

Annual Integrated Economic Survey - BLS Discussant

Mike Brill

BLS Productivity Program

12/10/2021



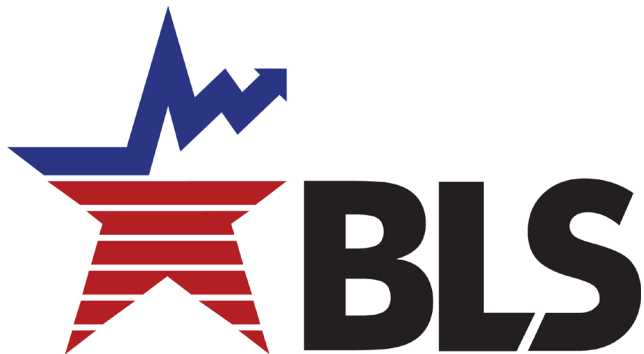
Several BLS programs rely on Census data

- This includes...

- ▶ Producer Price Index
- ▶ Employment Projections
- ▶ Productivity

- Majority of Census surveys to be combined into the AIES are currently used by BLS

- ▶ ASM, ARTS, AWTs, SAS, ACES



How does BLS use Census data?



PPI Weights and Census Data

- PPI is calculated using Modified Laspeyres formula
- Modified Laspeyres formula
 - ▶ Fixed weights over a given time period
- PPI Weights
 - ▶ Based on Economic Census Data
 - ▶ Updated every 5 years
 - ▶ Currently based on 2012 Census
 - ▶ In process of updating to be based on 2017 Census
 - ▶ Weights are relatively old by the time of update



PPI Weights and Census Data

- PPI uses Annual Retail Trade Survey data in deriving weights
 - ▶ PPI Retail trade indexes are based on margin revenue
 - ▶ PPI 'margins' the reported sales revenue to create index weights
 - PPI uses Annual gross margin data from the Annual Retail Trade Survey to calculate margin ratios by industry
 - Margin ratios applied to sales revenue to create index weights

