Comparison of BEA and BLS NAICS-based Output Measures

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INTRODUCTION

With statistical agencies shifting to NAICS-based measures, comparison of recently available NAICS-based output measures produced by the Bureau of Economic Analysis (BEA) and the Bureau of Labor Statistics (BLS) is a necessary next step in enhancing our understanding of the differences and sources of differences among the various output measures available to data users.

An earlier paper, "An Integrated BEA/BLS Production Account: A First Step and Theoretical Considerations," presents comparisons of BEA and BLS output measures for detailed industries, constructed using SIC-based data , and discusses the sources of differences in these measures.[1] This comparison finds that while BEA and BLS manufacturing output measures tend to be similar, in part due to BEA and BLS collaboration on these measures, it may be important to address some differences in current dollar source data and agency-specific adjustments in order to improve consistency among these measures. Nonmanufacturing output measures produced by BEA and BLS often differ and sometimes to a large extent. These differences were generally found to result from differences in the underlying data sources, price index choices and deflation methods. In this paper, comparisons of BEA and BLS output

[1] Fraumeni, Barbara, Michael Harper, Susan Powers and Robert Yuskavage, 2005, "An Integrated BEA/BLS Production Account: A First Step and Theoretical Considerations", presented at the Conference on Research in Income and Wealth conference on "Architecture for the National Accounts," April, 2004 and revised in February, 2005.

measures for detailed industries are extended to include BEA and BLS output measures constructed using NAICS-based data.

BEA and BLS both produce output measures for major sectors of the economy and for detailed industries. Historically, each agency has had differing purposes for their production of these output measures. BEA has focused on providing complete and consistent coverage of the entire economy in the NIPA's, while BLS has sought to achieve maximum reliability in the productivity measures it produces. BEA and BLS output measures have been developed separately in general. Many of their differences result from agency-specific choices regarding underlying data sources; price deflation procedures, including source data, deflation level of detail, and aggregation methods; data adjustment choices such as inventory change, resales, misreporting, coverage, drift, own-account production and commodity taxes; and output measure concept, such as gross, value-added or sectoral output definitions. In addition, as BEA and BLS transitioned from the use of SIC-based data to NAICS-based data, somewhat different approaches were used to create NAICS-based data for years prior to 1997, the only year for which complete Census data were available on both a NAICS and SIC basis.[2]

BEA and BLS output measures are often used by economic analysts in studies of economic growth, productivity, and structural change. In recent years, it has been noted that differences in the BEA and BLS output measures can lead to conflicting findings in these studies. For this reason, it is useful to identify the magnitude and scope of

[2] See Russell, Matthew, Takac, Paul and Lisa Usher, "Industry productivity trends under the North American Industry Classification system," Monthly Labor Review, November 2004, pp. 31-42; Robert and Yvon Pho, "Gross Domestic Product by Industry for 1987-2000: New Estimates on the North American Industry Classification System," Survey of Current Business, November, 2004, pp. 33-53; and Harper, Michael, Fraumeni, Barbara, Powers, Susan, and Robert Yuskavage, "Progress Toward Completing Historical Production Accounts using the North American Classification System," discussion paper, Federal Economic Statistics Advisory Committee (FESAC), June 10, 2005.

differences in the BEA and BLS NAICS-based output measures, to determine the sources of these differences, and to work towards eliminating unnecessary inconsistencies between the BEA and BLS output measures.

COMPARISONS

Real and nominal output measures and related output price deflators are compared for 3-, 4-, and 5-digit NAICS industry aggregates, using data from the Bureau of Economic Analysis GDP-by-Industry program and the Bureau of Labor Statistics Division of Industry Productivity Statistics (DIPS) program. For the 3-digit NAICS subsectors, BEA gross output measures, available for 1987-2003, are compared to BLS sectoral output[3] measures in 19 subsectors, including 14 manufacturing and 5 nonmanufacturing subsectors. The BLS sectoral output measures are available for 1987-2001 for the manufacturing subsectors, and for either 1987-2002 or 1987-2003 for the nonmanufacturing subsectors, depending on the particular subsector. For the 4-digit NAICS industry groups and 5-digit NAICS industries, BEA gross output measures are available for 1998-2003 and the BLS-DIPS sectoral output measures are available for 1987-2001, 2002 or 2003, depending on the industry. Comparisons are possible for 18 NAICS 4-digit industry groups including 11 manufacturing and 7 nonmanufacturing industry groups, and for 57 NAICS 5-digit industries including 51 manufacturing industries and 6 nonmanufacturing industries.[4]

[3] Sectoral output excludes those intermediate inputs purchased from within the sector.

[4] The BEA output measures are based on the 1997 NAICS while the BLS-DIPS output measures are based on the 2002 NAICS. This potential source of difference is noted in the comparisons, and is an issue for only a few industries. The majority of the industries impacted by the 1997 to 2002 NAICS changes have only a BEA output measure or a BLS output measure available, and so comparisons of the two output measures are not possible in those industries. NAICS industries where the 1997 to 2002 classification changes are reflected in the output comparisons include 511, Publishing Industries; 5112, Software

For the 3-digit NAICS subsectors, BEA and BLS output series are compared using two different approaches. The first approach is to calculate the difference in the acceleration of the average annual growth rate in 1990-95 as compared to 1995-2000 for the BEA and BLS-DIPS output measures. The difference in acceleration rates reflects differences in the change in the growth rate trends of the output measures between these two time periods. In general, if the output series are similar, the difference between the acceleration rates of the two output measures will be quite low. Dissimilar series will have larger absolute differences in the acceleration rates of the two measures. In those industries where the BEA and BLS-DIPS output measures exhibit a substantial difference in acceleration, further review of underlying data sources and methods is considered to be advisable.

For the purposes of these comparisons, a critical value of (+ or -) .9 percentage points is used to establish the level of difference in the acceleration rates where further review of a particular industry's output measures is merited. This value is selected to maintain consistency with the SIC-based output measure comparisons presented in the April, 2004 Conference on Research in Income and Wealth (CRIW) paper, "An Integrated BEA/BLS Production Account: A First Step and Theoretical Considerations."[5] The use of a value of ".9" percentage points as the value for selecting

Publishers; 51111, Newspaper Publishers; 51112, Periodical Publishers; 51113, Book Publishers; and 51121, Software Publishers.

[5] Fraumeni, Barbara, Michael Harper, Susan Powers and Robert Yuskavage, 2005, "An Integrated BEA/BLS Production Account: A First Step and Theoretical Considerations", presented at the Conference on Research in Income and Wealth conference on "Architecture for the National Accounts," April, 2004 and revised in February, 2005.

industries evolved from the pattern of differences in acceleration found between BEA and BLS output measures for the SIC industries. [6]

The second approach is to examine how closely the average annual growth rates of any two output series are correlated. The correlation coefficient, computed for the average annual growth rate of the output series over all available years of data, reflects the consistency in the annual movements of the output measures over this time period. In addition, correlation of the two measures may be used to examine how closely the series move together on a year-to-year basis.

For the 4- and 5-digit NAICS industry groups and industries, limited years of data are available for comparison. For some industries, as few as 4 years of data (1998-2001) are available for comparison and at most, 6 years of data (1998-2003) are available. Rather than select two time periods within this limited range of years and compare differences in acceleration of average annual growth rates within these two time periods, comparisons for the 4- and 5-digit NAICS industries are simply differences in average annual growth rates for the available data.[7] In addition, the BEA and BLS output

[6] The difference in acceleration of the BEA and BLS output measures, constructed using SIC-based data, tends to be either well below .9 percentage points or .9 or above. A difference in acceleration of .9 percentage points or greater appeared to be a natural breaking point for distinguishing industries where output measures differ markedly. Similarly, in the NAICS-based output measure comparisons, the difference in acceleration of the BEA and BLS output measures tends to be either well below .9 or .9 or above. Using a difference in acceleration of 1.0 as the critical value would result in very little difference in the set of industries considered for further review. Most of the differences in acceleration of .9 percentage points or higher either round up to 1.0 or are greater than 1.0. percentage points. The purpose of this critical value is simply to distinguish industries where the BEA and BLS output measures have relatively little difference and industries where BEA and BLS output measures appear to have larger differences meriting additional investigation.

[7] As a result of the limited data available, the 4- and 5-digit comparisons involve only differences in average annual growth rates for all available years, rather than differences in acceleration and this may impact the comparisons. For example, for 2211, real output average annual growth rate for 1998-01 is .244 versus 2.478 for the 1998-02 time period.

measures for each industry are correlated to look at the similarity of the year to year movements of the measures.

Table 1 presents an overall summary of these comparisons. Three additional sets of tables provide detailed industry comparison results for BEA and BLS real output, nominal output, and output price deflators. Tables 2A, 2B, and 2C present detailed results of BEA and BLS real output, nominal output, and output price deflator comparisons respectively for the NAICS 3-digit subsectors. Similarly, tables 3A, 3B, and 3C present real output, nominal output, and output price deflator comparisons for the NAICS 4-digit industry groups, and tables 4A, 4B, and 4C present comparison results for the NAICS 5-digit industries.

RESULTS[8]

NAICS 3-Digit Subsectors

BEA and BLS real output measures for *211, Oil and Gas Extraction*, appear to have similar rates of acceleration between the 1990-95 and 1995-00 time periods, but low correlation. Nominal output and output price deflators for this subsector have absolute differences in acceleration of .9 or greater, suggesting differences in underlying data sources and price deflation procedures.

For *334, Computer and Electronic Product Manufacturing*, the BEA and BLS real output measures appear to differ slightly, while the nominal output measures and output price deflators are similar. In part, this difference results from differences in the output concept. The BLS output measure is adjusted to remove intrasectoral transactions

[8] Detailed spreadsheets containing the original data compared as well as data comparisons are available upon request.

while the BEA output measure is a gross output measure.[9] The BEA and BLS average annual growth rates in this subsector are quite large, as are the differences in acceleration for both the BEA and BLS real output measures. The 1.1 percentage point difference between the BEA and BLS accelerations is small relative to these large growth rates. On the other hand, if productivity measures are computed using these alternative output measures, a 1.1 percentage point difference in output growth rates will translate into a substantial difference in productivity.

