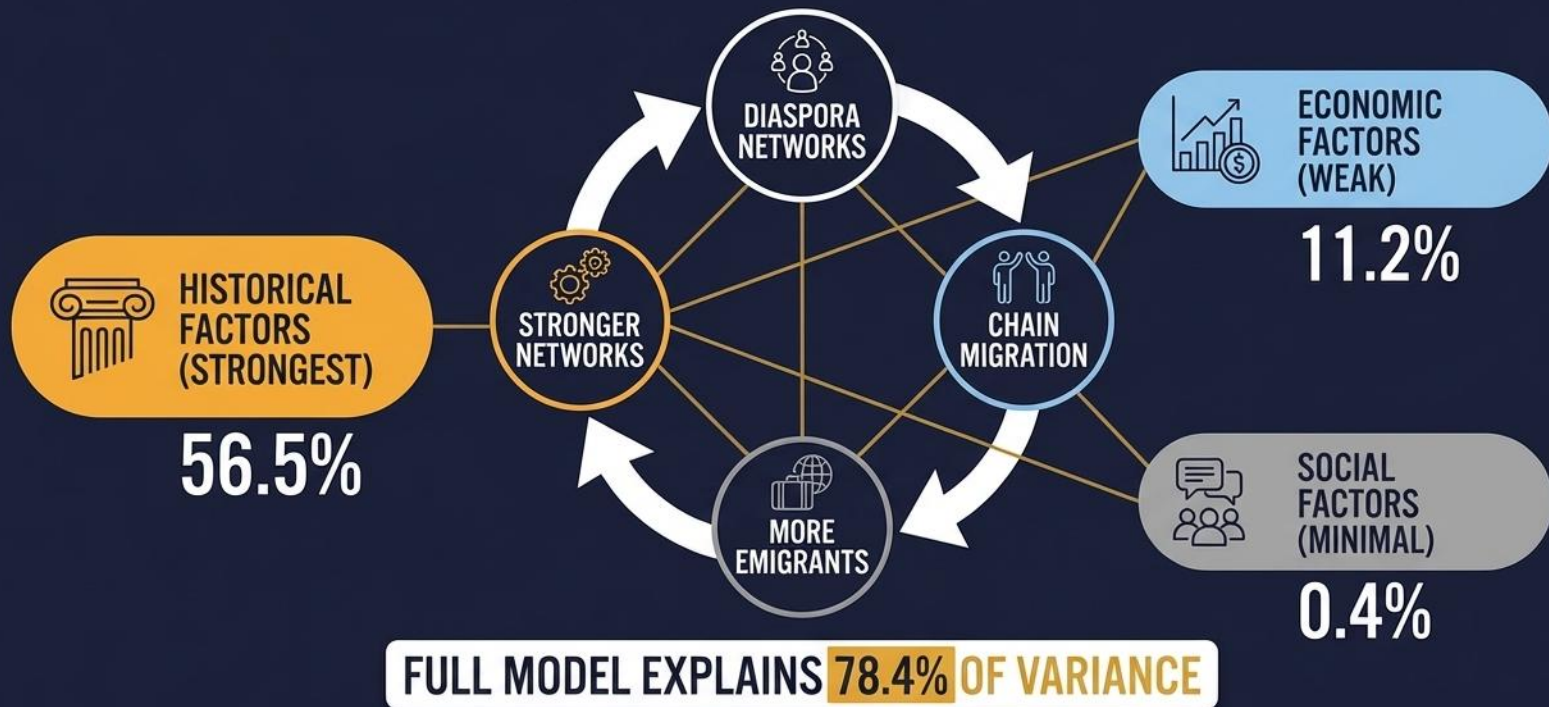# WHY CERTAIN INDIAN STATES ACCOUNT FOR MOST EXPATS

A Data-Driven Analysis of Emigration Patterns (2010-2023)

K-Dense Web | contact@k-dense.ai

GRAPHICAL ABSTRACT: NETWORK EFFECTS DRIVE EMIGRATION

DIASPORA NETWORKS

ECONOMIC FACTORS (WEAK)
11.2%

HISTORICAL FACTORS (STRONGEST)
56.5%

STRONGER NETWORKS

CHAIN MIGRATION

MORE EMIGRANTS

SOCIAL FACTORS (MINIMAL)
0.4%

FULL MODEL EXPLAINS 78.4% OF VARIANCE

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RESEARCH QUESTION & IMPORTANCE

Why do certain Indian states account for most number of expats?

