



TODAY'S ANALYSIS

(10 February 2025)

TOPICS TO BE COVERED

- JEVONS PARADOX
- ECONOMIC SURVEY
 - CHAPTER 1: GLOBAL ECONOMIC CONDITION & DOMESTIC ECONOMIC CONDITION [1/2]
- MCQs

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JEVONS PARADOX

- **The AI Situation:** Recently, a Chinese AI company named **DeepSeek** developed a chatbot that costs much less than the ones from American companies.
- This caused a drop in stock prices for U.S. tech companies.
- **Satya Nadella's View:** Microsoft's CEO, Satya Nadella, took a positive outlook on this situation.
- He pointed to **Jevons Paradox**, a **160-year-old idea from economics**, to explain why this could still be a good thing for the industry.
- According to Nadella, as **AI becomes more affordable and efficient**, it will become more widely used, leading to even greater demand for it.

WHAT IS JEVONS PARADOX?

What It Means: Jevons Paradox is a concept that says: **When a resource becomes more efficient, people tend to use more of it instead of less.**

- **The Original Example:** In the **19th century**, England was concerned about running out of **coal**, which powered the economy.

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- At that time, economist **William Stanley Jevons** argued that **making coal-burning technologies** more efficient **wouldn't reduce coal use**.
- In fact, it would **increase** it **because cheaper coal-powered technologies would create more demand**, leading to more coal being used, not less.
- **The Paradox:** Instead of using **less coal**, **more efficient use of coal meant lower prices and more demand** for things like factories, engines, and machines that ran on coal.



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JEVONS PARADOX IN TODAY'S WORLD

How It Relates to Modern Technology:

- **Energy Efficiency:** In modern times, **Jevons Paradox is often used to explain how energy-efficient technologies might fail to reduce energy use.** For example:

- **Fuel-Efficient Cars:** If cars use less fuel, **it becomes cheaper to drive.**
- This might lead people to drive more or buy more cars, which could actually **increase** fuel consumption.
- **Energy-Efficient Appliances:** If refrigerators become more efficient, people might use them more or buy more of them, leading to higher energy consumption.

HOW DOES IT APPLY TO AI?

- **AI Becoming Cheaper:** Now, some people, like Satya Nadella, believe that **Jevons Paradox might also apply to AI.**
- As AI becomes cheaper and more efficient, it could lead to an **explosion of demand** for AI technology.

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- In other words, despite competition from companies like DeepSeek, the growing efficiency of AI could actually lead to more profits for companies like Microsoft.
- **AI's Impact on Jobs:** Some economists, like **Erik Brynjolfsson**, argue that as AI improves worker productivity, it could create **more demand for human workers**, rather than replacing them.
- This is similar to what happened when airplanes became more efficient.
- **Even though jets allowed pilots to travel more miles**, the increased demand for air travel meant more pilots were needed, not fewer.

FOR AI TO CAUSE JEVONS PARADOX IN JOBS, THESE THREE THINGS MUST HAPPEN

1. **Increased Productivity:** AI must actually make workers **more productive**, helping them do their tasks faster or better.
2. **Lower Costs:** The increased productivity must lead to **lower costs** for services or goods.
 - a. This could happen because **AI can make work more efficient**.
3. **Greater Demand:** As things become cheaper, **more people** must want them.
 - a. This would mean more demand for the service, similar to how cheaper **coal-powered machines led to more coal being used in the 19th century**.

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CHALLENGES FOR AI'S EFFECT ON JOBS

- **Uncertainty:** We don't yet know if AI will really increase productivity in all industries.
- In some cases, **AI could completely replace human workers**, leading to job losses instead of job growth.
- **Demand Must Increase:** For AI to create jobs, demand for AI-powered services must **grow rapidly**.
- For example, **in farming, while technology has made food production much more efficient, food demand** hasn't increased enough to keep many farmers employed.

REAL LIFE EXAMPLES OF TECHNOLOGY REPLACING JOBS

- **Agriculture Example:** Many years ago, **technologies like tractors helped farmers become much more productive**.
- But even though **farmers could produce food more efficiently**, the **demand** for food didn't grow quickly enough to need as many farmers.
- As a result, the number of farmers has drastically dropped over time.
- **Brynjolfsson View:** Despite job losses in sectors like agriculture, **technology** has, on the whole, **created more jobs** in other areas over time.

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- For example, **computers and spreadsheets made office work much more efficient**, but they also opened the door to new jobs in technology, marketing, and other industries.