NAICS 4-Digit Industry Groups

For the NAICS 4-digit real output measures, 10 of the 18 industry groups compared had differences in the BEA and BLS average annual growth rates of output for 1998-01 or 1998-02 in excess of (+ or -) .9. These industry groups include 5 manufacturing industry groups: *3152, Cut and Sew Apparel Manufacturing; 3159, Apparel Accessories and Other Apparel Manufacturing; 3254, Pharmaceutical and Medicine Manufacturing; 3343, Audio and Video Equipment Manufacturing; 3365, Railroad Rolling Stock Manufacturing;* and 5 nonmanufacturing industry groups: *2121, Coal Mining, 2211, Electric Power Generation, Transmission and Distribution; 2212, Natural Gas Distribution; 4911, Postal Service; and 5112, Software Publishers.*[10]

Of the 10 industry groups where real output differences existed between the BEA and BLS output measures, 9 had notable differences between the BEA and BLS nominal

[9] John Duke of BLS has prepared an analysis of the impact of the BLS adjustment for intrasectoral transactions on the BLS output measure for NAICS 334 which is available upon request.

[10] Note that comparison of BEA and BLS output measures for 5112, Software Publishers, is complicated by differences in the 1997 and 2002 NAICS classification which impacted this industry group. How much of the difference might be due to classification changes as compared to other data differences has not yet been determined.

output measures. Within this set of 10 industry groups, the 5 manufacturing industry groups showed no differences between the BEA and BLS price deflators, as might be expected given BEA and BLS efforts to coordinate on manufacturing price deflators. However, the 5 nonmanufacturing industry groups do exhibit differences between the BEA and BLS price deflators. In addition, *2111, Oil and Gas Extraction* showed a difference between the BEA and BLS nominal output measure and *8123, Drycleaning and Laundry Services* reflected a difference between the BEA and BLS price deflators.

Table 1 summarizes these results, and also presents correlation rates for BEA and BLS real output, nominal output, and price deflator measures.[11] These results suggest that differences in output concept, underlying data sources and perhaps adjustments to the data may be responsible for differences in the nominal output. While price deflators used by BEA and BLS are quite consistent for the manufacturing industry groups due to collaborative efforts, many of the price deflators for nonmanufacturing industry groups clearly differ.

NAICS 5-Digit Industries

For the NAICS 5-digit real output measures, 14 of the 57 industries where BEA and BLS output measures were compared have differences in average annual growth rates from 1998-01 of greater than .9. [12] These industries include 9 manufacturing industries: *31141, Frozen Food Manufacturing; 32411, Petroleum Refineries; 32513,*

[11] Note that for 2211, Electric Power Generation, Transmission, and Distribution, real and nominal BEA and BLS output measures exhibit low correlations. For 3254, Pharmaceutical and Medicine Manufacturing, BEA and BLS real and nominal output and price deflators have low correlation rates.

[12] For 49111, Postal Services; 51111, Newspaper Publishing; 51113, Book Publishers; 51121, Software Publishers; and 53223, Video Tape and Disc Rental these differences persist for the 1998-02 period. Comparisons are not available for 1998-02 for 31141, 32411, 32513, 32518, 32541, 33121, 33312, 33451, and 33651, among other 5-digit NAICS industries.

Synthetic Dye and Pigment Manufacturing; 32518, Other Basic Inorganic Chemical Manufacturing; 32541, Pharmaceutical and Medicine Manufacturing; 33121, Iron and Steel Pipe and Tube Manufacturing from Purchased Steel; 33312, Construction Machinery Manufacturing; 33451, Navigational, Measuring, Electromedical, and Control Instruments Manufacturing; 33651,Railroad Rolling Stock Manufacturing; and 5 nonmanufacturing industries: *49111, Postal Services, 51111, Newspaper Publishing; 51113, Book Publishers; 51121, Software Publishers; and 53223, Video Tape and Disc Rental.*[13]

Of the 14 industry groups where real output differences existed between the BEA and BLS output measures, 10 had notable differences between the BEA and BLS nominal output measures and 7 (including 5 manufacturing industries) showed differences between the BEA and BLS price deflators. This suggests that differences in the output concept, underlying data sources, and price deflation procedures account for the real output differences. Table 1 summarizes these results and also presents correlation rates for BEA and BLS real and nominal output measures and price deflators.[14]

CONCLUSIONS

From these comparisons, it appears that the BEA and BLS output measures remain quite similar in the manufacturing sector, as also found when comparing SIC-

[13] Note that 51111, 51113, and 51121 have NAICS classification differences as the BEA output measure is based on the 1997 NAICS and the BLS output measure is based on the 2002 NAICS. These industries are not directly comparable as a result. Further examination is needed to determine the impact of classification differences on this comparison.

[14] The correlations are computed using data for a very limited number of years, including only 3 or 4 average annual growth rate years for the NAICS 4- and 5-digit comparisons. Note that *31142, Fruit and Vegetable Canning, Pickling, and Drying; 32541, Pharmaceutical and Medicine Manufacturing; and 33451, Navigational, Measuring, Electromedical and Control Instruments Manufacturing,* have low correlation rates between BEA and BLS real and nominal output and price deflators.

based output measures.[15] Very few comparisons are possible for the NAICS nonmanufacturing industries because of the lack of overlap of the BEA and BLS output measures for these industries. However, substantial differences are noted between the BEA and BLS output and price deflator measures for most of the nonmanufacturing industries where comparisons are possible. Most of these nonmanufacturing output differences occur at the NAICS 4- digit industry group and 5-digit industry levels and appear to be subsumed at the higher 3-digit subsector level.

Only one or a few of the underlying 4- and 5-digit measures are available for comparison in any given 3-digit subsector, making it difficult to trace the impact of differences in more detailed industry output measures on the more aggregate output measures. For example, for *334, Computer and Electronic Product Manufacturing,* both BEA and BLS release only one of six underlying 4-digit output measures, *3343, Audio and Video Equipment Manufacturing*.

Identifying and where possible eliminating unnecessary inconsistencies among the BEA and BLS detailed industry output measures remains a useful goal. These actions will assist data users who otherwise are faced with selecting among data sets offering contradictory results rooted solely in differences in underlying data sources, price deflation procedures, agency-specific data adjustments, and output concepts. Given the greater significance of the nonmanufacturing sector in the economy, as reflected by NAICS, an expansion of the BEA and BLS output series available for the detailed nonmanufacturing industries, as well as of the data years available, would also be helpful.

[15] See Fraumeni, Barbara, Michael Harper, Susan Powers and Robert Yuskavage, 2005, "An Integrated BEA/BLS Production Account: A First Step and Theoretical Considerations", presented at the Conference on Research in Income and Wealth conference on "Architecture for the National Accounts," April, 2004 and revised in February, 2005. http://www.nber.org/books/CRIW-naccts/fraumeni-et-al4-17-05.pdf

Table 1. Summary of NAICS Industries Exhibiting Differences in BEA and BLS Measures						
NAICS Industry	**Difference in Real Output (BEA and BLS)**	**Difference in Nominal Output (BEA and BLS)**	**Difference in Price Deflator (BEA and BLS)**	**Correlation** *(.8 or less)* **Real Output**	**Correlation** *(.8 or less)* **Nominal Output**	**Correlation** *(.8 or less)* **Price Deflator**
NAICS 3-digit Subsectors						
211, Oil and Gas Extraction		X	X	X		
324, Petroleum and Coal Products Manufacturing				X		
334, Computer and Electronic Product Manufacturing	X					
481, Air Transportation			X			
NAICS 4-digit Industry Groups						
2111, Oil and Gas Extraction			X			
2121, Coal Mining	X		X			
2211, Electric Power Generation, Transmission and Distribution	X	X	X	X	X	
2212, Natural Gas Distribution	X	X	X	X		
3152, Cut and Sew Apparel Manufacturing	X	X				
3159, Apparel Accessories and Other Apparel Manufacturing	X	X				
3162, Footwear Manufacturing						X
3254, Pharmaceutical and Medicine Manufacturing	X	X		X	X	X
3343, Audio and Video Equipment Manufacturing	X	X				
3365, Railroad Rolling Stock Manufacturing	X	X				
4911, Postal Service	X	X	X		X	
5112, Software Publishers	X	X	X			
8123, Drycleaning and Laundry Services		X				

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NAICS Industry	**Difference in Real Output (BEA and BLS)**	**Difference in Nominal Output (BEA and BLS)**	**Difference in Price Deflator (BEA and BLS)**	**Correlation** *(.8 or less)* **Real Output**	**Correlation** *(.8 or less)* **Nominal Output**	**Correlation** *(.8 or less)* **Price Deflator**
NAICS 5-digit Industries						
31141, Frozen Food Manufacturing	X	X		X	X	
31142, Fruit and Vegetable Canning, Pickling, and Drying				X	X	X
31519, Other Apparel Knitting Mills						X
32192, Wood Container and Pallet Manufacturing						X
32221, Paperboard Container Manufacturing			X			
32411, Petroleum Refineries	X		X			
32513, Synthetic Dye and Pigment Manufacturing	X	X				
32518, Other Basic Inorganic Chemical Manufacturing	X		X			
32541, Pharmaceutical and Medicine Manufacturing	X	X		X	X	X
32551, Paint and Coating Manufacturing				X		X
32612, Plastics Packaging Materials and Unlaminated Film and Sheet Manufacturing				X		
33121, Iron and Steel Pipe and Tube Manufactured from Purchased Steel	X		X			
33272, Turned Product and Screw, Nut, and Bolt Manufacturing						X
33312, Construction Machinery Manufacturing	X	X				
33421, Telephone Apparatus Manufacturing						X
33451, Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	X	X	X	X	X	X
33651, Railroad Rolling Stock Manufacturing	X	X				

Table 1. Summary of NAICS Industries Exhibiting Differences in BEA and BLS Measures						
NAICS Industry	**Difference in Real Output (BEA and BLS)**	**Difference in Nominal Output (BEA and BLS)**	**Difference in Price Deflator (BEA and BLS)**	**Correlation** *(.8 or less)* **Real Output**	**Correlation** *(.8 or less)* **Nominal Output**	**Correlation** *(.8 or less)* **Price Deflator**
33994, Office Supplies (except Paper) Manufacturing					X	
49111, Postal Services	X	X	X		X	
51111, Newspaper Publishers	X		X			X
51112, Periodical Publishers						X
51113, Book Publishers	X	X				
51121, Software Publishers	X	X	X			
53223, Video Tape and Disc Rental	X	X				