- **2.23 million** annual emigrants (2023)

- Highly concentrated in specific states

- Understanding drivers crucial for policy

DATA SOURCES & APPROACH

Data Sources & Coverage

- Ministry of **External Affairs** (MEA)
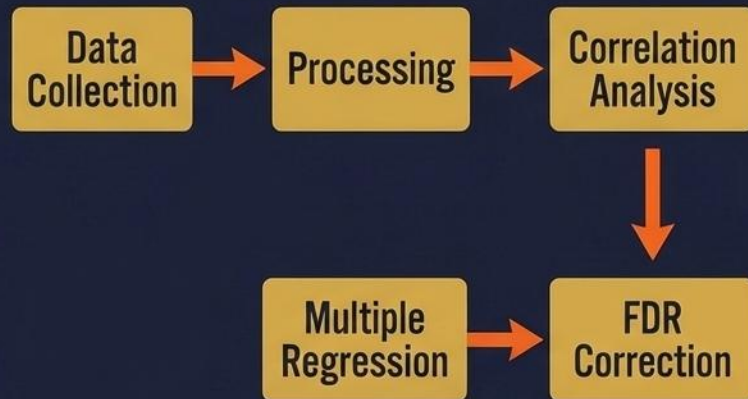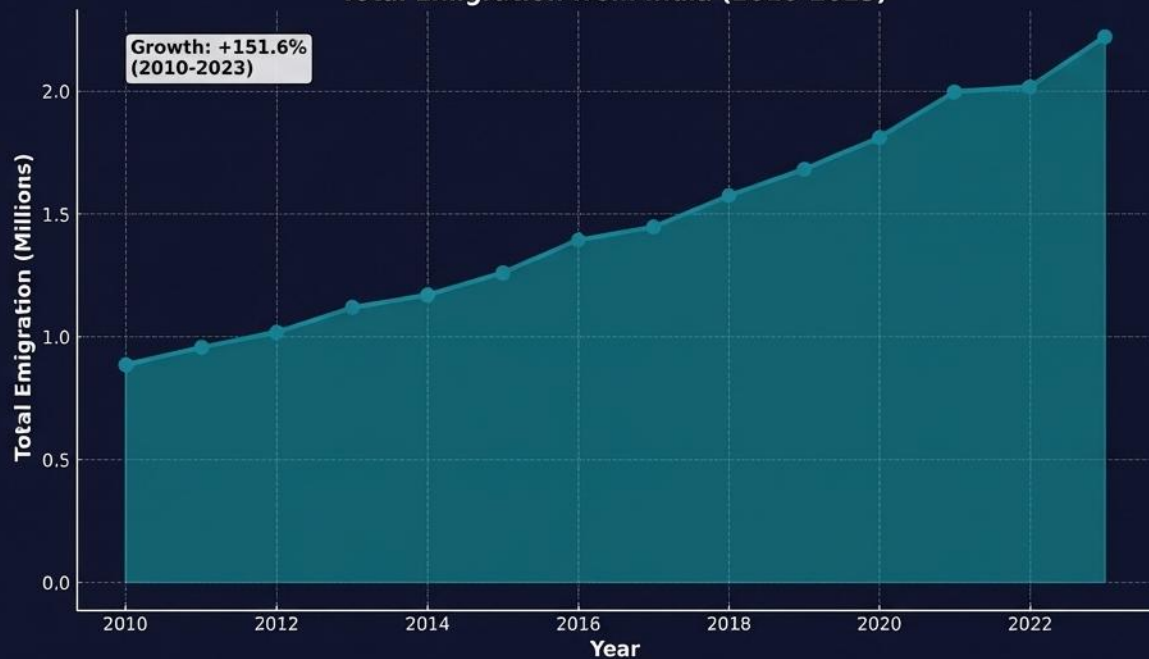- **Reserve Bank of India** (RBI)
- Census of India
- **Economic Survey** 2024-25

