Tracking Firm Use of AI in Real Time: A Snapshot From the Business Trends and Outlook Survey

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**BUSINESS TRENDS AND OUTLOOK SURVEY (BTOS)**

- Provides insight into the state of the economy by providing timely data for key economic measures and business expectations about future conditions.
- Has ongoing 2-week data collection periods and publications every 4 weeks.
- Data includes all employer businesses (single location and multilocation) in the U.S. economy, excluding farms.

**DATA AND METHODOLOGY**

- Sample consists of approximately 1.2 million businesses split into six panels.
- Target population is nonfarm employer businesses with receipts of $1,000 or more that are in the United States, the District of Columbia, and Puerto Rico.
- Asks businesses to respond to the survey once every 12 weeks for a year.
- Data are available for the national, state, sector, subsector, employment size class, sector by employment size class, and top 25 metropolitan statistical area levels.

**CURRENT AND EXPECTED AI USE**

- Response rate for the pooled supplemental period was around 16 percent, with approximately 164,500 businesses responding.

**CURRENT USE OF AI TECHNOLOGIES ('NONE' EXCLUDED)**

- Asks a series of qualitative questions about business conditions in the last 2 weeks and expectations about future business conditions. These qualitative questions result in one estimate per question answer. For most questions, an index is produced to create one estimate per question for easier comparison over time.

**EXPECTED USE OF AI TECHNOLOGIES**

- Note: Statistics are representative of companies that reported planning to use AI to produce goods or services in the next 6 months.

**SUMMARY**

- The BTOS AI supplement provides a new, real-time snapshot of current and expected future use of AI amongst U.S. businesses. We find that AI adoption has increased from about 1.7 percent in Fall 2021, to 2.5% in Fall 2022, and has continued to rise to about 4.4 percent in Fall 2023. AI usage is widespread across all sectors and states. The highest rates of adoption are found in the education, information, and scientific services sectors, as contrast with the Construction and Agriculture sectors. States with the highest AI includes Colorado, the District of Columbia, and Florida; the lowest-usage states include Mississippi, West Virginia, and Maine.

- Businesses using AI report using it for a variety of technologies: Decision making systems, natural language processing, and text and data analytics. These technologies are also the most commonly reported technologies for future AI usage, along with speech/voice recognition, machine learning, and recommendation systems based on AI.

- Adoption of AI remains relatively low, with the diffusion of AI progressing through the U.S. economy slower than expected. Whether these patterns will change as the diffusion of AI progresses through the U.S. economy remains to be seen. While the BTOS AI supplement data collection has ended, the core AI questions will continue to be fielded and used in future updates. As adoption rates continue to increase, we expect a similar pattern of increases in AI use for firms continuing adoption of AI and its effects on the economy.