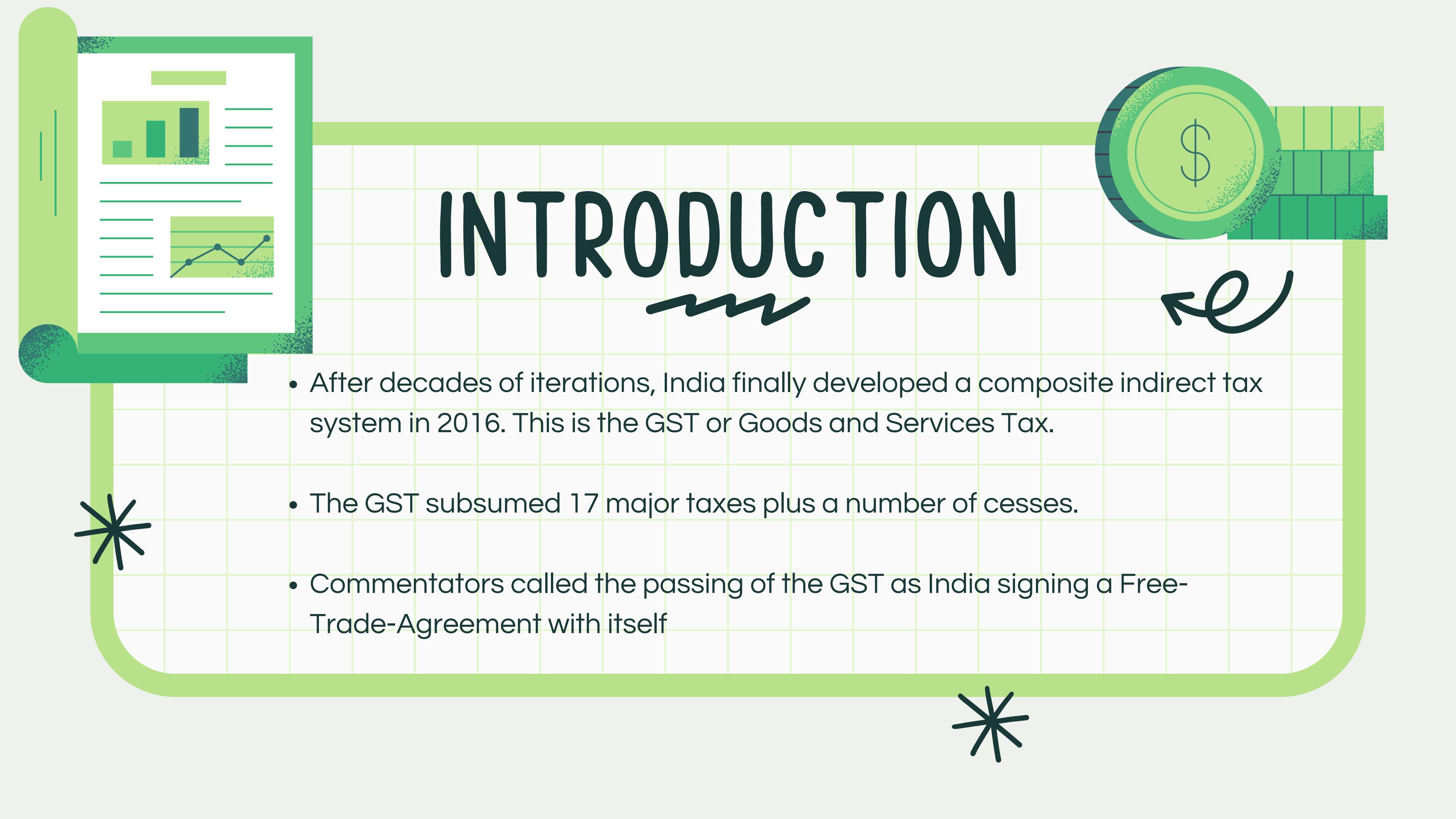


E-Way Bills & TRADE, EMPLOYMENT IN INDIA

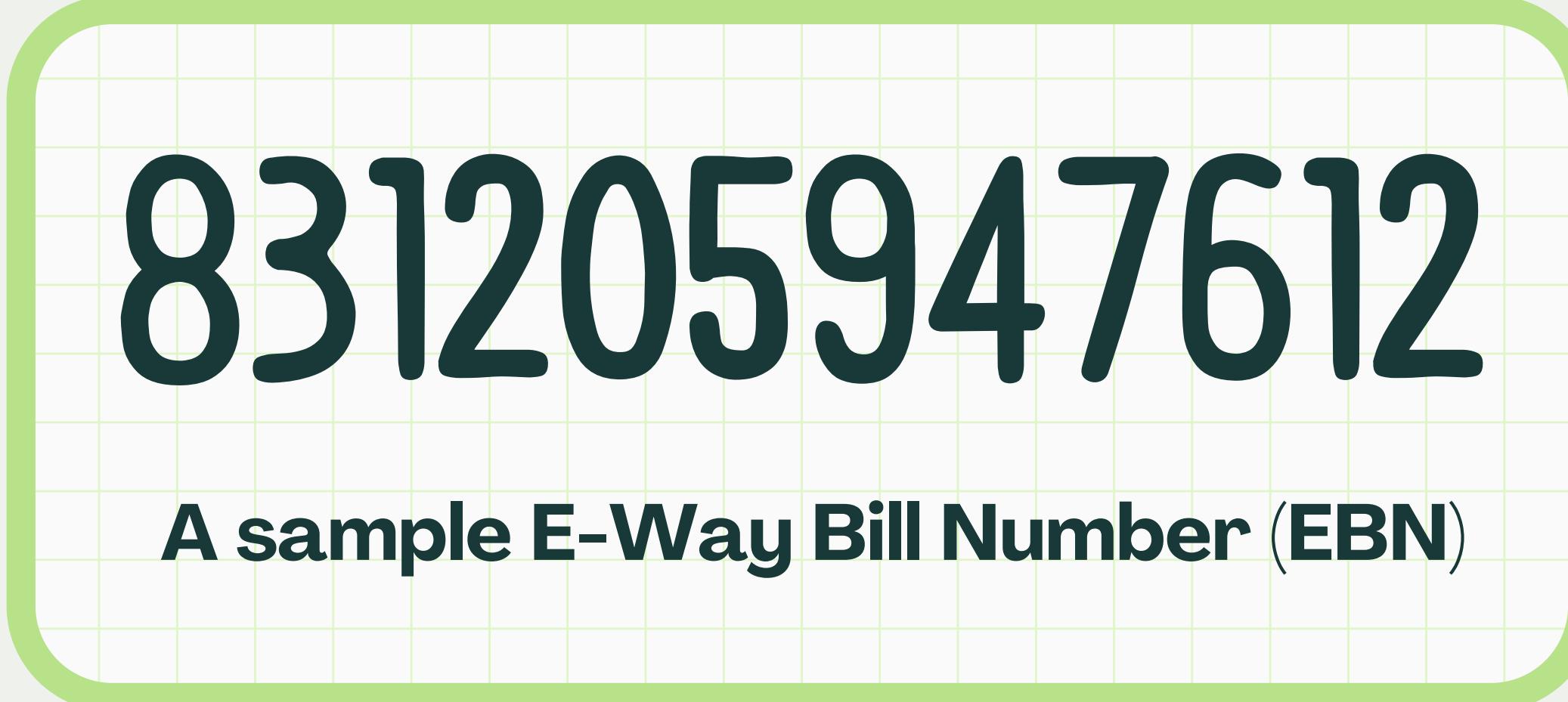
Name: Srimant Mishra
Course: DATA 512 (Human Centered Data Science)
Presentation Date: 1st December 2025



