan	-0.5%	40
Minnesota	-0.2%	35
Mississippi	0.3%	22
Missouri	-0.3%	38
Montana	0.2%	24
Nebraska	-0.7%	46
Nevada	3.0%	1
New Hampshire	1.6%	5
New Jersey	0.4%	18
New Mexico	-0.5%	41
New York	-1.4%	50
North Carolina	1.3%	7
North Dakota	-0.1%	32
Ohio	0.3%	21
Oklahoma	-0.2%	34
Oregon	0.3%	23
Pennsylvania	0.0%	30
Rhode Island	0.1%	28
South Carolina	0.6%	14
South Dakota	0.6%	13
Tennessee	0.4%	20
Texas	1.2%	10
Utah	0.5%	15
Vermont	-0.6%	44
Virginia	1.8%	4
Washington	-0.7%	48
West Virginia	-0.7%	47
Wisconsin	0.2%	25
Wyoming	-0.3%	37

Source: National Establishment Time-Series Database; YourEconomy.org; The Maine Heritage Policy Center

Table 4

Maine Jobs Due to Establishment In- and Out-Migration by Industry

Top 30 Job *Creators*

Calendar Years 1993 to 2007

Industry	Net Jobs Created (In minus Out)	Rank
Insurance Agents, Brokers, & Service Electric Services	1,537	1
Medical Service and Health Insurance	502	2
Poultry and Eggs	379	3
Computer and Data Processing Services	349	4
Management and Public Relations	308	5
Misc. Plastics Products, NEC	272	6
Misc. Business Services	215	7
Trucking & Courier Services, Ex. Air Advertising	196	8
Rubber and Plastics Footwear	194	9
Passenger Transportation Arrangement	175	10
Sanitary Services	125	11
Industrial Inorganic Chemicals	110	12
Miscellaneous Personal Services	107	13
Machinery, Equipment, and Supplies	105	14
Drugs	89	15
Shoe Stores	86	16
Mailing, Reproduction, Stenographic	85	17
Beverages	56	18
Electrical Goods	52	19
Holding Offices	47	20
Misc. General Merchandise Stores	47	21
Retail Bakeries	44	22
Industrial Organic Chemicals	40	23
Engineering & Architectural Services	39	24
Elementary and Secondary Schools	36	25
Retail Stores, NEC	36	26
Construction and Related Machinery	34	27
Painting and Paper Hanging	34	28
Total	5,393	--

Source: National Establishment Time-Series Database; The Maine Heritage Policy Center

Table 5

Maine Jobs Due to Establishment In- and Out-Migration by Industry

Top 30 Job *Losers*

Calendar Years 1993 to 2007

Industry	Net Jobs Lost (In minus Out)	Rank
Electrical Industrial Apparatus	1,347	1
Computer and Office Equipment	466	2
Footwear, Except Rubber	350	3
Motor Vehicles and Equipment	324	4
Camps and Recreational Vehicle Parks	298	5
Dairy Products	229	6
Life Insurance	170	7
Medical Instruments and Supplies	141	8
Preserved Fruits and Vegetables	140	9
Veterinary Services	136	10
Colleges and Universities	123	11
Eating and Drinking Places	122	12
Petroleum and Petroleum Products	118	13
Hotels and Motels	101	14
Real Estate Operators and Lessors	90	15
Newspapers	87	16
Miscellaneous Wood Products	81	17
Radio and Television Broadcasting	78	18
Motion Picture Production & Services	75	19
Men's and Boy's Furnishings	52	20
Paper and Paper Products	52	21
Commercial Banks	51	22
Misc. Apparel and Accessories	50	23
Misc. Equipment Rental & Leasing	46	24
Mortgage Bankers and Brokers	44	25
Beauty Shops	43	26
Legal Services	43	27
Offices & Clinics of Medical Doctors	43	28
Membership Organizations, NEC	40	29
Paperboard Mills	40	30
Total	4,980	--

Source: National Establishment Time-Series Database; The Maine Heritage Policy Center

relocations. Of course, many of the jobs in the Rim counties are based on natural resource-based industries which makes relocation more difficult.

As shown in Chart 4 and Table 7, the Core counties lost 973 jobs to in-state (to Rim counties) and out-of-state migration. However, note that the job loss would have been more severe had it not been for the large one-year influx of jobs (1,766 jobs) in 2002. Without this influx, the job loss would have been a higher 2,739 jobs. Excluding 2002, the Core counties saw the same number of years of net out-migration and net in-migration.