Table 2A. Comparison of Real Output Series: NAICS 3-Digit Subsectors

NAICS 3-Digit Subsector	Output Series	Average Annual Growth Rate (1990-95) (1)	Average Annual Growth Rate (1995-00) (2)	Acceleration (2) - (1)	Output Series Comparisons	Difference in Acceleration	Correlation Coefficient
211, Oil and Gas Extraction	BEA[1]	-0.469	-0.506	-0.037	BEA / BLS (DIPS)	-0.074	**0.786**
	BLS (DIPS)[2]	-0.686	-0.648	0.037			
212, Mining (except Oil and Gas)	BEA	0.907	0.874	-0.032	BEA / BLS (DIPS)	0.035	0.954
	BLS (DIPS)	0.279	0.212	-0.067			
321, Wood Product Manufacturing	BEA	1.400	3.012	1.612	BEA / BLS (DIPS)	0.704	0.987
	BLS (DIPS)	1.587	2.495	0.908			
322, Paper Manufacturing	BEA	1.777	-0.343	-2.120	BEA / BLS (DIPS)	-0.426	0.946
	BLS (DIPS)	1.875	0.181	-1.694			
323, Printing and Related Support Activities	BEA	0.669	1.031	0.362	BEA / BLS (DIPS)	0.175	0.989
	BLS (DIPS)	0.797	0.985	0.187			
324, Petroleum and Coal Products Manufacturing	BEA	0.862	1.346	0.484	BEA / BLS (DIPS)	0.148	**-0.043**
	BLS (DIPS)	1.352	1.689	0.336			
325, Chemical Manufacturing	BEA	1.132	2.047	0.915	BEA / BLS (DIPS)	0.491	0.949
	BLS (DIPS)	1.117	1.541	0.424			
326, Plastics and Rubber Products Manufacturing	BEA	4.493	3.733	-0.760	BEA / BLS (DIPS)	-0.072	0.989
	BLS (DIPS)	4.530	3.842	-0.688			
327, Nonmetallic Mineral Product Manufacturing	BEA	1.089	3.353	2.265	BEA / BLS (DIPS)	0.256	0.992
	BLS (DIPS)	1.274	3.282	2.008			
331, Primary Metal Manufacturing	BEA	1.842	0.639	-1.203	BEA / BLS (DIPS)	-0.647	0.947
	BLS (DIPS)	1.712	1.157	-0.556			
332, Fabricated Metal Product Manufacturing	BEA	3.065	3.193	0.128	BEA / BLS (DIPS)	-0.055	0.997
	BLS (DIPS)	2.859	3.042	0.183			
333, Machinery Manufacturing	BEA	3.416	2.492	-0.924	BEA / BLS (DIPS)	-0.185	0.993
	BLS (DIPS)	3.299	2.560	-0.739			
334, Computer and Electronic Product Manufacturing	BEA	14.328	21.587	7.259	BEA / BLS (DIPS)	**-1.093**	0.996
	BLS (DIPS)	13.427	21.779	8.352			
335, Electrical Equipment, Appliance, and Component Manufacturing	BEA	3.529	3.442	-0.087	BEA / BLS (DIPS)	-0.310	0.980
	BLS (DIPS)	3.229	3.453	0.224			
337, Furniture and Related Product Manufacturing	BEA	1.793	4.767	2.974	BEA / BLS (DIPS)	0.420	0.996
	BLS (DIPS)	2.029	4.583	2.554			

Table 2A. Comparison of Real Output Series: NAICS 3-Digit Subsectors

NAICS 3-Digit Subsector	Output Series	Average Annual Growth Rate (1990-95) (1)	Average Annual Growth Rate (1995-00) (2)	Acceleration (2) - (1)	Output Series Comparisons	Difference in Acceleration	Correlation Coefficient
339, Miscellaneous Manufacturing	BEA	2.891	4.224	1.333	BEA / BLS (DIPS)	0.124	0.983
	BLS (DIPS)	2.839	4.048	1.209			
481, Air Transportation	BEA	3.147	5.010	1.863	BEA / BLS (DIPS)	0.485	0.957
	BLS (DIPS)	3.539	4.916	1.378			
511, Publishing Industries	BEA	5.492	9.922	4.430	BEA / BLS (DIPS)	0.460	0.964
	BLS (DIPS)	5.159	9.129	3.970			
722, Food Services and Drinking Places	BEA	1.622	3.724	2.102	BEA / BLS (DIPS)	0.738	0.937
	BLS (DIPS)	1.584	2.948	1.364			

1. BEA refers to the Bureau of Economic Analysis published NAICS 3-digit gross output estimates from the GDP-by-industry accounts.
2. BLS (DIPS) refers to the Bureau of Labor Statistics published NAICS 3-digit sectoral output measures.

BEA output measures are based on the 1997 NAICS classification and BLS (DIPS) output measures are based on the 2002 NAICS classification. For selected industries, the 1997 and 2002 NAICS classifications differ. Industries where the 1997 and 2002 NAICS classifications are different and result in incomparable output data are shaded in yellow. Of the industries where output measures are compared above, only 511, Publishing Industries, reflects NAICS classification differences.

Table 2B. Comparison of Nominal Output Series: NAICS 3-Digit Subsectors

NAICS 3-Digit Subsector	Output Series	Average Annual Growth Rate (1990-95) (1)	Average Annual Growth Rate (1995-00) (2)	Acceleration (2) - (1)	Output Series Comparisons	Difference in Acceleration	Correlation Coefficient
211, Oil and Gas Extraction	BEA[1]	-4.387	14.870	19.257	BEA / BLS (DIPS)	**-1.066**	0.998
	BLS (DIPS)[2]	-5.280	15.043	20.322			
212, Mining (except Oil and Gas)	BEA	-0.078	-1.524	-1.447	BEA / BLS (DIPS)	-0.347	0.970
	BLS (DIPS)	0.318	-0.782	-1.100			
321, Wood Product Manufacturing	BEA	7.394	3.560	-3.834	BEA / BLS (DIPS)	0.638	0.996
	BLS (DIPS)	7.484	3.013	-4.472			
322, Paper Manufacturing	BEA	5.593	-0.414	-6.007	BEA / BLS (DIPS)	-0.252	0.996
	BLS (DIPS)	5.957	0.202	-5.755			
323, Printing and Related Support Activities	BEA	3.297	2.475	-0.822	BEA / BLS (DIPS)	0.242	0.988
	BLS (DIPS)	3.412	2.349	-1.064			
324, Petroleum and Coal Products Manufacturing	BEA	-2.533	9.211	11.745	BEA / BLS (DIPS)	-0.320	0.996
	BLS (DIPS)	-2.788	9.276	12.064			
325, Chemical Manufacturing	BEA	4.244	3.391	-0.853	BEA / BLS (DIPS)	0.023	0.994
	BLS (DIPS)	4.136	3.260	-0.876			
326, Plastics and Rubber Products Manufacturing	BEA	6.179	3.929	-2.250	BEA / BLS (DIPS)	-0.135	0.994
	BLS (DIPS)	6.158	4.043	-2.115			
327, Nonmetallic Mineral Product Manufacturing	BEA	3.488	5.067	1.579	BEA / BLS (DIPS)	0.191	0.993
	BLS (DIPS)	3.705	5.093	1.388			
331, Primary Metal Manufacturing	BEA	3.663	-0.904	-4.567	BEA / BLS (DIPS)	-0.533	0.990
	BLS (DIPS)	3.686	-0.348	-4.034			
332, Fabricated Metal Product Manufacturing	BEA	4.745	4.223	-0.523	BEA / BLS (DIPS)	0.014	0.998
	BLS (DIPS)	4.635	4.099	-0.536			
333, Machinery Manufacturing	BEA	5.598	3.658	-1.940	BEA / BLS (DIPS)	-0.423	0.991
	BLS (DIPS)	5.509	3.992	-1.517			
334, Computer and Electronic Product Manufacturing	BEA	7.957	6.293	-1.664	BEA / BLS (DIPS)	-0.867	0.985
	BLS (DIPS)	7.794	6.996	-0.798			
335, Electrical Equipment, Appliance, and Component Manufacturing	BEA	4.902	3.697	-1.205	BEA / BLS (DIPS)	-0.600	0.961
	BLS (DIPS)	4.608	4.003	-0.605			
337, Furniture and Related Product Manufacturing	BEA	4.184	6.308	2.124	BEA / BLS (DIPS)	0.269	0.996
	BLS (DIPS)	4.410	6.265	1.855			

Table 2B. Comparison of Nominal Output Series: NAICS 3-Digit Subsectors

NAICS 3-Digit Subsector	Output Series	Average Annual Growth Rate (1990-95) (1)	Average Annual Growth Rate (1995-00) (2)	Acceleration (2) - (1)	Output Series Comparisons	Difference in Acceleration	Correlation Coefficient
339, Miscellaneous Manufacturing	BEA	5.057	5.147	0.091	BEA / BLS (DIPS)	0.037	0.977
	BLS (DIPS)	4.973	5.026	0.053			
481, Air Transportation	BEA	4.189	5.998	1.809	BEA / BLS (DIPS)	-0.471	0.945
	BLS (DIPS)	3.579	5.859	2.280			
511, Publishing Industries	BEA	7.058	10.593	3.535	BEA / BLS (DIPS)	-0.226	0.968
	BLS (DIPS)	6.843	10.604	3.761			
722, Food Services and Drinking Places	BEA	3.997	5.707	1.711	BEA / BLS (DIPS)	0.017	0.976
	BLS (DIPS)	3.881	5.575	1.694			

1. BEA refers to the Bureau of Economic Analysis published NAICS 3-digit gross output estimates from the GDP-by-industry accounts.
2. BLS (DIPS) refers to the Bureau of Labor Statistics published NAICS 3-digit sectoral output measures.

BEA output measures are based on the 1997 NAICS classification and BLS (DIPS) output measures are based on the 2002 NAICS classification. Industries where the 1997 and 2002 NAICS classifications are different and result in incomparable output data are shaded in yellow. Of the industries where output measures are compared above, only 511, Publishing Industries, reflects NAICS classification differences.