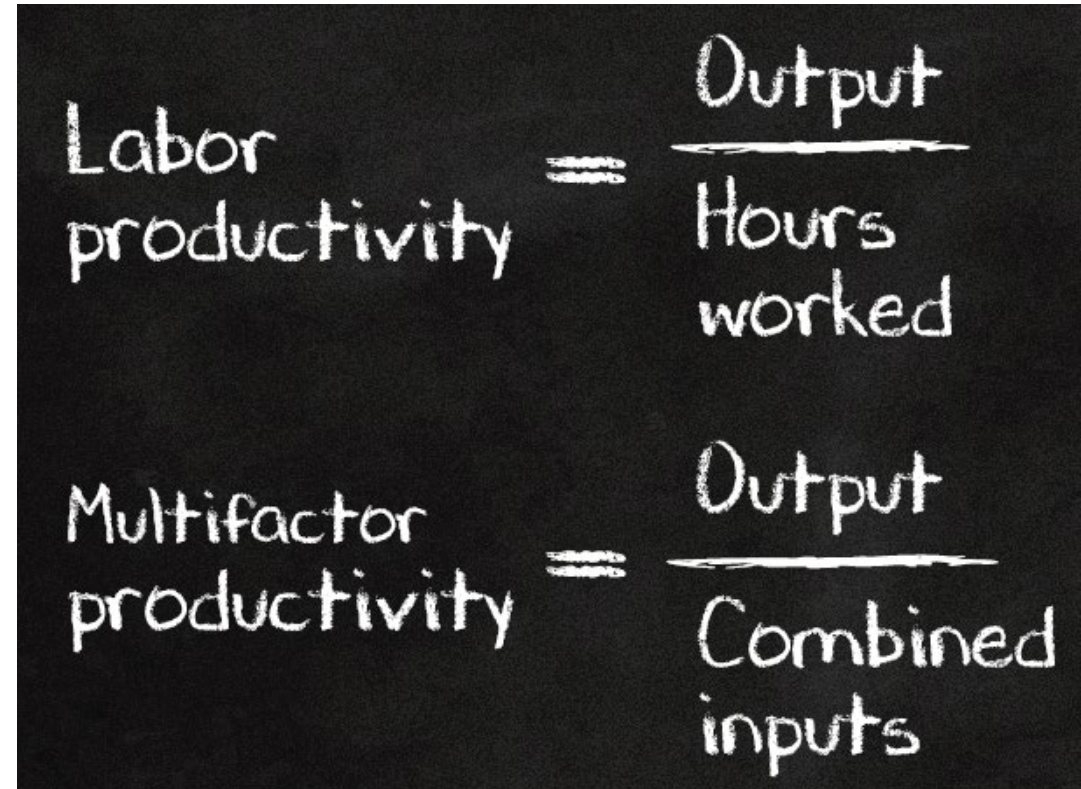


PPI Weights and Census Data

- Could PPI use annual Census data to more frequently update weights?
- PPI plans to explore this option in the future
- Possible issues
 - ▶ Annual Census data is less detailed than Economic Census data
 - ▶ PPI uses very detailed Census data
 - Possible solution is to update at 6-digit level annually and benchmark every 5 years to the Economic Census
 - ▶ Currently weight update process is labor intensive
 - Systems changes likely needed to make process feasible annually

Productivity and Census Data

- Labor productivity measures compare trends in output and hours worked
- Output revenue for detailed industries comes primarily from Census surveys
 - ▶ Manufacturing – ASM
 - ▶ Services – SAS
 - ▶ Trade – ARTS/AWTS



The image shows a chalkboard with two handwritten formulas. The first formula is 'Labor productivity = Output / Hours worked'. The second formula is 'Multifactor productivity = Output / Combined inputs'. Both formulas use a double horizontal line for the division symbol.

$$\text{Labor productivity} = \frac{\text{Output}}{\text{Hours worked}}$$
$$\text{Multifactor productivity} = \frac{\text{Output}}{\text{Combined inputs}}$$

Productivity and Census Data

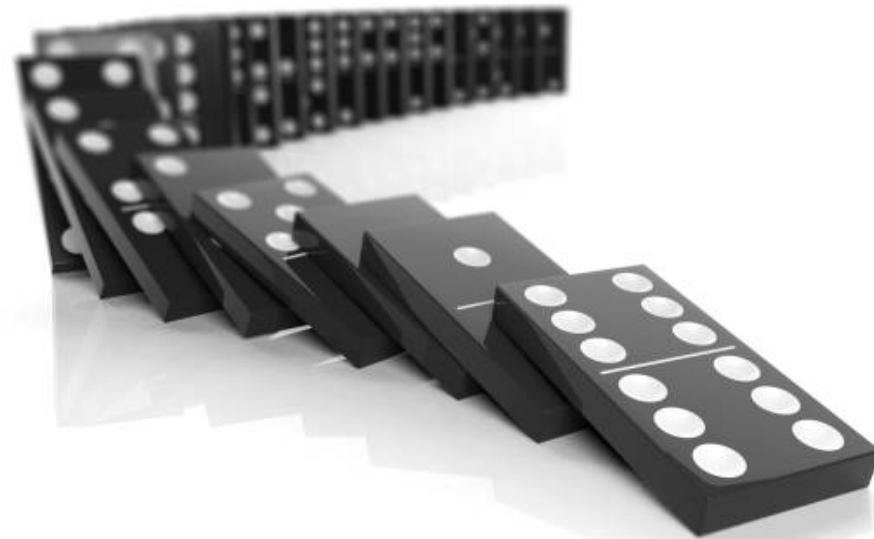
■ Additional series used from Census annual surveys

- ▶ Inventories
- ▶ Cost of materials
- ▶ Cost of electricity and fuels
- ▶ Capital investment
- ▶ Detailed product data
- ▶ Selected expenses
- ▶ And more...



Changes that impact BEA affect BLS

- The BLS productivity program relies heavily on BEA data. Census changes that impact BEA will also impact BLS productivity measures.