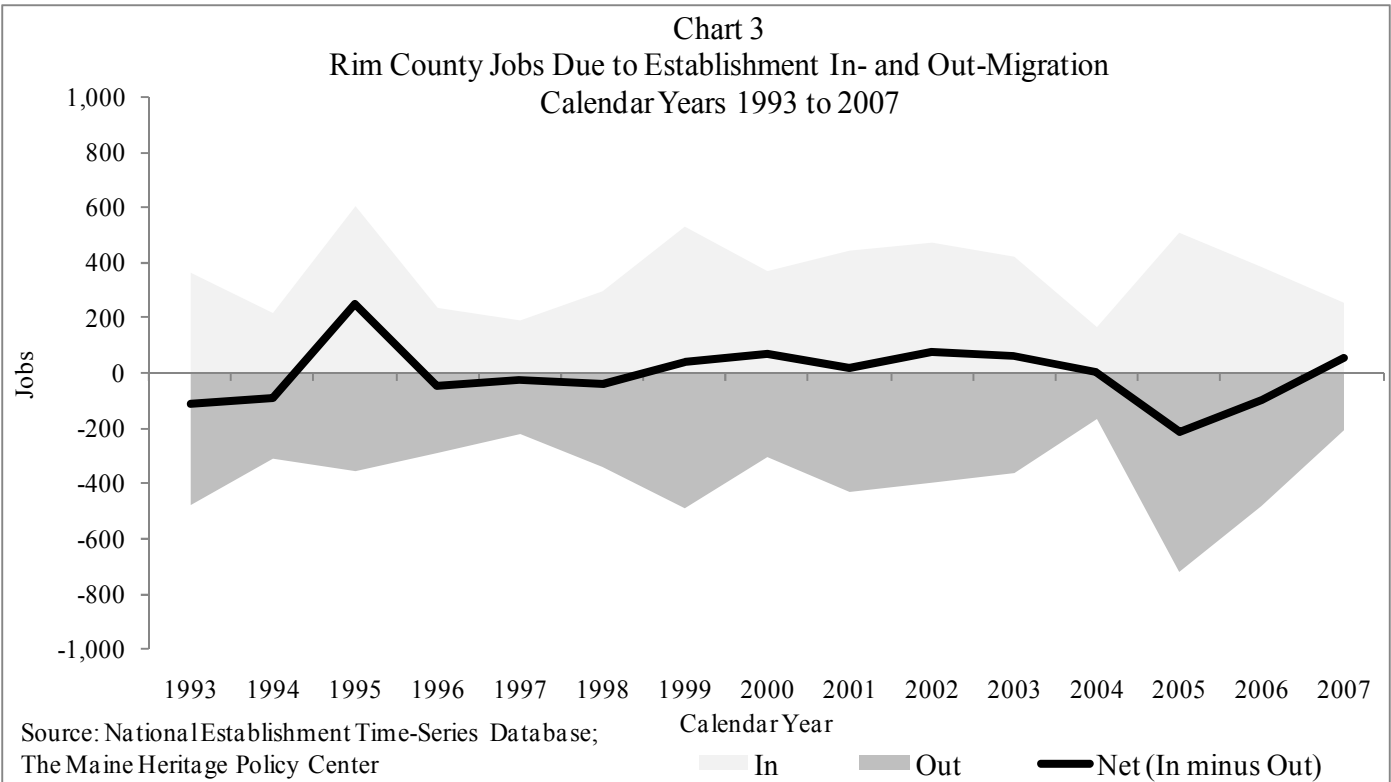
The migration patterns of the Core counties are more susceptible to quick changes in the trend for several reasons. First, the Core counties are more reliant on service based industries which are generally easier to relocate. Second, the Core counties are physically closer to the border of Maine's chief economic competitors—New Hampshire and Massachusetts.