Table 2C. Comparison of Output Price Deflator Series: NAICS 3-Digit Subsectors

NAICS 3-Digit Subsector	Output Series	Average Annual Growth Rate (1990-95) (1)	Average Annual Growth Rate (1995-00) (2)	Acceleration (2) - (1)	Output Series Comparisons	Difference in Acceleration	Correlation Coefficient
211, Oil and Gas Extraction	BEA[1]	-3.941	15.460	19.401	BEA / BLS (DIPS)	**-1.007**	0.998
	BLS (DIPS)[2]	-4.622	15.786	20.407			
212, Mining (except Oil and Gas)	BEA	-0.991	-2.370	-1.379	BEA / BLS (DIPS)	-0.357	0.844
	BLS (DIPS)	0.039	-0.983	-1.022			
321, Wood Product Manufacturing	BEA	5.890	0.538	-5.352	BEA / BLS (DIPS)	-0.080	0.998
	BLS (DIPS)	5.784	0.512	-5.272			
322, Paper Manufacturing	BEA	3.739	-0.066	-3.805	BEA / BLS (DIPS)	0.147	0.997
	BLS (DIPS)	3.988	0.036	-3.952			
323, Printing and Related Support Activities	BEA	2.600	1.436	-1.165	BEA / BLS (DIPS)	0.088	0.988
	BLS (DIPS)	2.608	1.355	-1.253			
324, Petroleum and Coal Products Manufacturing	BEA	-3.368	7.760	11.129	BEA / BLS (DIPS)	-0.389	0.982
	BLS (DIPS)	-4.069	7.448	11.517			
325, Chemical Manufacturing	BEA	3.080	1.314	-1.767	BEA / BLS (DIPS)	-0.500	0.972
	BLS (DIPS)	2.967	1.700	-1.267			
326, Plastics and Rubber Products Manufacturing	BEA	1.618	0.187	-1.431	BEA / BLS (DIPS)	-0.094	0.989
	BLS (DIPS)	1.535	0.197	-1.338			
327, Nonmetallic Mineral Product Manufacturing	BEA	2.365	1.664	-0.701	BEA / BLS (DIPS)	-0.064	0.977
	BLS (DIPS)	2.389	1.752	-0.637			
331, Primary Metal Manufacturing	BEA	1.795	-1.544	-3.339	BEA / BLS (DIPS)	0.101	0.987
	BLS (DIPS)	1.936	-1.504	-3.440			
332, Fabricated Metal Product Manufacturing	BEA	1.627	0.997	-0.630	BEA / BLS (DIPS)	0.094	0.996
	BLS (DIPS)	1.748	1.024	-0.724			
333, Machinery Manufacturing	BEA	2.110	1.137	-0.973	BEA / BLS (DIPS)	-0.195	0.970
	BLS (DIPS)	2.160	1.382	-0.778			
334, Computer and Electronic Product Manufacturing	BEA	-5.572	-12.579	-7.006	BEA / BLS (DIPS)	0.210	0.997
	BLS (DIPS)	-4.935	-12.151	-7.216			
335, Electrical Equipment, Appliance, and Component Manufacturing	BEA	1.324	0.254	-1.070	BEA / BLS (DIPS)	-0.216	0.991
	BLS (DIPS)	1.358	0.505	-0.854			
337, Furniture and Related Product Manufacturing	BEA	2.361	1.492	-0.869	BEA / BLS (DIPS)	-0.141	0.984
	BLS (DIPS)	2.338	1.610	-0.728			
339, Miscellaneous Manufacturing	BEA	2.110	0.886	-1.223	BEA / BLS (DIPS)	-0.103	0.989
	BLS (DIPS)	2.062	0.942	-1.120			

Table 2C. Comparison of Output Price Deflator Series: NAICS 3-Digit Subsectors

NAICS 3-Digit Subsector	Output Series	Average Annual Growth Rate (1990-95) (1)	Average Annual Growth Rate (1995-00) (2)	Acceleration (2) - (1)	Output Series Comparisons	Difference in Acceleration	Correlation Coefficient
481, Air Transportation	BEA	1.002	0.941	-0.061	BEA / BLS (DIPS)	**-0.942**	0.851
	BLS (DIPS)	0.041	0.922	0.881			
511, Publishing Industries *	BEA	1.483	0.614	-0.869	BEA / BLS (DIPS)	-0.637	0.881
	BLS (DIPS)	1.590	1.358	-0.232			
722, Food Services and Drinking Places	BEA	2.337	1.912	-0.424	BEA / BLS (DIPS)	-0.735	0.840
	BLS (DIPS)	2.249	2.560	0.311			

1. BEA refers to the Bureau of Economic Analysis published NAICS 3-digit gross output estimates from the GDP-by-industry accounts.
2. BLS (DIPS) refers to the Bureau of Labor Statistics published NAICS 3-digit sectoral output measures.

BEA output measures are based on the 1997 NAICS classification and BLS (DIPS) output measures are based on the 2002 NAICS classification. Industries where the 1997 and 2002 NAICS classifications are different and result in incomparable output data are shaded in yellow. Of the industries where output measures are compared above, only 511, Publishing Industries, reflects NAICS classification differences.

Table 3A. Comparison of Real Output Series: NAICS 4-Digit Industry Groups						
NAICS 4-Digit Industry Groups	**Output Series**	**Average Annual Growth Rate (1998-01) (1)**	**Difference , 1998-01** *(BEA less BLS Average Annual Growth Rate)*	**Average Annual Growth Rate (1998-02) (2)**	**Difference , 1998-02** *(BEA less BLS Average Annual Growth Rate)*	**Correlation Coefficients**
2111, Oil and Gas Extraction	BEA[1]	0.035	0.407	-0.493	0.378	0.893
	BLS (DIPS)[2]	-0.372		-0.871		
2121, Coal Mining	BEA	-0.072	**0.973**	-0.699	**1.339**	0.991
	BLS (DIPS)	-1.045		-2.038		
2211, Electric Power Generation, Transmission and Distribution	BEA	0.016	0.244	0.854	**2.478**	**0.085**
	BLS (DIPS)	-0.228		-1.625		
2212, Natural Gas Distribution	BEA	2.458	**2.147**	0.560	-0.491	**0.313**
	BLS (DIPS)	0.312		1.051		
3152, Cut and Sew Apparel Manufacturing	BEA	-8.504	**-2.714**	-6.132	Data NA	0.993
	BLS (DIPS)	-5.790		Data NA		
3159, Apparel Accessories and Other Apparel Manufacturing	BEA	-6.715	**-1.353**	-5.679	Data NA	0.992
	BLS (DIPS)	-5.362		Data NA		
3161, Leather and Hide Tanning and Finishing	BEA	-8.839	0.085	-2.528	Data NA	0.997
	BLS (DIPS)	-8.924		Data NA		
3162, Footwear Manufacturing	BEA	-2.344	0.113	2.620	Data NA	0.973
	BLS (DIPS)	-2.457		Data NA		
3169, Other Leather and Allied Product Manufacturing	BEA	-8.916	-0.146	-2.392	Data NA	1.000
	BLS (DIPS)	-8.770		Data NA		
3254, Pharmaceutical and Medicine Manufacturing	BEA	5.571	**-1.413**	0.733	Data NA	**0.509**
	BLS (DIPS)	6.984		Data NA		
3325, Hardware Manufacturing	BEA	-2.307	-0.101	-1.702	Data NA	0.997
	BLS (DIPS)	-2.205		Data NA		
3326, Spring and Wire Product Manufacturing	BEA	-4.525	-0.110	-3.137	Data NA	0.999
	BLS (DIPS)	-4.415		Data NA		
3343, Audio and Video Equipment Manufacturing	BEA	2.283	**-1.197**	2.065	Data NA	0.874
	BLS (DIPS)	3.480		Data NA		
3363, Motor Vehicle Parts Manufacturing	BEA	0.429	-0.080	1.796	Data NA	1.000
	BLS (DIPS)	0.509		Data NA		
3365, Railroad Rolling Stock Manufacturing	BEA	-4.253	**-0.919**	-3.873	Data NA	1.000
	BLS (DIPS)	-3.334		Data NA		
4911, Postal Service	BEA	0.300	-0.791	-0.878	**-0.951**	0.952
	BLS (DIPS)	1.092		0.073		

Table 3A. Comparison of Real Output Series: NAICS 4-Digit Industry Groups

NAICS 4-Digit Industry Groups	Output Series	Average Annual Growth Rate (1998-01) (1)	Difference , 1998-01 *(BEA less BLS Average Annual Growth Rate)*	Average Annual Growth Rate (1998-02) (2)	Difference , 1998-02 *(BEA less BLS Average Annual Growth Rate)*	Correlation Coefficients
5112, Software Publishers	BEA	9.645	**4.491**	7.475	**4.469**	0.986
	BLS (DIPS)	5.154		3.006		
8123, Drycleaning and Laundry Services	BEA	2.402	0.761	1.157	0.679	0.972
	BLS (DIPS)	1.641		0.478		

1. BEA refers to the Bureau of Economic Analysis unpublished detailed NAICS 4-digit gross output estimates underlying the GDP-by-industry accounts.
2. BLS (DIPS) refers to the Bureau of Labor Statistics published NAICS 4-digit sectoral output measures.

BEA output measures are based on the 1997 NAICS classification and BLS (DIPS) output measures are based on the 2002 NAICS classification. For selected industries, the 1997 and 2002 NAICS classifications differ. Industries where the 1997 and 2002 NAICS classifications are different and result in incomparable output data are shaded in yellow.

Table 3B. Comparison of Nominal Output Series: NAICS 4-Digit Industry Groups						
NAICS 4-Digit Industry Groups	**Output Series**	**Average Annual Growth Rate (1998-01) (1)**	**Difference , 1998-01** *(BEA less BLS Average Annual Growth Rate)*	**Average Annual Growth Rate (1998-02) (2)**	**Difference , 1998-02** *(BEA less BLS Average Annual Growth Rate)*	**Correlation Coefficient**
2111, Oil and Gas Extraction	BEA[1]	25.835	-0.588	13.846	0.339	0.999
	BLS (DIPS)[2]	26.423		13.507		
2121, Coal Mining	BEA	-0.423	0.136	-0.112	0.328	0.979
	BLS (DIPS)	-0.559		-0.440		
2211, Electric Power Generation, Transmission and Distribution	BEA	3.123	**1.516**	2.599	**3.642**	**0.683**
	BLS (DIPS)	1.607		-1.043		
2212, Natural Gas Distribution	BEA	14.679	**-2.143**	4.968	**-2.141**	0.984
	BLS (DIPS)	16.823		7.109		
3152, Cut and Sew Apparel Manufacturing	BEA	-8.570	**-2.860**	-6.454	Data NA	0.994
	BLS (DIPS)	-5.710		Data NA		
3159, Apparel Accessories and Other Apparel Manufacturing	BEA	-5.936	**-1.503**	-4.987	Data NA	0.994
	BLS (DIPS)	-4.433		Data NA		
3161, Leather and Hide Tanning and Finishing	BEA	-5.191	0.068	0.368	Data NA	0.993
	BLS (DIPS)	-5.259		Data NA		
3162, Footwear Manufacturing	BEA	-2.105	0.264	2.987	Data NA	0.963
	BLS (DIPS)	-2.370		Data NA		
3169, Other Leather and Allied Product Manufacturing	BEA	-8.417	-0.269	-2.014	Data NA	1.000
	BLS (DIPS)	-8.148		Data NA		
3254, Pharmaceutical and Medicine Manufacturing	BEA	7.997	**-1.545**	3.034	Data NA	**0.730**
	BLS (DIPS)	9.542		Data NA		
3325, Hardware Manufacturing	BEA	-0.844	-0.127	-0.405	Data NA	0.998
	BLS (DIPS)	-0.717		Data NA		
3326, Spring and Wire Product Manufacturing	BEA	-4.794	-0.728	-3.311	Data NA	0.993
	BLS (DIPS)	-4.066		Data NA		
3343, Audio and Video Equipment Manufacturing	BEA	0.570	**-1.196**	0.509	Data NA	0.855
	BLS (DIPS)	1.766		Data NA		
3363, Motor Vehicle Parts Manufacturing	BEA	0.045	-0.101	1.444	Data NA	1.000
	BLS (DIPS)	0.146		Data NA		
3365, Railroad Rolling Stock Manufacturing	BEA	-4.190	**-0.958**	-3.884	Data NA	1.000
	BLS (DIPS)	-3.232		Data NA		
4911, Postal Service	BEA	3.030	**2.208**	2.316	**1.102**	**-0.681**
	BLS (DIPS)	0.822		1.214		