WHAT COULD THE FUTURE OF JOBS AND AI LOOK LIKE

- **Unpredictability:** It's very difficult to predict exactly how AI will change the job market.
- For instance, **Jevons was wrong when he predicted that England would run out of coal**, which shows how difficult it is to make long-term predictions.
- **Positive Change?** While no one knows for sure, **some economists** believe that AI will lead to a **Jevons Paradox** effect in certain jobs.
- This means that as workers get more efficient with AI tools, demand for their work could grow, leading to more jobs and better wages.

CONCLUSION

AI's Impact: The idea of **Jevons Paradox** suggests that, as AI becomes more affordable and efficient, it could create more **demand** for AI technology and even for **human workers** in certain occupations. But, there's still a lot of uncertainty. In some cases, AI might replace jobs entirely, while in others, it might increase productivity and open up more opportunities. We don't know yet how things will play out.

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ECONOMIC SURVEY, 2025

The **Economic Survey** is an annual report released by the Indian government, providing a comprehensive analysis of the **country's economic performance over the past year and forecasts** for the future. Key points include:

- **Coverage:** It addresses various topics like GDP growth, inflation, employment, agriculture, industry, and infrastructure.
- **Preparation:** The **Ministry of Finance, specifically the Department of Economic Affairs, is responsible for its preparation.**
- **Presentation:** The survey is **presented to Parliament by the Finance Minister, typically a day before the Union Budget.**
- **Importance:** It serves as an important resource for policymakers, businesses, and researchers.
- **Policy Formation:** It plays a crucial role in shaping the government's economic

CHAPTER 1: GLOBAL ECONOMIC CONDITION & DOMESTIC

ECONOMIC CONDITION [1/2]

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In 2024, the **global economy saw steady but uneven growth** across regions.

Manufacturing slowed down, especially in **Europe and parts of Asia**, due to supply chain issues and weak demand.

However, the **services sector performed better**, helping many economies grow. **Inflation eased in most places**, but services inflation remained high. While commodity prices stabilized, there was still a risk of price increases.

Central banks may adjust their policies differently, creating uncertainty about future rates and inflation. **Geopolitical tensions and trade risks** also remained challenges for global stability.

In India, the economy grew steadily with an estimated 6.4% GDP growth for FY 25.

KEY HIGHLIGHTS OF THE INDIAN ECONOMY

- **Agriculture and services** supported growth, while **manufacturing faced challenges** due to weak global demand.
- **Private consumption remained stable.**
- India's **strong fiscal management**, healthy **external balance**, and **remittance growth** helped maintain economic stability.

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- Looking ahead, India's growth prospects for FY26 are balanced, with **challenges** like **geopolitical uncertainties and possible commodity price shocks**.
- Key factors for growth include **stronger investment, improved consumer confidence, and rising rural demand**.
- India **will need structural reforms** to boost its global competitiveness and ensure long-term growth.

GLOBAL ECONOMIC CONDITIONS

- **Factors:** The **global economy is affected by changing growth rates, changing prices of goods like oil and metals, and changes in money policies**.
- **Impact:** These factors **affect prices, trade, and money flow** in countries.
- **Complications:** The current situation is **made more complex by political issues, supply chain problems, and climate-related shocks**.

Global Economic Growth:

- **2023 Growth:** The **global economy grew by 3.3% in 2023**.
- **IMF Projections:** The IMF **expects global growth of 3.2% for 2024 and 3.3% for 2025**.

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- **Long-Term Outlook:** Over the **next 5 years**, **global growth is expected to be around 3.2%**, which is lower than in the past.

GLOBAL ECONOMIC SCENARIO

2024 Events:

- a. **Elections:** **More than half of the world's people voted in major elections**, showing a lot of political activity.
- b. **Conflicts:** The **Russia-Ukraine** and **Israel-Hamas conflicts** made some regions unstable, **affecting energy and food security** and causing higher prices and inflation.
- c. **Cyberattacks:** More cyberattacks happened **because of the use of technology in important systems**, causing big risks.

ADVANCED ECONOMIES

- a. **Stable Growth:** **Rich countries had stable growth in the first half of 2024** despite higher interest rates, **due to lower inflation** and steady jobs and spending.
- b. **US Growth:** The **US is expected to grow by 2.8% in 2024**, with a **slight drop in 2025** due to less spending and exports.