Table 6
Rim County Jobs Due to Establishment In- and Out- Migration (a)
Calendar Years 1993 to 2007

Calendar Year	Change in Total Jobs	Jobs Created by Establishment In-Migration	Jobs Lost Due to Establishment Out-Migration	Net Jobs Created (In Minus Out)
1993	(5,753)	366	479	(113)
1994	5,354	220	310	(90)
1995	(6,526)	607	355	252
1996	3,508	239	288	(49)
1997	6,062	194	219	(25)
1998	2,418	299	340	(41)
1999	5,775	532	491	41
2000	5,770	372	304	68
2001	7,141	446	431	15
2002	(154)	474	397	77
2003	(5,952)	424	362	62
2004	(3,706)	169	164	5
2005	(2,161)	510	723	(213)
2006	1,072	387	483	(96)
2007	(4,732)	257	205	52
Total	8,116	5,496	5,551	(55)

(a) Migration includes inter- and intra-state migration.

Source: National Establishment Time-Series Database; The Maine Heritage Policy Center



Conclusion

This study shows that while the overall number of yearly jobs lost to out-migration of 1,028 is relatively small, the job loss is a problem that serves as a headwind against job creation in Maine. Fortunately, that headwind has relented somewhat in the most recent years. Additionally, the data shows that out-migration is not simply a reflection of the business cycle, which makes it more difficult to pin down its causes.

One issue policymakers should be concerned about is the vast disparity in migration patterns between Maine and neighboring New Hampshire. If Maine had the percentage growth in migration as New Hampshire (1.6 percent), then Maine would have had an additional 10,925 job gain as opposed to the reality of a 1,028 job loss.

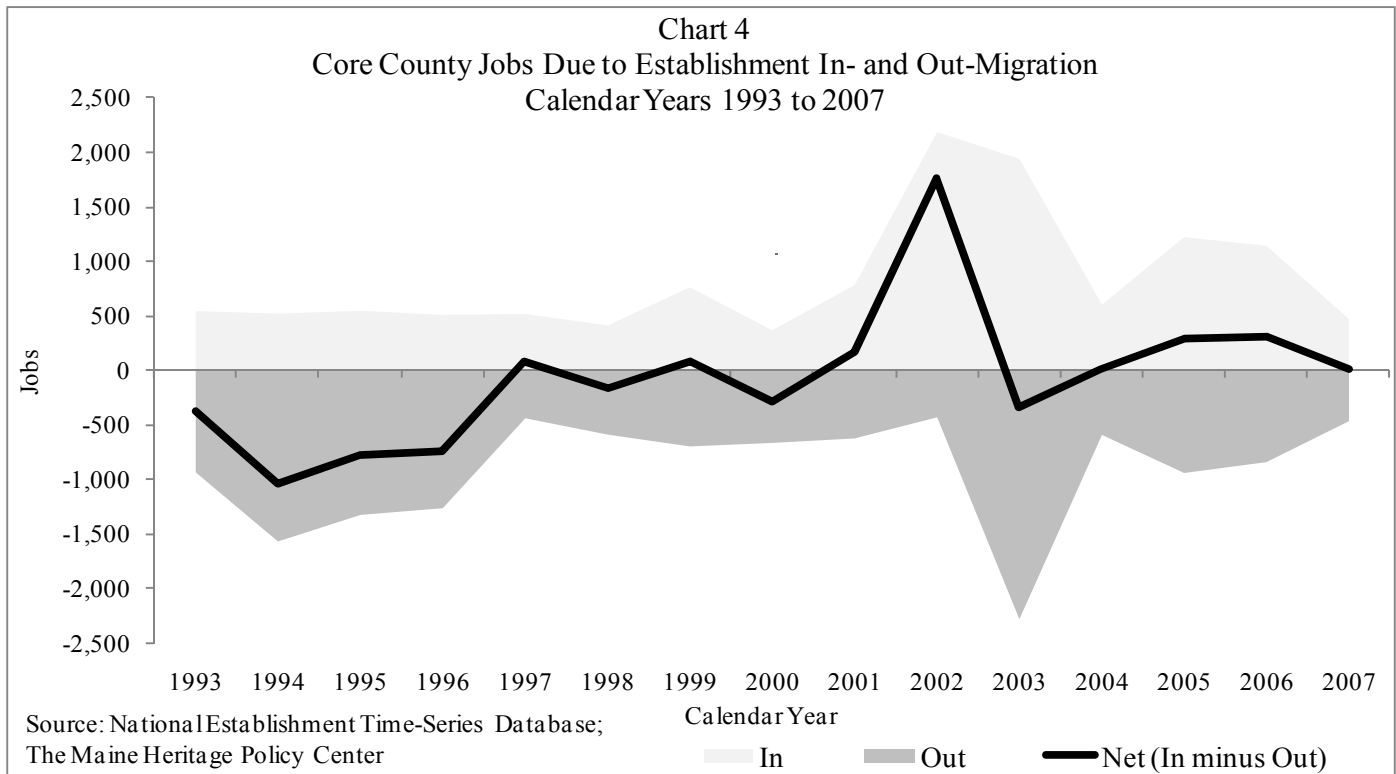
Finally, keep in mind, there are other avenues of job creation, such as the births and deaths of establishments and the expansion and contraction of establishments, which are explored in more detail in companion studies of the "Maine Business InsideOut" series.