INTRODUCTION



- After decades of iterations, India finally developed a composite indirect tax system in 2016. This is the GST or Goods and Services Tax.
- The GST subsumed 17 major taxes plus a number of cesses.
- Commentators called the passing of the GST as India signing a Free-Trade-Agreement with itself



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A sample E-Way Bill Number (EBN)

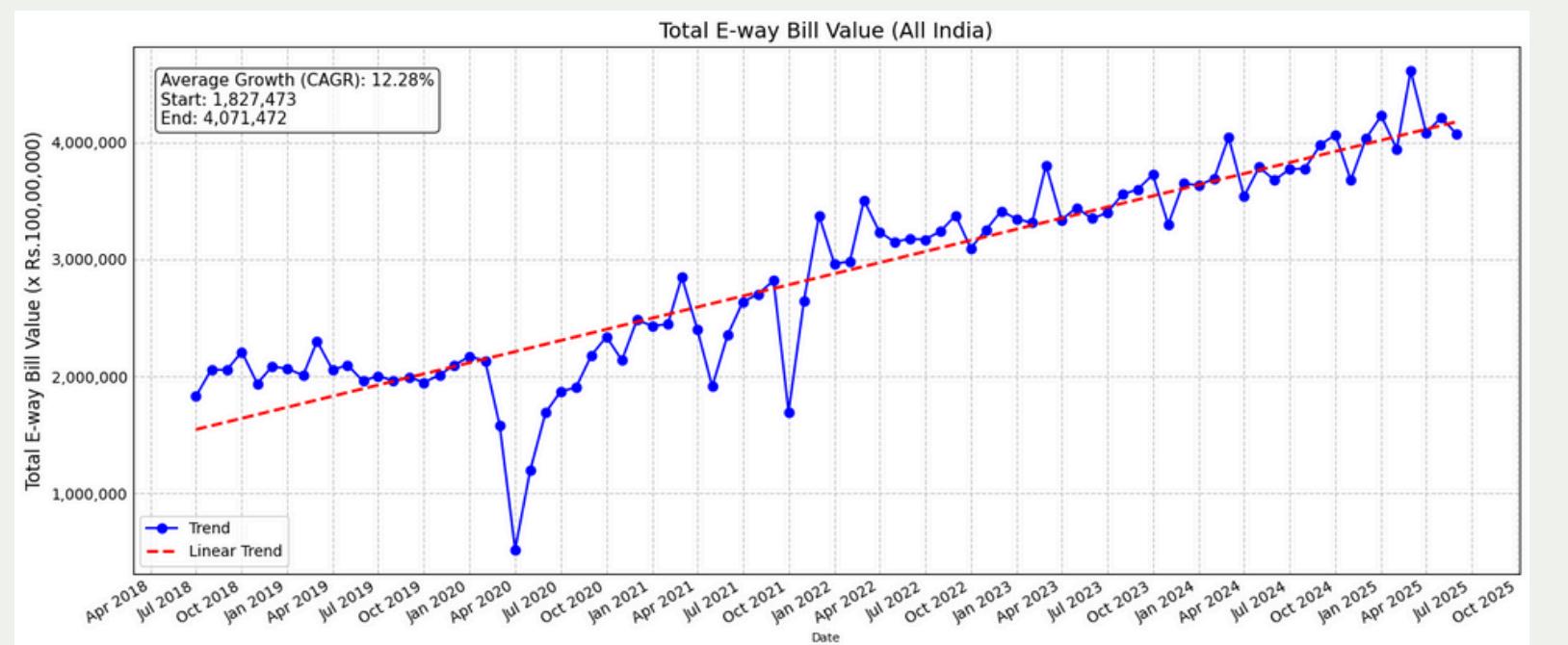