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- c. **Euro Area Growth:** Europe's growth is **expected to improve from 0.4% in 2023 to 0.8% in 2024 and 1.0% in 2025**, due to better services. However, growth is different in various European countries, with some facing challenges.

ASIAN ECONOMIES

- a. **Japan:** Japan's growth was slowed by local supply issues in early 2024.
- b. **China:** China's growth slowed after the first quarter of 2024 due to weak spending and investment, and issues in the real estate market.

GLOBAL MANUFACTURING & SERVICES

- a. **Composite PMI:** The global composite PMI has been in the **growth zone for 14 months straight as of December 2024**, showing steady economic activity.
- b. **Services Sector:** The services sector is strong, with the global **Services PMI rising to a four-month high of 53.8 in December 2024**, showing growth for 23 months straight.
- c. **Manufacturing PMI:** The **manufacturing PMI showed a slowdown, stabilizing in November 2024 with a value of 50.0**, showing no overall change. Growth in consumer and intermediate goods offset a drop in investment goods.

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INFLATION

- **Trend:** Inflation rates have been dropping steadily, getting closer to the targets set by central banks.
- **2023:** Prices dropped in 2023 due to lower fuel prices.
- **2024:** In 2024, inflation was due to a broad drop in goods prices.
- **Disinflation:** The process of lowering inflation has slowed due to persistent services inflation, while core goods inflation has dropped to very low levels.
- The **IMF notes that higher wage growth** compared to before the pandemic has added to these pressures, but there are signs that these pressures are easing.
- **Monetary Policy:**
 - **Policy Pivot:** Major central banks have lowered interest rates, taking advantage of the drop in inflation.
 - **Uncertainty:** There is uncertainty about future interest rates across countries. The pace of rate cuts is different due to varying economic conditions.
- **Commodity Prices:**
 - **Forecast:** Commodity prices are expected to drop slightly after softening in

2024.

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- **Risk:** The risk of big price increases remains due to political tensions and extreme weather events.
- **Sovereign Bond Yields:**
 - **Trend:** Bond yields in rich countries dropped between April and September 2024, showing expectations of lower borrowing costs. However, uncertainty pushed bond yields up in October-December 2024.
 - **China:** Lower growth and deflation in China have pushed Chinese bond yields lower, widening the gap between the US and Chinese bond yields.

Domestic Economy

- **GDP Growth:**
 - **FY25 Estimate:** The real GDP growth for FY25 is estimated to be 6.4%.
 - **Private Consumption:** Private spending is estimated to grow by 7.3%, driven by a recovery in rural areas.
 - **Gross Fixed Capital Formation:** Estimated to grow by 6.4%, showing strong investment activity.
- **Sectoral Growth:**
 - **Agriculture:** Agriculture is expected to grow by 3.8% in FY25, supported by good crop production and normal rainfall.

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- **Industrial Sector: Estimated to grow by 6.2% in FY25**, driven by strong growth in construction and utility services.
- **Services Sector: Expected to grow by 7.2%**, driven by good activity in finance, real estate, public services, and defense.
- **Recovery Trends:**
 - **Aggregate GVA:** Overall economic value added (**GVA**) surpassed pre-pandemic levels in Q1 FY25 and remains above those levels in the first half of FY25.
 - **Construction and Utilities:** These sectors are doing well above pre-pandemic levels, driven by strong infrastructure development and housing demand.
 - **Manufacturing and Mining:** These sectors are **still recovering, with manufacturing slightly below pre-pandemic** levels and mining below pre-pandemic levels.

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MCQs

1. Recently, a term Jevons Paradox was in news. What does it mean?
 - (A) When a resource becomes efficient, then it is used less by the population.
 - (B) When a resource becomes efficient, then it is used more by the population.
 - (C) A paradox related to technology advancements leading to replacing humans.
 - (D) None of the above.

Ans. (B)

2. Which of these can be a possible impact of Artificial Intelligence?
 1. Job Losses
 2. More Efficiency in work.
 - (A) Only 1
 - (B) Only 2
 - (C) Both 1 & 2
 - (D) Neither 1 nor 2

Ans. (C)

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3. Which of the following factors can affect the global economy?

1. Supply Chains
2. Monetary Policies
3. Geopolitical Conflicts

- (A) Only 3
- (B) Only 1 & 3
- (C) Only 1 & 2
- (D) All of the above



Ans. (D)

4. Which sector is expected to witness the highest growth rate?

- (A) Agriculture
- (B) Manufacturing
- (C) Mining
- (D) Services

Ans. (D)

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