Table 7
Core County Jobs Due to Establishment In- and Out-Migration (a)
Calendar Years 1993 to 2007

Calendar Year	Change in Total Jobs	Jobs Created by Establishment In-Migration	Jobs Lost Due to Establishment Out-Migration	Net Jobs Created (In Minus Out)
1993	196	550	930	(380)
1994	11,684	527	1,565	(1,038)
1995	(16,241)	553	1,322	(769)
1996	7,022	514	1,259	(745)
1997	8,698	523	433	90
1998	3,925	417	585	(168)
1999	11,099	768	693	75
2000	13,478	374	661	(287)
2001	16,728	788	618	170
2002	(17,092)	2,192	426	1,766
2003	(7,008)	1,949	2,280	(331)
2004	(13,085)	608	588	20
2005	9,436	1,230	936	294
2006	6,498	1,151	836	315
2007	(8,677)	476	461	15
Total	26,661	12,620	13,593	(973)

(a) Migration includes inter- and intra-state migration.

Source: National Establishment Time-Series Database; The Maine Heritage Policy Center



Notes and Sources

- [1] The firm Walls & Associates performs the conversion of the Duns & Bradstreet Marketing Information file into a time-series database that is useful for economic research purposes. The file is proprietary to Walls & Associates which licenses the database to researchers across the country—including the U.S. Department of Commerce’s Census Bureau and the Bureau of Economic Analysis.
- [2] The NETS database is based on establishments, which means that one organization can have numerous establishments in various locations, i.e., Starbucks. Additionally, different establishments can occupy the same location. For example, a organization at a single location could represent two different activities — such as a single organization with both a distribution and retail establishment under the same roof. This structure provides an unprecedented level of geographic and industry classification.
- [3] Though this study will use the term “Maine employment,” it does not mean that those employed are all Maine residents. Since employment is reported on a per establishment basis, there is no information on the residency of the workforce. Therefore, someone living in New Hampshire but working for a Maine establishment would be included in the “Maine employment” number.
- [4] This study draws on data for national comparisons from www.YourEconomy.org (YE) which is based on the national NETS database. YE is a project of the Edward Lowe Foundation. For technical reasons, the YE Web site uses the NETS database for the years 1993 to 2007. For comparative purposes, this study also uses the years 1993 to 2007, though the full Maine NETS database contains data for the years 1989 to 2007.
- [5] Establishment out-migration may be understated because some closures are actually a form of out-migration. For example, a company may decide to consolidate several far-flung establishments under one roof. If the new consolidated establishment is not located in Maine, there is no way to determine that an establishment closure was really a form of out-migration.
- [6] Industry classification is based on the establishment’s 2007 reported industry. However, it is possible that the establishment reported a different industry classification in previous years. This analysis does not take that possibility into consideration which may cause some misreporting of industry classification over the 1993 to 2007 time-period.
- [7] Regions are based on counties as defined below: **Rim Region:** Aroostook, Franklin, Oxford, Penobscot, Piscataquis, Somerset and Washington counties. **Core Region:** Androscoggin, Cumberland, Hancock, Kennebec, Knox, Lincoln, Sagadahoc, Waldo and York counties.
- [8] Examining in- and out-migration by state of origin or destination is possible using the NETS database and may be the subject of future studies.
- [9] Regional data includes inter and intra state migration.

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Maine Business InsideOut is a special series of publications by The Maine Heritage Policy Center which focus on better understanding Maine’s business climate through the use of the cutting-edge National Establishment Time-Series Database. All information is from sources considered reliable, but may be subject to inaccuracies, omissions, and modifications.

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