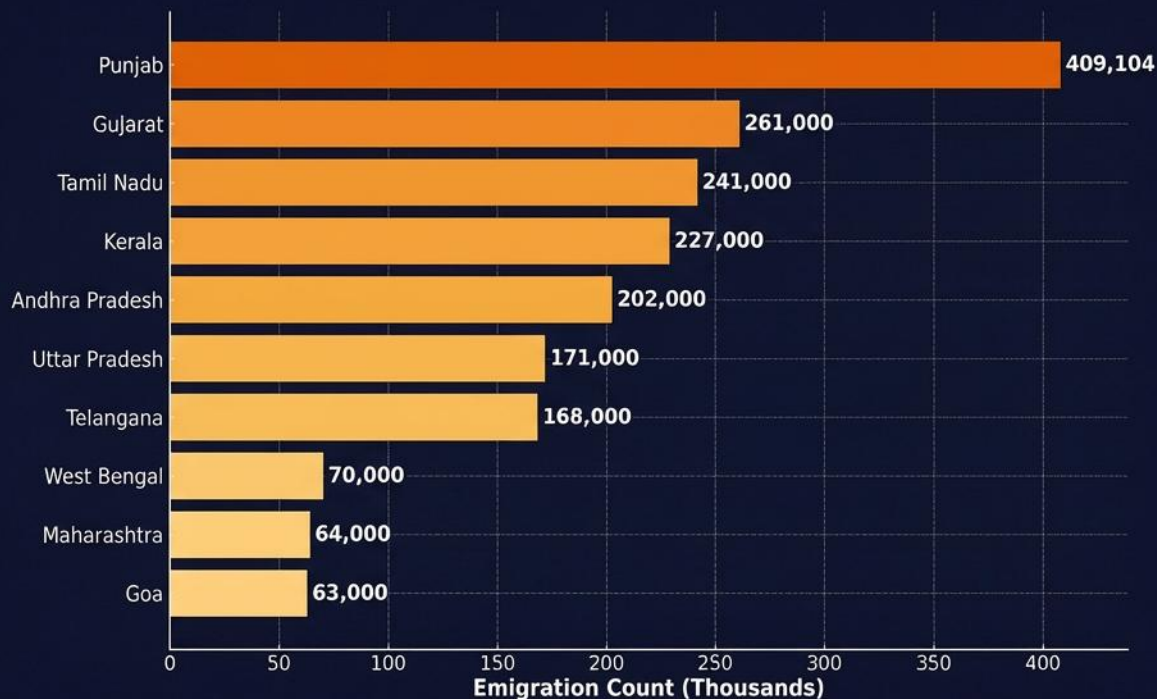**Coverage:** 20 states, 2010-2023 (14 years), 280 observations

Statistical Methods

Data Collection → Processing → Correlation Analysis → FDR Correction ← Multiple Regression

Emigration Growth: 2010-2023

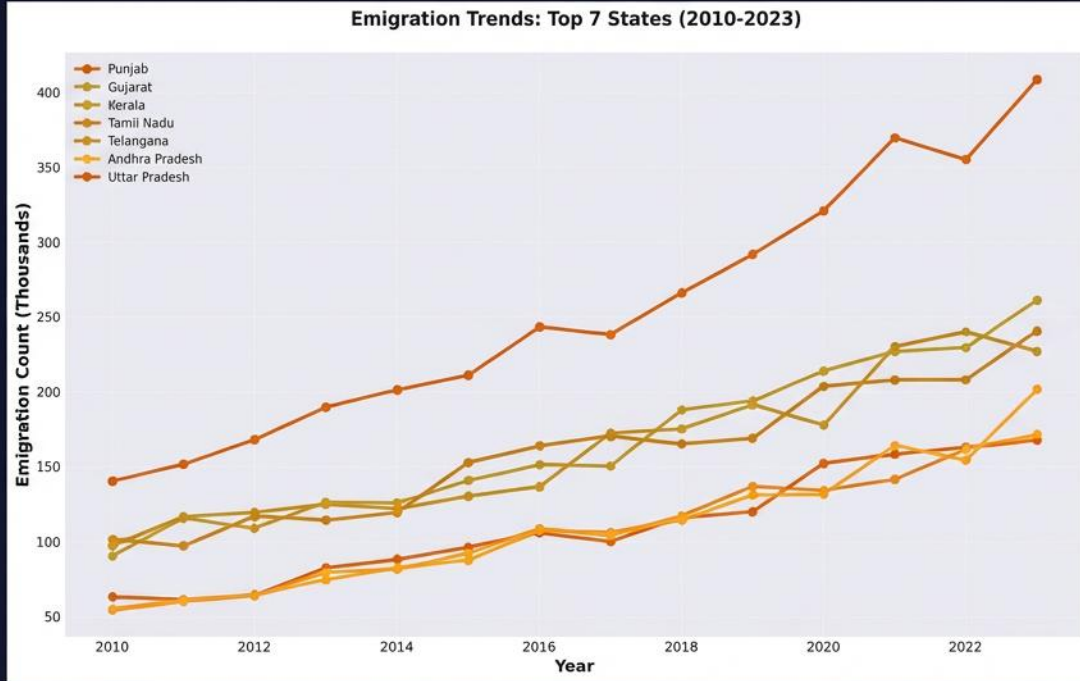**Total Emigration from India (2010-2023)**