Table 3B. Comparison of Nominal Output Series: NAICS 4-Digit Industry Groups

NAICS 4-Digit Industry Groups	Output Series	Average Annual Growth Rate (1998-01) (1)	Difference , 1998-01 *(BEA less BLS Average Annual Growth Rate)*	Average Annual Growth Rate (1998-02) (2)	Difference , 1998-02 *(BEA less BLS Average Annual Growth Rate)*	Correlation Coefficient
5112, Software Publishers	BEA	9.002	**0.951**	6.172	0.718	0.996
	BLS (DIPS)	8.051		5.454		
8123, Drycleaning and Laundry Services	BEA	5.389	**1.113**	4.050	0.867	0.937
	BLS (DIPS)	4.275		3.183		

1. BEA refers to the Bureau of Economic Analysis unpublished detailed NAICS 4-digit gross output estimates underlying the GDP-by-industry accounts.
2. BLS (DIPS) refers to the Bureau of Labor Statistics published NAICS 4-digit sectoral output measures.

BEA output measures are based on the 1997 NAICS classification and BLS (DIPS) output measures are based on the 2002 NAICS classification. For selected industries, the 1997 and 2002 NAICS classifications differ. Industries where the 1997 and 2002 NAICS classifications are different and result in incomparable output data are shaded in yellow.

Table 3C. Comparison of Output Price Deflator Series: NAICS 4-Digit Industry Groups

NAICS 4-Digit Industry Groups	Output Price Deflator Series	Average Annual Growth Rate (1998-01) (1)	Difference , 1998-01 *(BEA less BLS Average Annual Growth Rate)*	Average Annual Growth Rate (1998-02) (2)	Difference , 1998-02 *(BEA less BLS Average Annual Growth Rate)*	Correlation Coefficient
2111, Oil and Gas Extraction	BEA[1]	25.791	**-1.096**	14.411	-0.084	0.999
	BLS (DIPS)[2]	26.886		14.495		
2121, Coal Mining	BEA	-0.352	-0.851	0.592	**-1.046**	0.838
	BLS (DIPS)	0.499		1.638		
2211, Electric Power Generation, Transmission and Distribution	BEA	3.106	**1.258**	1.730	**1.145**	0.991
	BLS (DIPS)	1.848		0.585		
2212, Natural Gas Distribution	BEA	11.928	**-4.504**	4.383	**-1.599**	0.972
	BLS (DIPS)	16.431		5.982		
3152, Cut and Sew Apparel Manufacturing	BEA	-0.072	-0.139	-0.343	Data NA	0.936
	BLS (DIPS)	0.066		Data NA		
3159, Apparel Accessories and Other Apparel Manufacturing	BEA	0.836	-0.108	0.735	Data NA	0.905
	BLS (DIPS)	0.944		Data NA		
3161, Leather and Hide Tanning and Finishing	BEA	4.003	-0.009	2.977	Data NA	1.000
	BLS (DIPS)	4.012		Data NA		
3162, Footwear Manufacturing	BEA	0.246	0.147	0.357	Data NA	**0.714**
	BLS (DIPS)	0.099		Data NA		
3169, Other Leather and Allied Product Manufacturing	BEA	0.554	-0.136	0.389	Data NA	-0.993
	BLS (DIPS)	0.690		Data NA		
3254, Pharmaceutical and Medicine Manufacturing	BEA	2.298	-0.119	2.285	Data NA	**-0.142**
	BLS (DIPS)	2.417		Data NA		
3325, Hardware Manufacturing	BEA	1.498	0.000	1.322	Data NA	1.000
	BLS (DIPS)	1.497		Data NA		
3326, Spring and Wire Product Manufacturing	BEA	-0.280	-0.678	-0.180	Data NA	0.833
	BLS (DIPS)	0.398		Data NA		
3343, Audio and Video Equipment Manufacturing	BEA	-1.673	-0.026	-1.524	Data NA	0.875
	BLS (DIPS)	-1.646		Data NA		
3363, Motor Vehicle Parts Manufacturing	BEA	-0.383	-0.046	-0.347	Data NA	0.995
	BLS (DIPS)	-0.336		Data NA		
3365, Railroad Rolling Stock Manufacturing	BEA	0.068	-0.032	-0.011	Data NA	0.985
	BLS (DIPS)	0.100		Data NA		
4911, Postal Service	BEA	2.722	**2.991**	3.223	**2.098**	0.877
	BLS (DIPS)	-0.270		1.124		

Table 3C. Comparison of Output Price Deflator Series: NAICS 4-Digit Industry Groups

NAICS 4-Digit Industry Groups	Output Price Deflator Series	Average Annual Growth Rate (1998-01) (1)	Difference , 1998-01 *(BEA less BLS Average Annual Growth Rate)*	Average Annual Growth Rate (1998-02) (2)	Difference , 1998-02 *(BEA less BLS Average Annual Growth Rate)*	Correlation Coefficient
5112, Software Publishers	BEA	-0.586	**-3.342**	-1.213	**-3.604**	0.955
	BLS (DIPS)	2.756		2.391		
8123, Drycleaning and Laundry Services	BEA	2.917	0.322	2.860	0.160	0.880
	BLS (DIPS)	2.595		2.699		

1. BEA refers to the Bureau of Economic Analysis unpublished detailed NAICS 4-digit gross output estimates underlying the GDP-by-industry accounts.
2. BLS (DIPS) refers to the Bureau of Labor Statistics published NAICS 4-digit sectoral output measures.

BEA output measures are based on the 1997 NAICS classification and BLS (DIPS) output measures are based on the 2002 NAICS classification. For selected industries, the 1997 and 2002 NAICS classifications differ. Industries where the 1997 and 2002 NAICS classifications are different and result in incomparable output data are shaded in yellow.

Table 4A. Comparison of Real Output Series: NAICS 5-Digit Industry Groups						
NAICS 5-Digit Industry Groups	**Output Series**	**Average Annual Growth Rate (1998-01) (1)**	**Difference , 1998-01** *(BEA less BLS Average Annual Growth Rate)*	**Average Annual Growth Rate (1998-02) (2)**	**Difference , 1998-02** *(BEA less BLS Average Annual Growth Rate)*	**Correlation Coefficient**
31123, Breakfast Cereal Manufacturing	BEA[1]	4.730	-0.153	3.888	Data NA	0.996
	BLS (DIPS)[2]	4.883		Data NA		
31131, Sugar Manufacturing	BEA	-4.271	0.087	-3.327	Data NA	0.998
	BLS (DIPS)	-4.358		Data NA		
31134, Nonchocolate Confectionery Manufacturing	BEA	1.300	-0.568	1.332	Data NA	0.998
	BLS (DIPS)	1.868		Data NA		
31141, Frozen Food Manufacturing	BEA	-3.403	**-3.862**	0.141	Data NA	**0.659**
	BLS (DIPS)	0.459		Data NA		
31142, Fruit and Vegetable Canning, Pickling, and Drying	BEA	1.108	-0.372	3.064	Data NA	**-0.746**
	BLS (DIPS)	1.480		Data NA		
31152, Ice Cream and Frozen Dessert Manufacturing	BEA	1.426	0.632	-0.843	Data NA	0.999
	BLS (DIPS)	0.794		Data NA		
31211, Soft Drink and Ice Manufacturing	BEA	-0.683	-0.223	-0.404	Data NA	1.000
	BLS (DIPS)	-0.460		Data NA		
31311, Fiber, Yarn, and Thread Mills	BEA	-5.476	-0.097	-4.398	Data NA	0.998
	BLS (DIPS)	-5.380		Data NA		
31321, Broadwoven Fabric Mills	BEA	-9.098	-0.252	-7.757	Data NA	0.999
	BLS (DIPS)	-8.846		Data NA		
31411, Carpet and Rug Mills	BEA	0.868	0.171	2.095	Data NA	0.998
	BLS (DIPS)	0.697		Data NA		
31412, Curtain and Linen Mills	BEA	1.508	-0.427	3.337	Data NA	0.998
	BLS (DIPS)	1.935		Data NA		
31491, Textile Bag and Canvas Mills	BEA	-2.823	-0.085	-0.901	Data NA	0.979
	BLS (DIPS)	-2.738		Data NA		
31519, Other Apparel Knitting Mills	BEA	-12.222	-0.573	-9.042	Data NA	0.994
	BLS (DIPS)	-11.649		Data NA		
32192, Wood Container and Pallet Manufacturing	BEA	-0.265	0.063	0.513	Data NA	1.000
	BLS (DIPS)	-0.328		Data NA		
32221, Paperboard Container Manufacturing	BEA	-3.294	-0.851	-2.761	Data NA	0.915
	BLS (DIPS)	-2.442		Data NA		
32411, Petroleum Refineries	BEA	2.282	**1.922**	1.444	Data NA	-0.824
	BLS (DIPS)	0.360		Data NA		
32513, Synthetic Dye and Pigment Manufacturing	BEA	-2.812	**-1.445**	-0.983	Data NA	0.993
	BLS (DIPS)	-1.367		Data NA		
32518, Other Basic Inorganic Chemical Manufacturing	BEA	-9.432	**1.657**	-6.614	Data NA	1.000
	BLS (DIPS)	-11.089		Data NA		