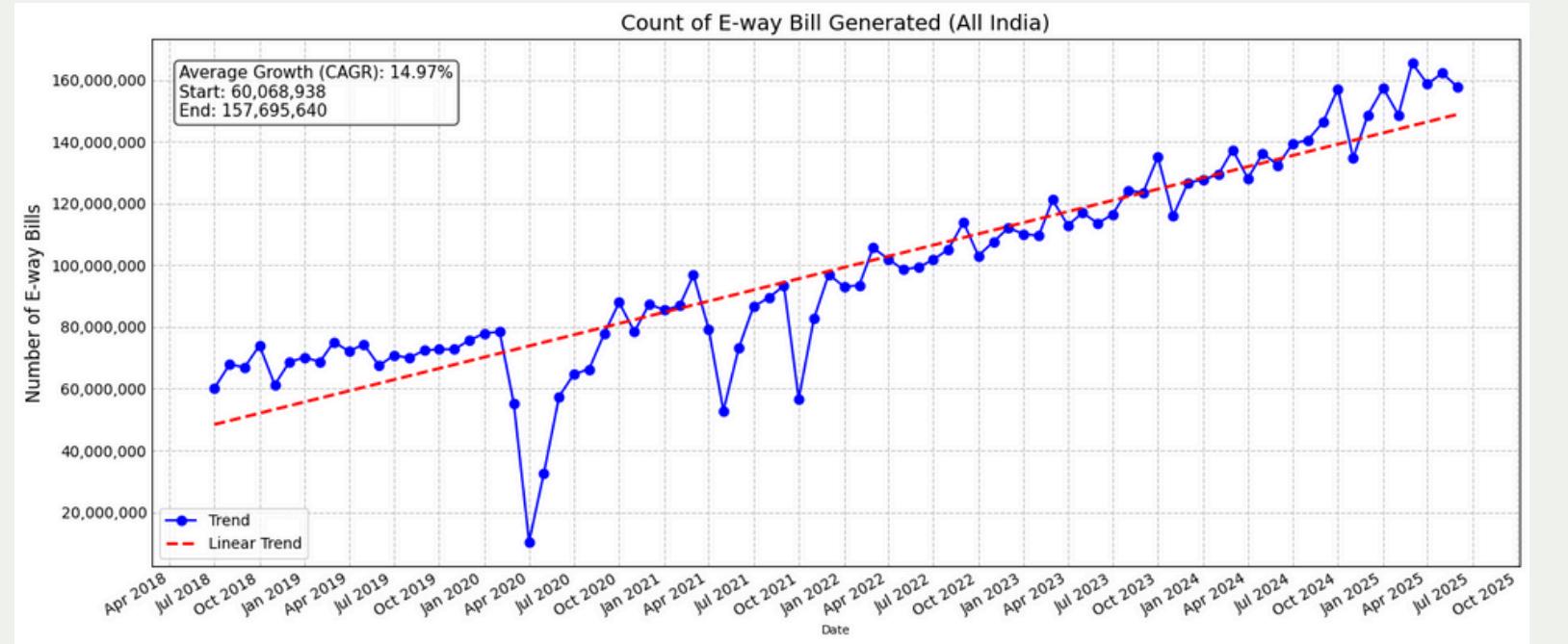
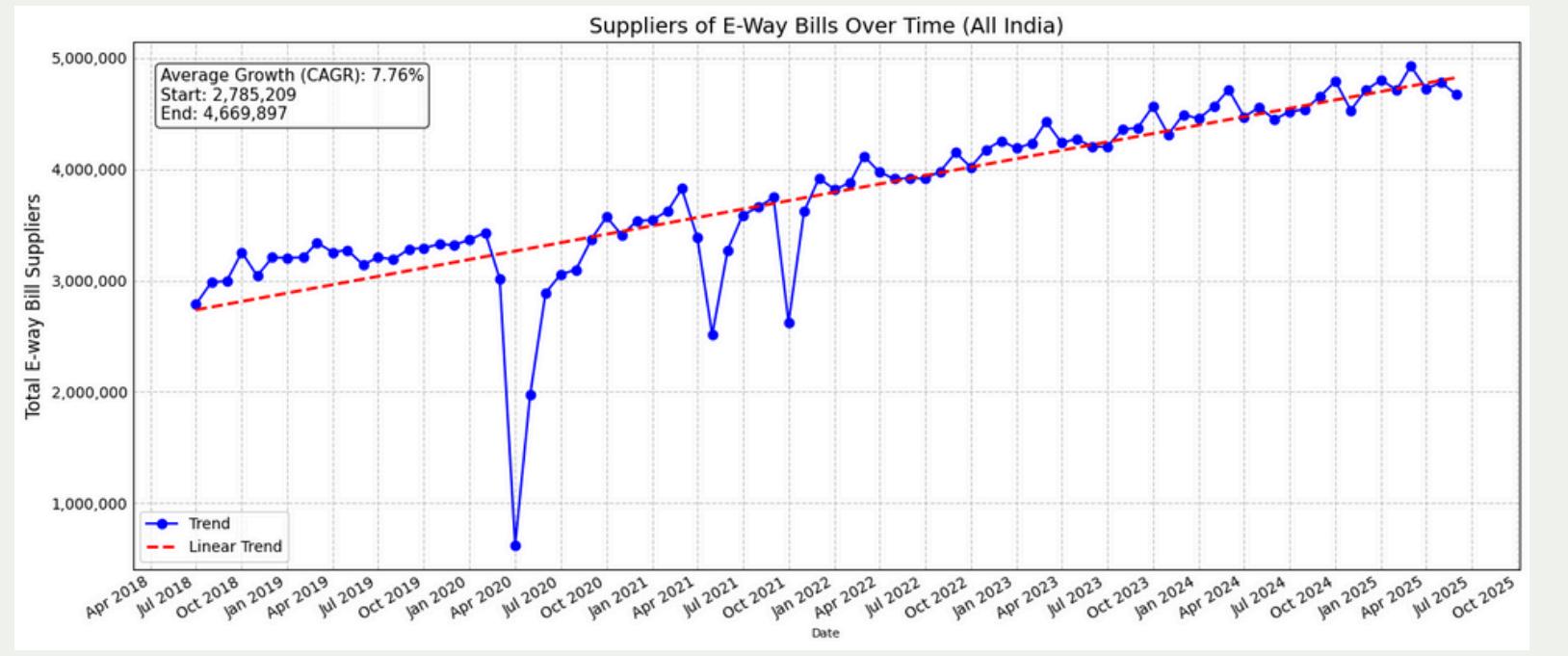
But What is an E-Way Bill?

- A 12 digit auto-generated document that contains records of all shipments above Rs. 50,000 (~\$560)
- It contains details about the parties and items being moved + the value of the goods and mode of transport
- It captures shipments for sale AND non-sale reasons, as well as exports and imports



SO WHY SHOULD YOU CARE?