Growth: +151.6%
(2010-2023)

- Emigration increased by **151.6%**, rising from **0.88M** in 2010 to **2.23M** in 2023.

- Steady acceleration in emigration trends observed from **2015 onwards.**

- Growth trend continued **despite COVID-19 disruption.**

Geographic Concentration: Top 5 States

Emigration Count (Thousands)

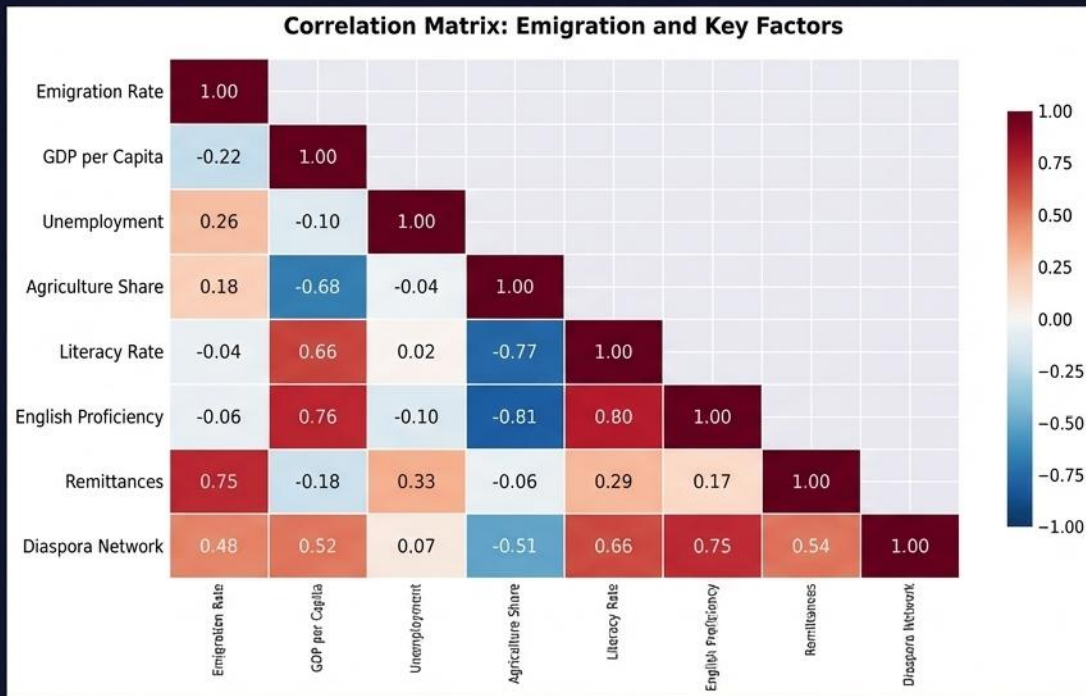| State	Emigration Count
Punjab	409,104
Gujarat	261,000
Tamil Nadu	241,000
Kerala	227,000
Andhra Pradesh	202,000
Uttar Pradesh	171,000
Telangana	168,000
West Bengal	70,000
Maharashtra	64,000
Goa	63,000

- **Punjab** leads significantly with **409,104** emigrants.