Thoughts on AIES



Integrated annual survey is a great idea

- ▶ Improved efficiency and consistency
- ▶ Just makes sense



More consistent annual manufacturing data

- ▶ The Annual Survey of Manufactures is not collected during Economic Census years and doesn't come out at the same time each year. This is a challenge for data users.
- ▶ Will the new survey report manufacturing activity every year on a consistent schedule? This would be fantastic.



Are time series doomed?

- ▶ BLS and others build time series from Census data. We are concerned with how we will link data from the old surveys to the new integrated survey.
- ▶ Changes in collection procedures could make comparisons between current surveys and new integrated survey difficult.



Impact on NAPCS collection codes?

- ▶ The switch to NAPCS products was a significant change for both Census and data users.
- ▶ Does Census expect NAPCS collection codes to change significantly with the new survey?

Notes

Selections

Geos

Years

Topics

Surveys

123

2 Codes

Hide

Filter

Recommended Pivot

Transpose

Margin of Error

Restore

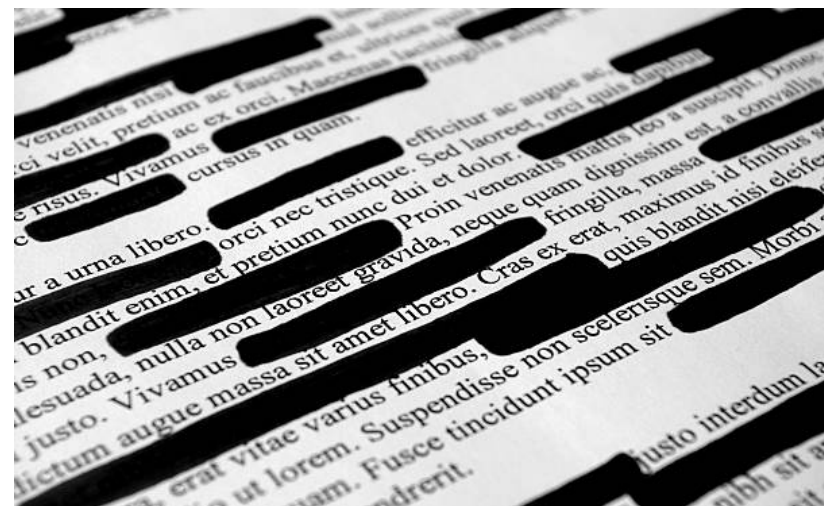
Excel

Download

Geographic Area Name	2017 NAICS code		Meaning of NAICS code		2017 NAPCS collection code	Meaning of NAPCS collect
United States	31-33	:	Manufacturing	:	0000000000	Total
United States	31-33	:	Manufacturing	:	1000025000	Extraction of natural gas (v
United States	31-33	:	Manufacturing	:	1000750000	Mining of fire clay, includin
United States	31-33	:	Manufacturing	:	1000825000	Mining of common (miscel
United States	31-33	:	Manufacturing	:	1000950000	Mining and/or beneficiator
United States	31-33	:	Manufacturing	:	1001400000	Quarrying of rough dimens
United States	31-33	:	Manufacturing	:	1001425000	Quarrying of rough dimens
United States	31-33	:	Manufacturing	:	1001450000	Quarrying of other rough di
United States	31-33	:	Manufacturing	:	1001475000	Quarrying of construction s
United States	31-33	:	Manufacturing	:	1001500000	Quarrying of crushed and b
United States	31-33	:	Manufacturing	:	1001525000	Quarrying of crushed and b
United States	31-33	:	Manufacturing	:	1001550000	Quarrying of bituminous lir
United States	31-33	:	Manufacturing	:	1001575000	Quarrying of other crushed

How much will be published?

- ▶ Is there an expectation of whether there will be more, fewer, or about the same number of undisclosed values in the new survey?
- ▶ Additional detail is great in theory but can fall short when publication standards aren't met.



Continue to keep stakeholders in the loop

- ▶ Census has done a good job of this so far.
 - Annual content review
 - Presentations to agencies
 - Presentations to advisory committees
- ▶ Thank you!



Contact Information

Mike Brill

Supervisory Economist
BLS Productivity Program

www.bls.gov/lpc

202-691-5657

brill.michael@bls.gov