- The E-Way Bill allows us to see, for the first time, how merchandise trade takes place for 1.5 billion people.
- It gives us information at a granularity never available earlier, including the national, state, and intra-state level.



MAJOR FINDINGS

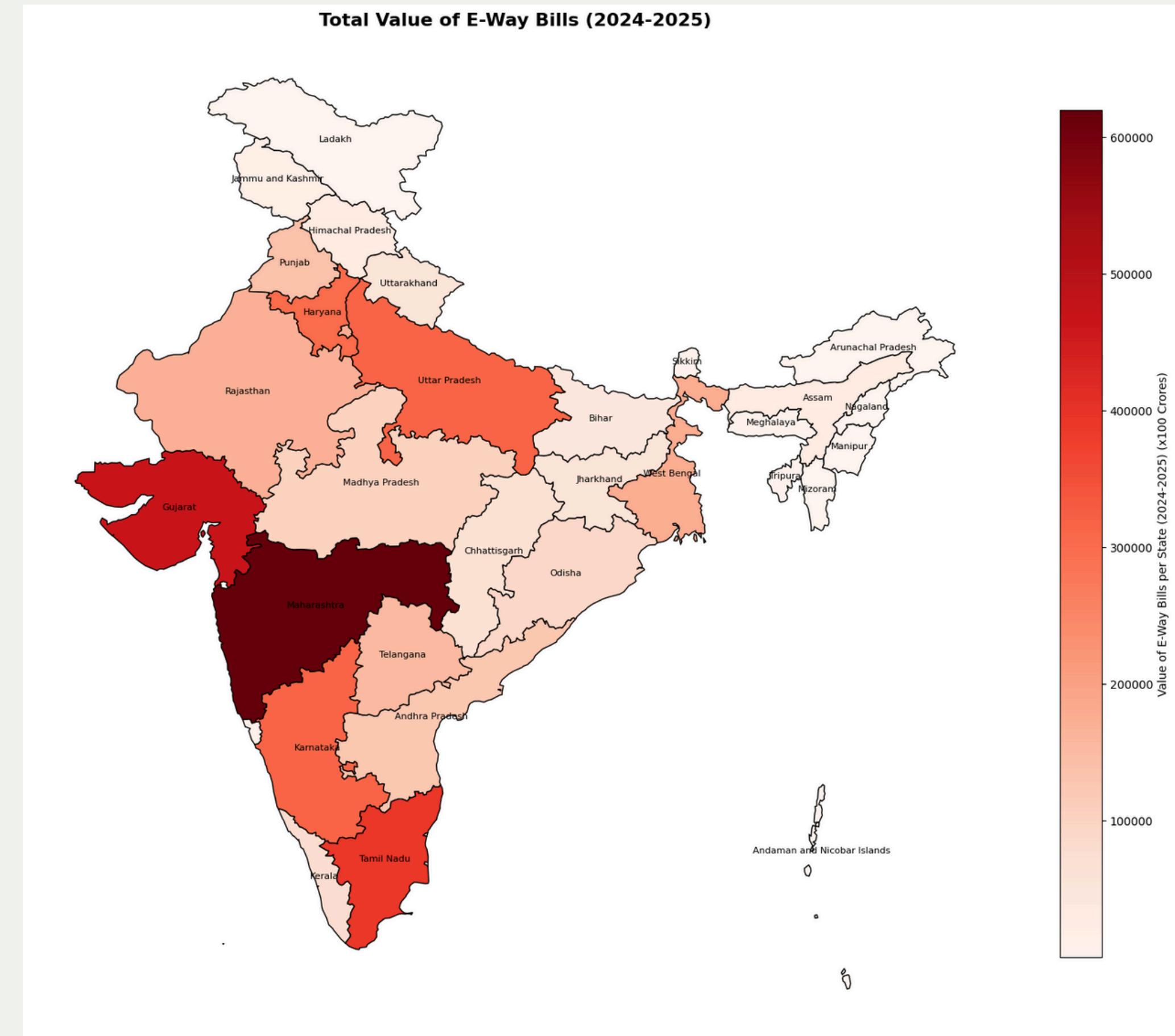
[ALL INDIA LEVEL]

- The number of suppliers (top), the quantity of bills generated (middle), and the value of bills (bottom) have all grown faster than the GDP.
- Firms are growing the number of bills that they generate year-on-year, as well as the size of each bill.
- High and Sustained Growth in merchandise trade over 6 years indicates that
 - There is robust manufacturing growth in India
 - Businesses are choosing to shift into the formal economy (A major development)