Table 4A. Comparison of Real Output Series: NAICS 5-Digit Industry Groups						
NAICS 5-Digit Industry Groups	**Output Series**	**Average Annual Growth Rate (1998-01) (1)**	**Difference , 1998-01** *(BEA less BLS Average Annual Growth Rate)*	**Average Annual Growth Rate (1998-02) (2)**	**Difference , 1998-02** *(BEA less BLS Average Annual Growth Rate)*	**Correlation Coefficient**
32519, Other Basic Organic Chemical Manufacturing	BEA	-2.279	-0.471	-1.481	Data NA	0.997
	BLS (DIPS)	-1.808		Data NA		
32541, Pharmaceutical and Medicine Manufacturing	BEA	5.571	**-1.413**	0.733	Data NA	**0.509**
	BLS (DIPS)	6.984		Data NA		
32551, Paint and Coating Manufacturing	BEA	-1.692	-0.077	-0.997	Data NA	**0.774**
	BLS (DIPS)	-1.615		Data NA		
32562, Toilet Preparation Manufacturing	BEA	3.308	-0.006	2.108	Data NA	0.983
	BLS (DIPS)	3.314		Data NA		
32611, Plastics Packaging Materials and Unlaminated Film and Sheet Manufacturing	BEA	-1.040	0.052	0.856	Data NA	0.998
	BLS (DIPS)	-1.092		Data NA		
32612, Plastics Pipe, Pipe Fitting and Unlaminated Profile Shape Manufacturing	BEA	1.600	0.099	2.127	Data NA	**0.701**
	BLS (DIPS)	1.502		Data NA		
32621, Tire Manufacturing	BEA	-1.929	0.000	-2.274	Data NA	0.999
	BLS (DIPS)	-1.928		Data NA		
32622, Rubber and Plastics Hoses and Belting Manufacturing	BEA	-3.815	-0.161	-1.460	Data NA	0.996
	BLS (DIPS)	-3.654		Data NA		
32629, Other Rubber Product Manufacturing	BEA	-2.066	-0.397	-0.091	Data NA	1.000
	BLS (DIPS)	-1.669		Data NA		
32732, Ready-Mix Concrete Manufacturing	BEA	1.236	0.299	-0.759	Data NA	1.000
	BLS (DIPS)	0.937		Data NA		
33121, Iron and Steel Pipe and Tube Manufacturing from Purchased Steel	BEA	1.143	**2.746**	0.927	Data NA	0.965
	BLS (DIPS)	-1.603		Data NA		
33151, Ferrous Metal Foundries	BEA	-2.398	-0.296	-3.158	Data NA	0.999
	BLS (DIPS)	-2.102		Data NA		
33251, Hardware Manufacturing	BEA	-2.307	-0.101	-1.702	Data NA	0.997
	BLS (DIPS)	-2.205		Data NA		
33261, Spring and Wire Manufacturing	BEA	-4.525	-0.110	-3.137	Data NA	0.999
	BLS (DIPS)	-4.415		Data NA		
33271, Machine Shops	BEA	1.963	0.474	1.521	Data NA	0.999
	BLS (DIPS)	1.488		Data NA		
33272, Turned Product and Screw, Nut, and Bolt Manufacturing	BEA	-3.597	0.563	-2.591	Data NA	0.994
	BLS (DIPS)	-4.159		Data NA		

Table 4A. Comparison of Real Output Series: NAICS 5-Digit Industry Groups						
NAICS 5-Digit Industry Groups	**Output Series**	**Average Annual Growth Rate (1998-01) (1)**	**Difference , 1998-01** *(BEA less BLS Average Annual Growth Rate)*	**Average Annual Growth Rate (1998-02) (2)**	**Difference , 1998-02** *(BEA less BLS Average Annual Growth Rate)*	**Correlation Coefficient**
33291, Metal Valve Manufacturing	BEA	-3.669	0.162	-3.530	Data NA	0.996
	BLS (DIPS)	-3.831		Data NA		
33312, Construction Machinery Manufacturing	BEA	-5.805	**0.990**	-5.109	Data NA	0.974
	BLS (DIPS)	-6.795		Data NA		
33421, Telephone Apparatus Manufacturing	BEA	17.450	0.556	8.085	Data NA	1.000
	BLS (DIPS)	16.894		Data NA		
33422, Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing	BEA	5.057	-0.617	-2.042	Data NA	0.999
	BLS (DIPS)	5.674		Data NA		
33451, Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	BEA	6.862	**4.649**	6.389	Data NA	**0.747**
	BLS (DIPS)	2.212		Data NA		
33511, Electric Lamp Bulb and Part Manufacturing	BEA	-9.323	0.169	-7.017	Data NA	1.000
	BLS (DIPS)	-9.493		Data NA		
33512, Lighting Fixture Manufacturing	BEA	-0.354	0.049	-0.416	Data NA	1.000
	BLS (DIPS)	-0.403		Data NA		
33593, Wiring Device Manufacturing	BEA	-0.200	-0.111	-4.973	Data NA	0.994
	BLS (DIPS)	-0.089		Data NA		
33611, Automobile and Light Duty Motor Vehicle Manufacturing	BEA	-1.264	0.031	-0.046	Data NA	1.000
	BLS (DIPS)	-1.295		Data NA		
33612, Heavy Duty Truck Manufacturing	BEA	-12.732	0.123	-8.423	Data NA	1.000
	BLS (DIPS)	-12.855		Data NA		
33651, Railroad Rolling Stock Manufacturing	BEA	-4.253	**-0.919**	-3.873	Data NA	1.000
	BLS (DIPS)	-3.334		Data NA		
33711, Wood Kitchen Cabinet and Countertop Manufacturing	BEA	6.326	0.470	4.922	Data NA	0.997
	BLS (DIPS)	5.856		Data NA		
33991, Jewelry and Silverware Manufacturing	BEA	1.355	-0.129	2.552	Data NA	0.999
	BLS (DIPS)	1.484		Data NA		
33992, Sporting and Athletic Goods Manufacturing	BEA	2.290	0.375	0.337	Data NA	0.997
	BLS (DIPS)	1.914		Data NA		
33993, Doll, Toy, and Game Manufacturing	BEA	-7.792	0.463	-7.570	Data NA	0.999
	BLS (DIPS)	-8.255		Data NA		

Table 4A. Comparison of Real Output Series: NAICS 5-Digit Industry Groups

NAICS 5-Digit Industry Groups	Output Series	Average Annual Growth Rate (1998-01) (1)	Difference , 1998-01 *(BEA less BLS Average Annual Growth Rate)*	Average Annual Growth Rate (1998-02) (2)	Difference , 1998-02 *(BEA less BLS Average Annual Growth Rate)*	Correlation Coefficient
33994, Office Supplies (except Paper) Manufacturing	BEA	-6.091	-0.845	1.039	Data NA	0.840
	BLS (DIPS)	-5.245		Data NA		
33995, Sign Manufacturing	BEA	3.475	0.321	3.871	Data NA	0.999
	BLS (DIPS)	3.153		Data NA		
49111, Postal Service	BEA	0.300	-0.791	-0.878	**-0.951**	0.952
	BLS (DIPS)	1.092		0.073		
51111, Newspaper Publishers	BEA	-1.307	**1.469**	-0.934	**1.917**	0.991
	BLS (DIPS)	-2.776		-2.850		
51112, Periodical Publishers	BEA	0.738	0.448	-0.590	0.790	0.997
	BLS (DIPS)	0.290		-1.380		
51113, Book Publishers	BEA	3.402	**-1.036**	1.807	**-1.131**	0.943
	BLS (DIPS)	4.438		2.939		
51121, Software Publishers	BEA	9.645	**4.491**	7.475	**4.469**	0.986
	BLS (DIPS)	5.154		3.006		
53223, Video Tape and Disc Rental	BEA	5.073	**-2.724**	3.190	**-2.215**	0.949
	BLS (DIPS)	7.796		5.405		

1. BEA refers to the Bureau of Economic Analysis unpublished detailed NAICS 5-digit gross output estimates underlying the GDP-by-industry accounts.
2. BLS (DIPS) refers to the Bureau of Labor Statistics published NAICS 5-digit sectoral output measures.

BEA output measures are based on the 1997 NAICS classification and BLS (DIPS) output measures are based on the 2002 NAICS classification. For selected industries, the 1997 and 2002 NAICS classifications differ. Industries where the 1997 and 2002 NAICS classifications are different and result in incomparable output data are shaded in yellow.

Table 4B. Comparison of Nominal Output Series: NAICS 5-Digit Industry Groups

NAICS 5-Digit Industry Groups	Output Series	Average Annual Growth Rate (1998-01) (1)	Difference , 1998-01 *(BEA less BLS Average Annual Growth Rate)*	Average Annual Growth Rate (1998-02) (2)	Difference , 1998-02 *(BEA less BLS Average Annual Growth Rate)*	Correlation Coefficient
31123, Breakfast Cereal Manufacturing	BEA[1]	5.646	-0.060	4.872	Data NA	0.997
	BLS (DIPS)[2]	5.706		Data NA		
31131, Sugar Manufacturing	BEA	-6.778	0.488	-3.880	Data NA	0.999
	BLS (DIPS)	-7.266		Data NA		
31134, Nonchocolate Confectionery Manufacturing	BEA	2.328	-0.471	2.380	Data NA	0.995
	BLS (DIPS)	2.799		Data NA		
31141, Frozen Food Manufacturing	BEA	-2.971	**-3.801**	0.729	Data NA	**0.710**
	BLS (DIPS)	0.830		Data NA		
31142, Fruit and Vegetable Canning, Pickling, and Drying	BEA	2.048	-0.692	4.325	Data NA	**-0.678**
	BLS (DIPS)	2.741		Data NA		
31152, Ice Cream and Frozen Dessert Manufacturing	BEA	4.869	0.568	1.902	Data NA	0.999
	BLS (DIPS)	4.301		Data NA		
31211, Soft Drink and Ice Manufacturing	BEA	2.162	-0.455	2.223	Data NA	1.000
	BLS (DIPS)	2.617		Data NA		
31311, Fiber, Yarn, and Thread Mills	BEA	-8.574	-0.055	-7.517	Data NA	1.000
	BLS (DIPS)	-8.520		Data NA		
31321, Broadwoven Fabric Mills	BEA	-10.511	0.124	-9.353	Data NA	0.998
	BLS (DIPS)	-10.635		Data NA		
31411, Carpet and Rug Mills	BEA	1.511	-0.068	2.593	Data NA	1.000
	BLS (DIPS)	1.579		Data NA		
31412, Curtain and Linen Mills	BEA	1.054	-0.838	2.822	Data NA	0.993
	BLS (DIPS)	1.892		Data NA		
31491, Textile Bag and Canvas Mills	BEA	-1.025	-0.309	0.802	Data NA	0.970
	BLS (DIPS)	-0.717		Data NA		
31519, Other Apparel Knitting Mills	BEA	-12.294	-0.102	-9.313	Data NA	0.999
	BLS (DIPS)	-12.191		Data NA		
32192, Wood Container and Pallet Manufacturing	BEA	0.014	-0.014	0.245	Data NA	1.000
	BLS (DIPS)	0.027		Data NA		
32221, Paperboard Container Manufacturing	BEA	1.749	0.070	0.537	Data NA	1.000
	BLS (DIPS)	1.679		Data NA		
32411, Petroleum Refineries	BEA	19.861	0.202	12.878	Data NA	0.996
	BLS (DIPS)	19.659		Data NA		
32513, Synthetic Dye and Pigment Manufacturing	BEA	-3.414	**-1.095**	-2.610	Data NA	1.000
	BLS (DIPS)	-2.319		Data NA		