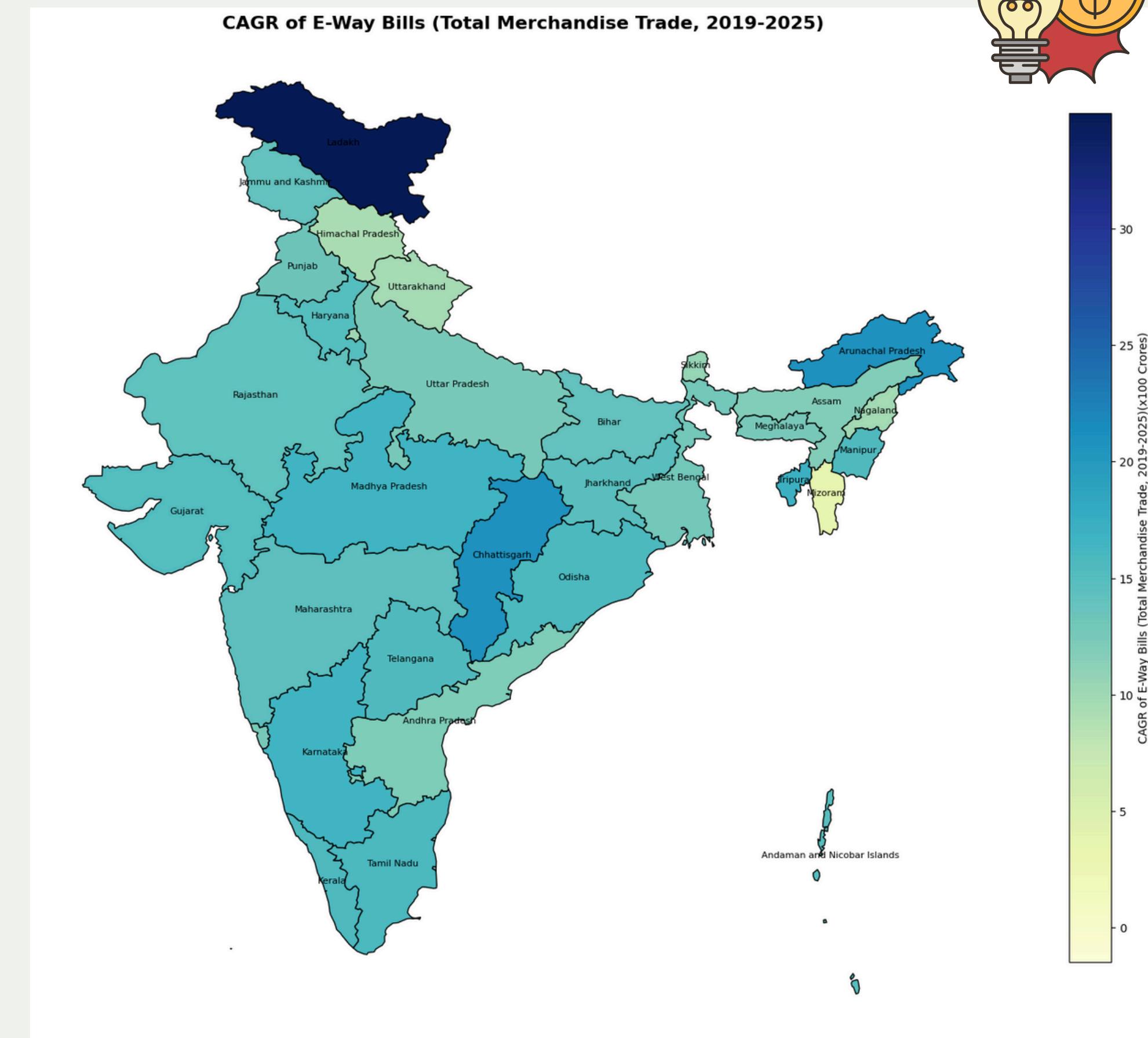
WHERE IS THIS BUSINESS CONCENTRATED?

- Maharashtra, by far and away, has the most merchandise trade business. This is due to its large GDP + its role as an export-import hub.
- The Indian North-East and its Himalayan states are major laggards. Worse infrastructure and lower populations explain some of this.
- The mineral belt (Odisha + Bihar + Chhattisgarh + Jharkhand + Madhya Pradesh) see surprisingly low goods trade - a counterintuitive finding given the mining activity there.



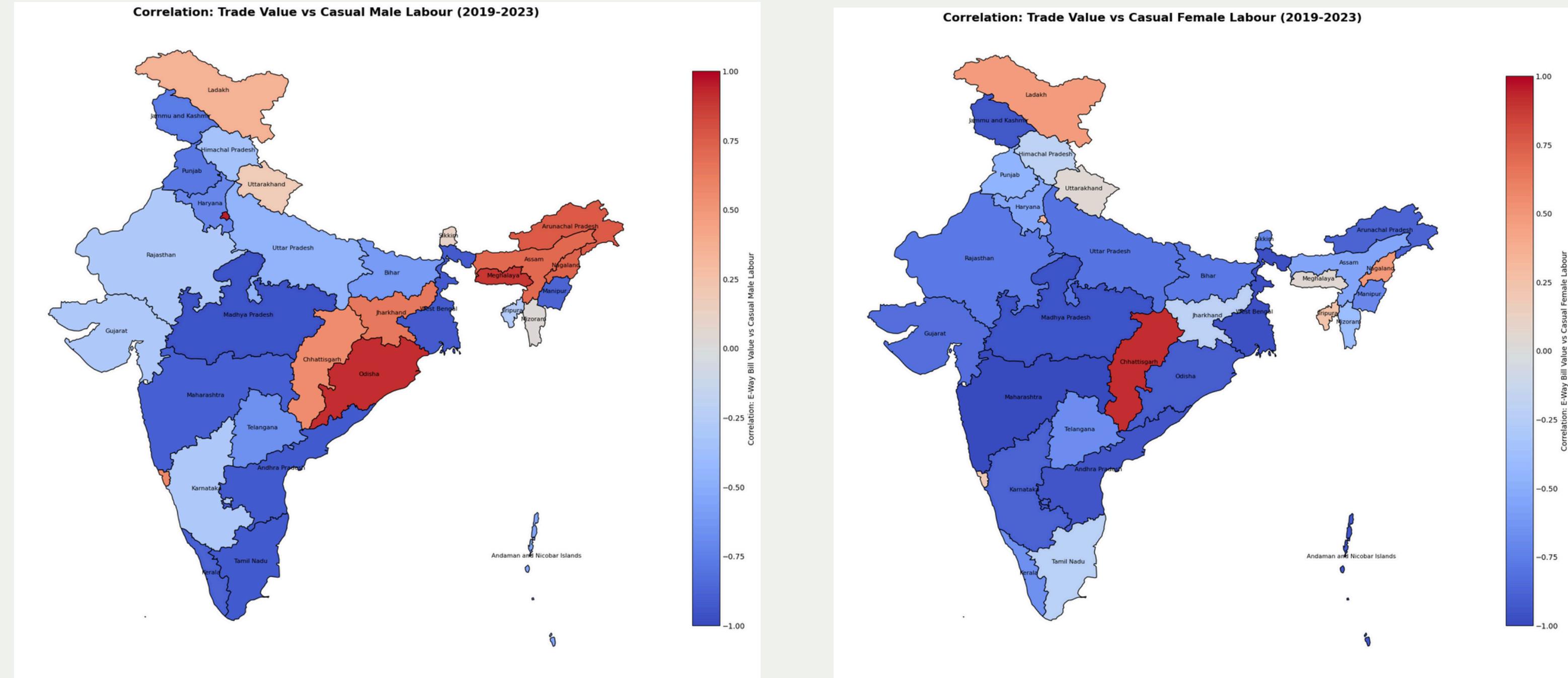
WHAT ABOUT THE GROWTH IN GOODS TRADE?

- Every region has seen growth. There is no state or union territory that has seen a decline in merchandise trade.
- Ladakh has seen the highest growth in goods trade. This is likely due to its separate administration post 2019 + buildup of border infrastructure + low base effect.
- Chhattisgarh and Arunachal Pradesh are also 2 interesting finds cases.
 - In Chhattisgarh, counter-insurgency operations have successfully raised trade.
 - Arunachal Pradesh, a distant Himalayan state, is integrating fast with the mainland economy.



WHAT IS THE LINK BETWEEN TRADE AND EMPLOYMENT?

CASE 1: CASUAL WORK



CURIOS CASES (MEN): ODISHA, DELHI, GOA, NORTH EAST INDIA

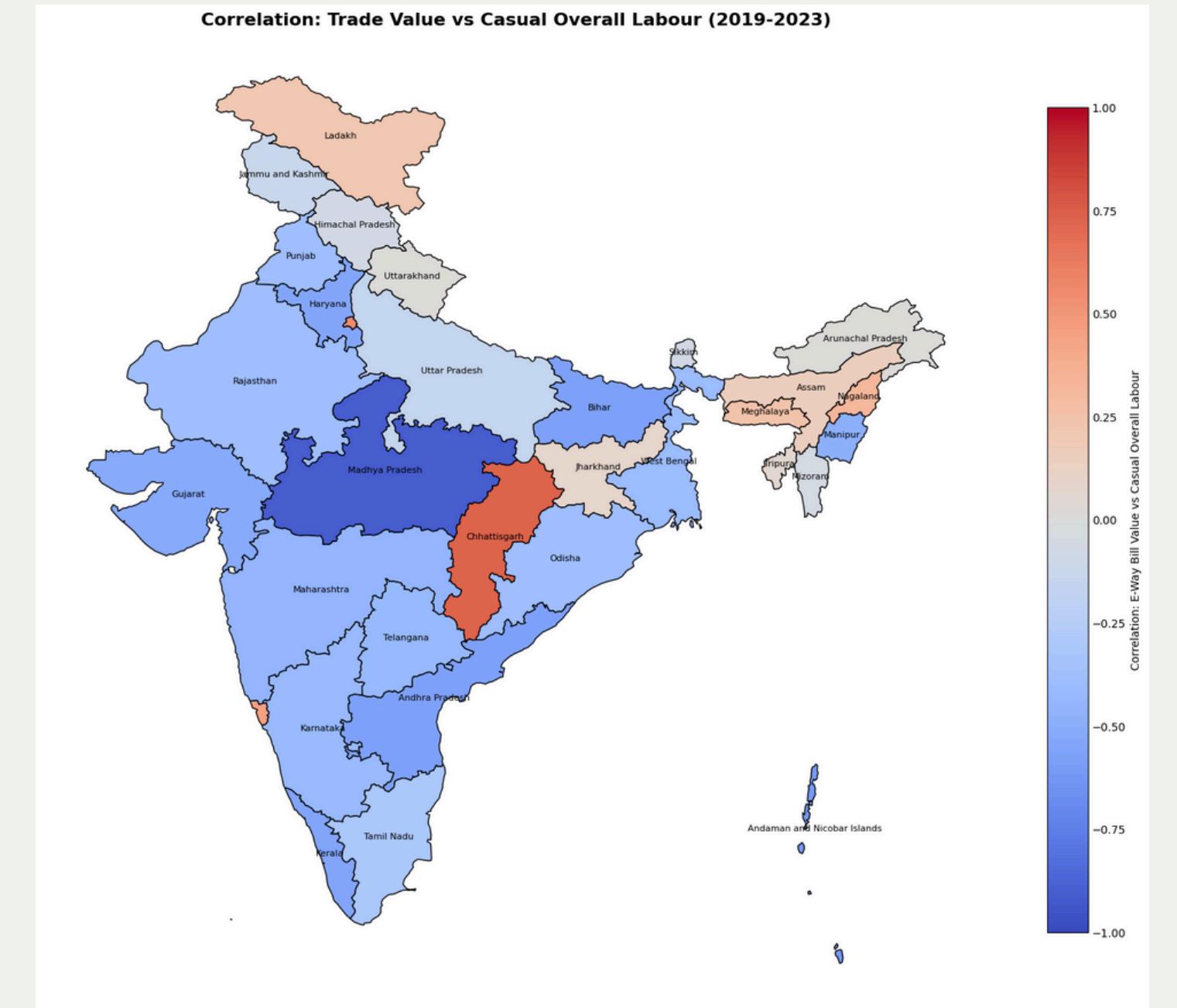
CURIOS CASES (WOMEN): CHATTISGARH, LADAKH, GOA, NORTH EAST INDIA



WHAT IS THE LINK BETWEEN TRADE AND EMPLOYMENT?