Table 4B. Comparison of Nominal Output Series: NAICS 5-Digit Industry Groups						
NAICS 5-Digit Industry Groups	**Output Series**	**Average Annual Growth Rate (1998-01) (1)**	**Difference , 1998-01** *(BEA less BLS Average Annual Growth Rate)*	**Average Annual Growth Rate (1998-02) (2)**	**Difference , 1998-02** *(BEA less BLS Average Annual Growth Rate)*	**Correlation Coefficient**
32518, Other Basic Inorganic Chemical Manufacturing	BEA	-9.737	0.219	-7.563	Data NA	1.000
	BLS (DIPS)	-9.956		Data NA		
32519, Other Basic Organic Chemical Manufacturing	BEA	1.127	0.221	1.025	Data NA	1.000
	BLS (DIPS)	0.906		Data NA		
32541, Pharmaceutical and Medicine Manufacturing	BEA	7.997	**-1.545**	3.034	Data NA	**0.730**
	BLS (DIPS)	9.542		Data NA		
32551, Paint and Coating Manufacturing	BEA	0.012	-0.151	0.607	Data NA	0.880
	BLS (DIPS)	0.164		Data NA		
32562, Toilet Preparation Manufacturing	BEA	4.716	-0.272	3.283	Data NA	0.984
	BLS (DIPS)	4.988		Data NA		
32611, Plastics Packaging Materials and Unlaminated Film and Sheet Manufacturing	BEA	1.594	0.005	2.554	Data NA	1.000
	BLS (DIPS)	1.589		Data NA		
32612, Plastics Pipe, Pipe Fitting and Unlaminated Profile Shape Manufacturing	BEA	1.956	0.116	2.929	Data NA	0.971
	BLS (DIPS)	1.840		Data NA		
32621, Tire Manufacturing	BEA	-1.865	0.049	-1.918	Data NA	1.000
	BLS (DIPS)	-1.913		Data NA		
32622, Rubber and Plastics Hoses and Belting Manufacturing	BEA	-2.518	-0.161	-0.670	Data NA	0.992
	BLS (DIPS)	-2.357		Data NA		
32629, Other Rubber Product Manufacturing	BEA	-1.655	-0.264	0.147	Data NA	1.000
	BLS (DIPS)	-1.391		Data NA		
32732, Ready-Mix Concrete Manufacturing	BEA	3.746	0.286	1.064	Data NA	1.000
	BLS (DIPS)	3.460		Data NA		
33121, Iron and Steel Pipe and Tube Manufacturing from Purchased Steel	BEA	-3.065	0.213	-1.576	Data NA	0.994
	BLS (DIPS)	-3.278		Data NA		
33151, Ferrous Metal Foundries	BEA	-1.430	-0.087	-2.327	Data NA	1.000
	BLS (DIPS)	-1.343		Data NA		
33251, Hardware Manufacturing	BEA	-0.844	-0.127	-0.405	Data NA	0.998
	BLS (DIPS)	-0.717		Data NA		

Table 4B. Comparison of Nominal Output Series: NAICS 5-Digit Industry Groups						
NAICS 5-Digit Industry Groups	**Output Series**	**Average Annual Growth Rate (1998-01) (1)**	**Difference , 1998-01** *(BEA less BLS Average Annual Growth Rate)*	**Average Annual Growth Rate (1998-02) (2)**	**Difference , 1998-02** *(BEA less BLS Average Annual Growth Rate)*	**Correlation Coefficient**
33261, Spring and Wire Manufacturing	BEA	-4.794	-0.728	-3.311	Data NA	0.993
	BLS (DIPS)	-4.066		Data NA		
33271, Machine Shops	BEA	2.865	0.283	2.149	Data NA	1.000
	BLS (DIPS)	2.582		Data NA		
33272, Turned Product and Screw, Nut, and Bolt Manufacturing	BEA	-3.606	0.057	-2.573	Data NA	1.000
	BLS (DIPS)	-3.663		Data NA		
33291, Metal Valve Manufacturing	BEA	-2.197	0.201	-2.214	Data NA	0.997
	BLS (DIPS)	-2.398		Data NA		
33312, Construction Machinery Manufacturing	BEA	-4.719	**0.903**	-3.960	Data NA	0.970
	BLS (DIPS)	-5.622		Data NA		
33421, Telephone Apparatus Manufacturing	BEA	8.731	-0.332	0.401	Data NA	1.000
	BLS (DIPS)	9.063		Data NA		
33422, Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing	BEA	3.720	-0.644	-3.725	Data NA	0.999
	BLS (DIPS)	4.364		Data NA		
33451, Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	BEA	4.299	**2.138**	4.489	Data NA	**0.621**
	BLS (DIPS)	2.161		Data NA		
33511, Electric Lamp Bulb and Part Manufacturing	BEA	-9.351	0.182	-7.428	Data NA	1.000
	BLS (DIPS)	-9.532		Data NA		
33512, Lighting Fixture Manufacturing	BEA	-0.291	0.010	-0.472	Data NA	1.000
	BLS (DIPS)	-0.301		Data NA		
33593, Wiring Device Manufacturing	BEA	-0.658	-0.178	-5.238	Data NA	0.997
	BLS (DIPS)	-0.480		Data NA		
33611, Automobile and Light Duty Motor Vehicle Manufacturing	BEA	-1.178	0.052	-0.593	Data NA	1.000
	BLS (DIPS)	-1.230		Data NA		
33612, Heavy Duty Truck Manufacturing	BEA	-11.829	-0.110	-7.477	Data NA	1.000
	BLS (DIPS)	-11.719		Data NA		
33651, Railroad Rolling Stock Manufacturing	BEA	-4.190	**-0.958**	-3.884	Data NA	1.000
	BLS (DIPS)	-3.232		Data NA		
33711, Wood Kitchen Cabinet and Countertop Manufacturing	BEA	8.205	0.239	6.658	Data NA	0.995
	BLS (DIPS)	7.966		Data NA		

Table 4B. Comparison of Nominal Output Series: NAICS 5-Digit Industry Groups

NAICS 5-Digit Industry Groups	Output Series	Average Annual Growth Rate (1998-01) (1)	Difference , 1998-01 *(BEA less BLS Average Annual Growth Rate)*	Average Annual Growth Rate (1998-02) (2)	Difference , 1998-02 *(BEA less BLS Average Annual Growth Rate)*	Correlation Coefficient
33991, Jewelry and Silverware Manufacturing	BEA	1.577	-0.155	2.932	Data NA	0.998
	BLS (DIPS)	1.732		Data NA		
33992, Sporting and Athletic Goods Manufacturing	BEA	2.032	0.356	-0.010	Data NA	0.997
	BLS (DIPS)	1.676		Data NA		
33993, Doll, Toy, and Game Manufacturing	BEA	-7.910	0.356	-7.429	Data NA	1.000
	BLS (DIPS)	-8.266		Data NA		
33994, Office Supplies (except Paper) Manufacturing	BEA	-5.442	-0.835	1.846	Data NA	**0.720**
	BLS (DIPS)	-4.607		Data NA		
33995, Sign Manufacturing	BEA	5.492	0.307	5.482	Data NA	1.000
	BLS (DIPS)	5.185		Data NA		
49111, Postal Service	BEA	3.030	**2.208**	2.316	**1.102**	**-0.681**
	BLS (DIPS)	0.822		1.214		
51111, Newspaper Publishers	BEA	1.277	0.044	1.153	0.028	1.000
	BLS (DIPS)	1.233		1.125		
51112, Periodical Publishers	BEA	3.746	0.035	2.277	-0.024	1.000
	BLS (DIPS)	3.711		2.301		
51113, Book Publishers	BEA	6.696	-0.813	5.129	**-1.070**	0.911
	BLS (DIPS)	7.510		6.199		
51121, Software Publishers	BEA	9.002	**0.951**	6.172	0.718	0.996
	BLS (DIPS)	8.051		5.454		
53223, Video Tape and Disc Rental	BEA	4.008	**-1.878**	2.328	**-1.523**	0.979
	BLS (DIPS)	5.886		3.850		

1. BEA refers to the Bureau of Economic Analysis unpublished detailed NAICS 5-digit gross output estimates underlying the GDP-by-industry accounts.
2. BLS (DIPS) refers to the Bureau of Labor Statistics published NAICS 5-digit sectoral output measures.

BEA output measures are based on the 1997 NAICS classification and BLS (DIPS) output measures are based on the 2002 NAICS classification. For selected industries, the 1997 and 2002 NAICS classifications differ. Industries where the 1997 and 2002 NAICS classifications are different and result in incomparable output data are shaded in yellow.