CASE 1: CASUAL WORK

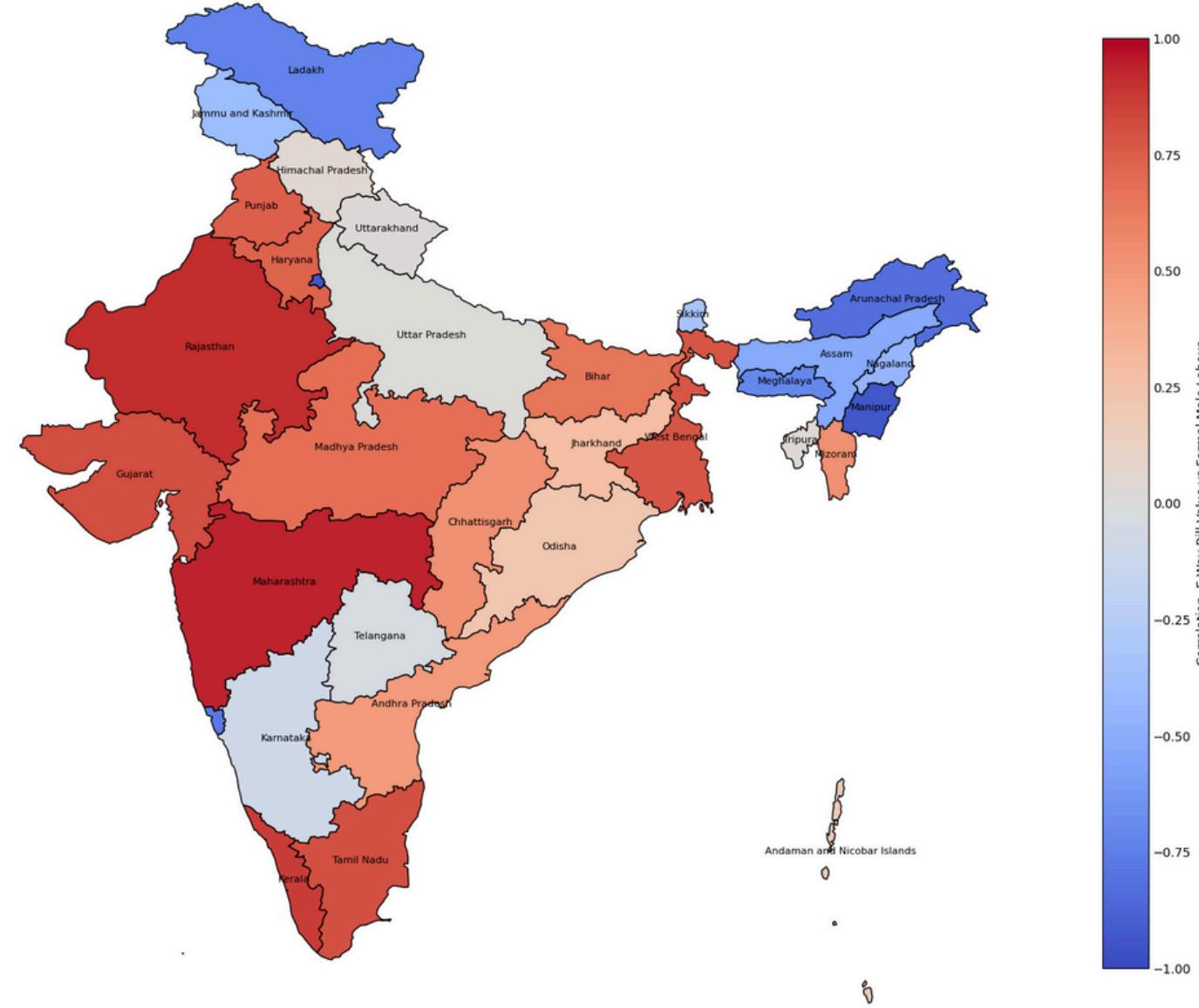
- Nearly every region sees a fall in casual employment with a rise in registered merchandise trade.
- The only exceptions are the north-eastern states, Jharkhand, Chhattisgarh, Ladakh, Delhi and Goa.
 - Each region has their own reasons for this trend.
 - In places like Delhi and Goa, this is due to nearly full-employment already existing. More trade will require informal workers from nearby areas.
 - In the North-eastern states and the mining belt, this trend could be occurring due to corporations strong-arming workers (only offering work without benefits).



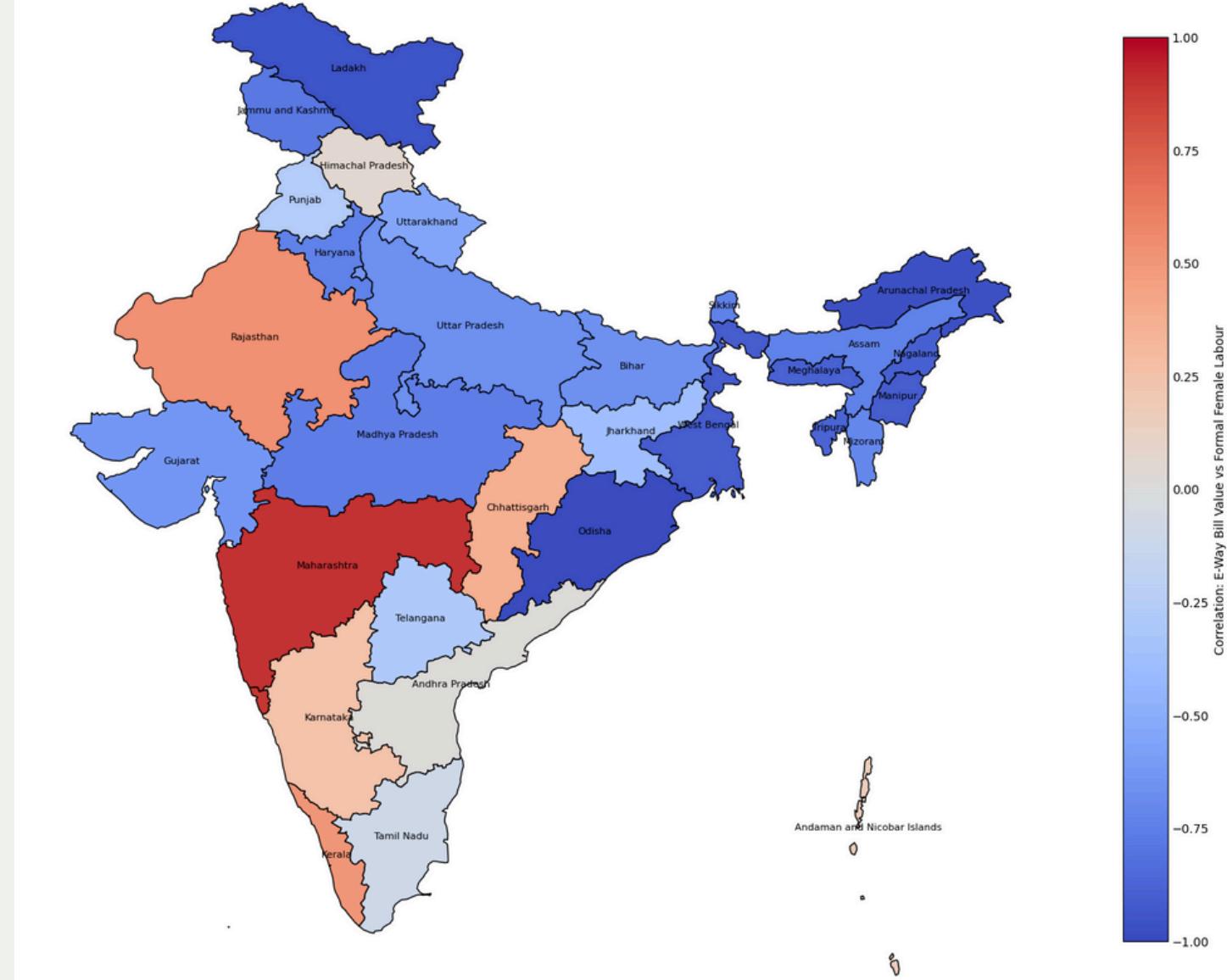
WHAT IS THE LINK BETWEEN TRADE AND EMPLOYMENT?

CASE 2: FORMAL WORK

Correlation: Trade Value vs Formal Male Labour (2019-2023)



Correlation: Trade Value vs Formal Female Labour (2019-2023)



CURIOS CASES (MEN): DELHI, GOA, LADAKH, NORTH EAST INDIA

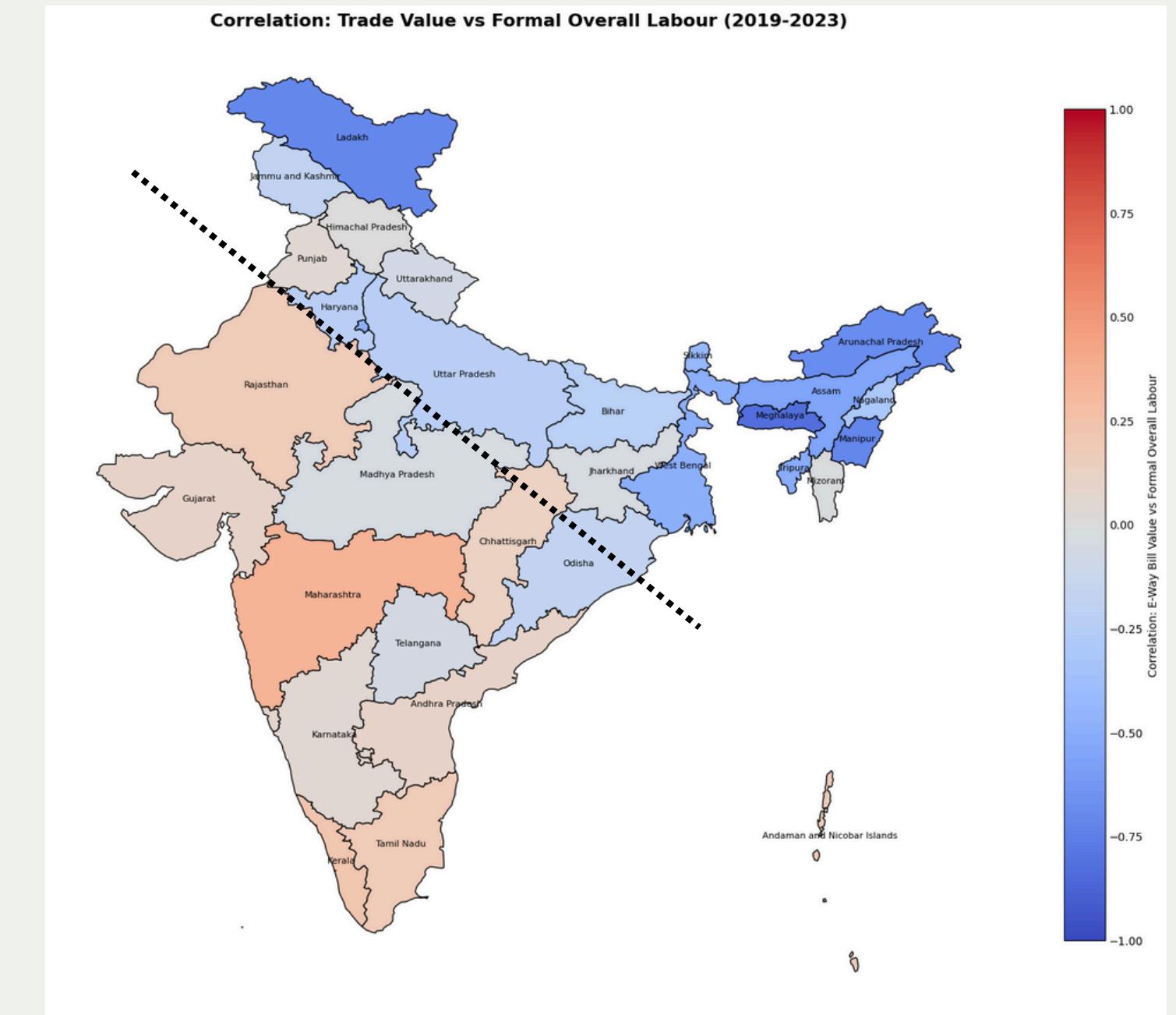
CURIOS CASES (WOMEN): MOST OF NORTH AND NORTH-EAST INDIA



WHAT IS THE LINK BETWEEN TRADE AND EMPLOYMENT?

CASE 2: FORMAL WORK

- There is a clear North and North-East vs Rest of India divide (indicated by the line).
 - Above the line, more trade leads to less formal employment (bad outcome).
 - Below this line, more trade leads to more formal employment, except Telangana (good outcome).
- Maharashtra has the strongest link between growth in merchandise trade and rising formal employment, though still relatively weak compared to previous assessments.
- The positive correlations for men and the negative correlations for women seem to be cancelling each other out, leaving most states with little to no correlations.



CONCLUSION

- This was a very high level overview of the insights that can be gleaned using e-way bill and employment data.
- Combining other datasets from the NDAP platform (Government of India's Public Data Platform) will help discover more insights.
- For state level insights, I have also made a dashboard that allows one to see their numbers (with some explanations). A screenshot of this is attached alongside.