Table 4C. Comparison of Output Price Deflator Series: NAICS 5-Digit Industry Groups						
NAICS 5-Digit Industry Groups	**Output Series**	**Average Annual Growth Rate (1998-01) (1)**	**Difference , 1998-01** *(BEA less BLS Average Annual Growth Rate)*	**Average Annual Growth Rate (1998-02) (2)**	**Difference , 1998-02** *(BEA less BLS Average Annual Growth Rate)*	**Correlation Coefficient**
31123, Breakfast Cereal Manufacturing	BEA[1]	0.876	0.061	0.947	Data NA	0.983
	BLS (DIPS)[2]	0.815		Data NA		
31131, Sugar Manufacturing	BEA	-2.616	0.393	-0.572	Data NA	0.967
	BLS (DIPS)	-3.009		Data NA		
31134, Nonchocolate Confectionery Manufacturing	BEA	1.011	0.053	1.031	Data NA	0.976
	BLS (DIPS)	0.958		Data NA		
31141, Frozen Food Manufacturing	BEA	0.446	0.080	0.588	Data NA	0.999
	BLS (DIPS)	0.366		Data NA		
31142, Fruit and Vegetable Canning, Pickling, and Drying	BEA	0.930	-0.318	1.224	Data NA	**-0.136**
	BLS (DIPS)	1.248		Data NA		
31152, Ice Cream and Frozen Dessert Manufacturing	BEA	3.395	-0.104	2.768	Data NA	1.000
	BLS (DIPS)	3.499		Data NA		
31211, Soft Drink and Ice Manufacturing	BEA	2.865	-0.230	2.638	Data NA	0.997
	BLS (DIPS)	3.095		Data NA		
31311, Fiber, Yarn, and Thread Mills	BEA	-3.278	0.017	-3.263	Data NA	0.996
	BLS (DIPS)	-3.295		Data NA		
31321, Broadwoven Fabric Mills	BEA	-1.556	0.422	-1.730	Data NA	0.994
	BLS (DIPS)	-1.978		Data NA		
31411, Carpet and Rug Mills	BEA	0.638	-0.250	0.488	Data NA	0.979
	BLS (DIPS)	0.888		Data NA		
31412, Curtain and Linen Mills	BEA	-0.451	-0.384	-0.500	Data NA	0.881
	BLS (DIPS)	-0.067		Data NA		
31491, Textile Bag and Canvas Mills	BEA	1.848	-0.244	1.716	Data NA	1.000
	BLS (DIPS)	2.092		Data NA		
31519, Other Apparel Knitting Mills	BEA	-0.083	0.558	-0.297	Data NA	**0.289**
	BLS (DIPS)	-0.641		Data NA		
32192, Wood Container and Pallet Manufacturing	BEA	0.279	-0.109	-0.269	Data NA	**-0.205**
	BLS (DIPS)	0.388		Data NA		
32221, Paperboard Container Manufacturing	BEA	5.214	**0.983**	5.214	Data NA	0.997
	BLS (DIPS)	4.232		Data NA		
32411, Petroleum Refineries	BEA	17.187	**-2.061**	11.271	Data NA	0.974
	BLS (DIPS)	19.248		Data NA		
32513, Synthetic Dye and Pigment Manufacturing	BEA	-0.620	0.311	-1.646	Data NA	0.990
	BLS (DIPS)	-0.931		Data NA		
32518, Other Basic Inorganic Chemical Manufacturing	BEA	-0.338	**-1.644**	-1.016	Data NA	1.000
	BLS (DIPS)	1.307		Data NA		

Table 4C. Comparison of Output Price Deflator Series: NAICS 5-Digit Industry Groups						
NAICS 5-Digit Industry Groups	**Output Series**	**Average Annual Growth Rate (1998-01) (1)**	**Difference , 1998-01** *(BEA less BLS Average Annual Growth Rate)*	**Average Annual Growth Rate (1998-02) (2)**	**Difference , 1998-02** *(BEA less BLS Average Annual Growth Rate)*	**Correlation Coefficient**
32519, Other Basic Organic Chemical Manufacturing	BEA	3.486	0.717	2.544	Data NA	0.999
	BLS (DIPS)	2.769		Data NA		
32541, Pharmaceutical and Medicine Manufacturing	BEA	2.298	-0.119	2.285	Data NA	**-0.142**
	BLS (DIPS)	2.417		Data NA		
32551, Paint and Coating Manufacturing	BEA	1.733	-0.070	1.619	Data NA	**0.800**
	BLS (DIPS)	1.803		Data NA		
32562, Toilet Preparation Manufacturing	BEA	1.363	-0.252	1.152	Data NA	0.873
	BLS (DIPS)	1.616		Data NA		
32611, Plastics Packaging Materials and Unlaminated Film and Sheet Manufacturing	BEA	2.661	-0.072	1.684	Data NA	1.000
	BLS (DIPS)	2.734		Data NA		
32612, Plastics Pipe, Pipe Fitting and Unlaminated Profile Shape Manufacturing	BEA	0.352	0.047	0.786	Data NA	1.000
	BLS (DIPS)	0.306		Data NA		
32621, Tire Manufacturing	BEA	0.064	0.064	0.364	Data NA	0.981
	BLS (DIPS)	0.000		Data NA		
32622, Rubber and Plastics Hoses and Belting Manufacturing	BEA	1.348	0.013	0.800	Data NA	0.998
	BLS (DIPS)	1.335		Data NA		
32629, Other Rubber Product Manufacturing	BEA	0.418	0.153	0.237	Data NA	0.973
	BLS (DIPS)	0.265		Data NA		
32732, Ready-Mix Concrete Manufacturing	BEA	2.479	-0.043	1.837	Data NA	0.989
	BLS (DIPS)	2.522		Data NA		
33121, Iron and Steel Pipe and Tube Manufacturing from Purchased Steel	BEA	-4.163	**-2.450**	-2.479	Data NA	0.952
	BLS (DIPS)	-1.713		Data NA		
33151, Ferrous Metal Foundries	BEA	0.992	0.202	0.858	Data NA	0.981
	BLS (DIPS)	0.791		Data NA		
33251, Hardware Manufacturing	BEA	1.498	0.000	1.322	Data NA	1.000
	BLS (DIPS)	1.497		Data NA		
33261, Spring and Wire Manufacturing	BEA	-0.280	-0.678	-0.180	Data NA	0.833
	BLS (DIPS)	0.398		Data NA		
33271, Machine Shops	BEA	0.884	-0.193	0.619	Data NA	0.972
	BLS (DIPS)	1.077		Data NA		
33272, Turned Product and Screw, Nut, and Bolt Manufacturing	BEA	-0.010	-0.540	0.016	Data NA	**-0.057**
	BLS (DIPS)	0.530		Data NA		
33291, Metal Valve Manufacturing	BEA	1.526	0.007	1.364	Data NA	0.995
	BLS (DIPS)	1.519		Data NA		

Table 4C. Comparison of Output Price Deflator Series: NAICS 5-Digit Industry Groups

NAICS 5-Digit Industry Groups	Output Series	Average Annual Growth Rate (1998-01) (1)	Difference , 1998-01 *(BEA less BLS Average Annual Growth Rate)*	Average Annual Growth Rate (1998-02) (2)	Difference , 1998-02 *(BEA less BLS Average Annual Growth Rate)*	Correlation Coefficient
33312, Construction Machinery Manufacturing	BEA	1.154	-0.078	1.212	Data NA	1.000
	BLS (DIPS)	1.231		Data NA		
33421, Telephone Apparatus Manufacturing	BEA	-7.423	-0.715	-7.110	Data NA	**0.449**
	BLS (DIPS)	-6.708		Data NA		
33422, Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing	BEA	-1.272	0.014	-1.718	Data NA	0.999
	BLS (DIPS)	-1.287		Data NA		
33451, Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	BEA	-2.400	**-2.334**	-1.787	Data NA	**0.186**
	BLS (DIPS)	-0.066		Data NA		
33511, Electric Lamp Bulb and Part Manufacturing	BEA	-0.027	0.037	-0.437	Data NA	0.999
	BLS (DIPS)	-0.064		Data NA		
33512, Lighting Fixture Manufacturing	BEA	0.063	-0.037	-0.056	Data NA	0.976
	BLS (DIPS)	0.100		Data NA		
33593, Wiring Device Manufacturing	BEA	-0.460	-0.093	-0.277	Data NA	0.886
	BLS (DIPS)	-0.367		Data NA		
33611, Automobile and Light Duty Motor Vehicle Manufacturing	BEA	0.088	0.054	-0.548	Data NA	0.998
	BLS (DIPS)	0.034		Data NA		
33612, Heavy Duty Truck Manufacturing	BEA	1.033	-0.270	1.034	Data NA	0.997
	BLS (DIPS)	1.303		Data NA		
33651, Railroad Rolling Stock Manufacturing	BEA	0.068	-0.032	-0.011	Data NA	0.985
	BLS (DIPS)	0.100		Data NA		
33711, Wood Kitchen Cabinet and Countertop Manufacturing	BEA	1.770	-0.222	1.655	Data NA	0.916
	BLS (DIPS)	1.992		Data NA		
33991, Jewelry and Silverware Manufacturing	BEA	0.221	-0.013	0.370	Data NA	1.000
	BLS (DIPS)	0.234		Data NA		
33992, Sporting and Athletic Goods Manufacturing	BEA	-0.250	-0.019	-0.345	Data NA	0.983
	BLS (DIPS)	-0.231		Data NA		
33993, Doll, Toy, and Game Manufacturing	BEA	-0.125	-0.125	0.151	Data NA	1.000
	BLS (DIPS)	0.000		Data NA		
33994, Office Supplies (except Paper) Manufacturing	BEA	0.692	0.000	0.799	Data NA	0.975
	BLS (DIPS)	0.692		Data NA		
33995, Sign Manufacturing	BEA	1.949	-0.015	1.552	Data NA	0.988
	BLS (DIPS)	1.964		Data NA		

Table 4C. Comparison of Output Price Deflator Series: NAICS 5-Digit Industry Groups

NAICS 5-Digit Industry Groups	Output Series	Average Annual Growth Rate (1998-01) (1)	Difference , 1998-01 *(BEA less BLS Average Annual Growth Rate)*	Average Annual Growth Rate (1998-02) (2)	Difference , 1998-02 *(BEA less BLS Average Annual Growth Rate)*	Correlation Coefficient
49111, Postal Service	BEA	2.722	**2.991**	3.223	**2.098**	0.877
	BLS (DIPS)	-0.270		1.124		
51111, Newspaper Publishers	BEA	2.618	**-1.497**	2.106	**-1.987**	**0.467**
	BLS (DIPS)	4.116		4.094		
51112, Periodical Publishers	BEA	2.987	-0.399	2.884	-0.864	**0.504**
	BLS (DIPS)	3.386		3.748		
51113, Book Publishers	BEA	3.186	0.260	3.262	0.110	0.870
	BLS (DIPS)	2.926		3.152		
51121, Software Publishers	BEA	-0.586	**-3.342**	-1.213	**-3.604**	0.955
	BLS (DIPS)	2.756		2.391		
53223, Video Tape and Disc Rental	BEA	-1.015	0.760	-0.835	0.641	0.672
	BLS (DIPS)	-1.774		-1.476		

1. BEA refers to the Bureau of Economic Analysis unpublished detailed NAICS 5-digit gross output estimates underlying the GDP-by-industry accounts.
2. BLS (DIPS) refers to the Bureau of Labor Statistics published NAICS 5-digit sectoral output measures.

BEA output measures are based on the 1997 NAICS classification and BLS (DIPS) output measures are based on the 2002 NAICS classification. For selected industries, the 1997 and 2002 NAICS classifications differ. Industries where the 1997 and 2002 NAICS classifications are different and result in incomparable output data are shaded in yellow.