- Top 5 states account for **60.2%** of the total emigration share (Punjab, Gujarat, Tamil Nadu, Kerala, Andhra Pradesh).

- Clear concentration pattern is evident in specific regions.

State-Level Emigration Trends

Emigration Trends: Top 7 States (2010-2023)

Legend: Punjab, Gujarat, Kerala, Tamil Nadu, Telangana, Andhra Pradesh, Uttar Pradesh

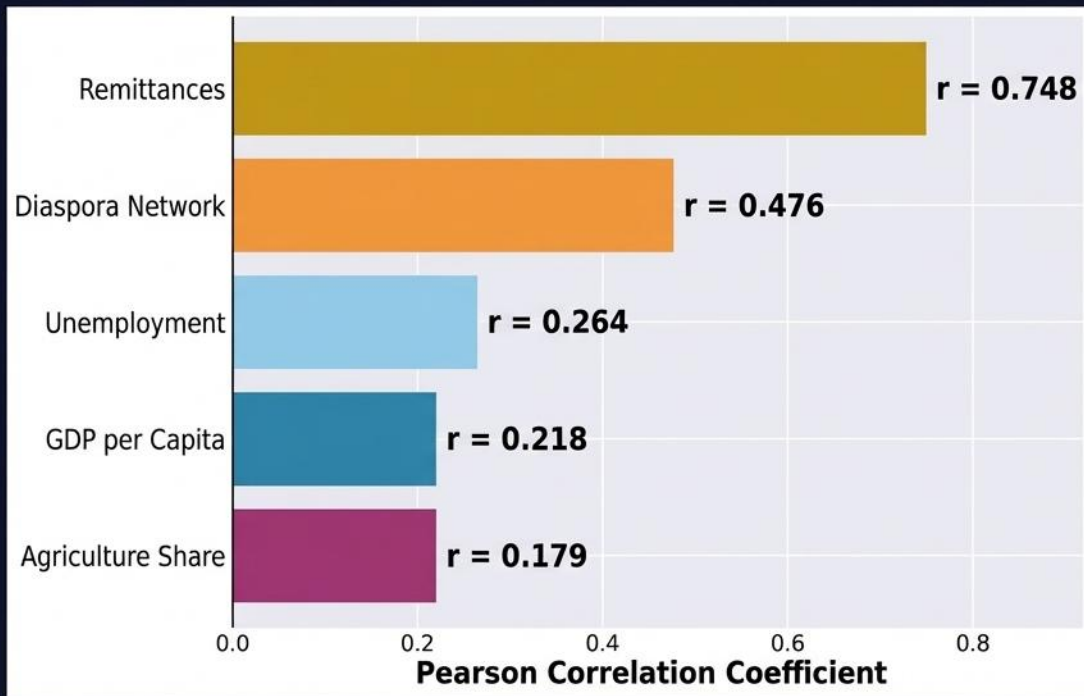Y-axis: Emigration Count (Thousands)
X-axis: Year

- **Fastest Growing States:** Andhra Pradesh (+267%), Uttar Pradesh (+216%), Punjab (+191%).

- Traditional States (like Kerala) maintained high but slower growth.

- Clear divergence patterns among state trends.

What Drives Emigration? Correlation Analysis

Correlation Matrix: Emigration and Key Factors

	Emigration Rate	GDP per Capita	Unemployment	Agriculture Share	Literacy Rate	English Proficiency	Remittances	Diaspora Network
Emigration Rate	1.00							
GDP per Capita	-0.22	1.00						
Unemployment	0.26	-0.10	1.00					
Agriculture Share	0.18	-0.68	-0.04	1.00				
Literacy Rate	-0.04	0.66	0.02	-0.77	1.00			
English Proficiency	-0.06	0.76	-0.10	-0.81	0.80	1.00		
Remittances	0.75	-0.18	0.33	-0.06	0.29	0.17	1.00	
Diaspora Network	0.48	0.52	0.07	-0.51	0.66	0.75	0.54	1.00

- Strong correlations cluster around network factors (Remittances, Diaspora).

- Weak correlations for economic/social factors.
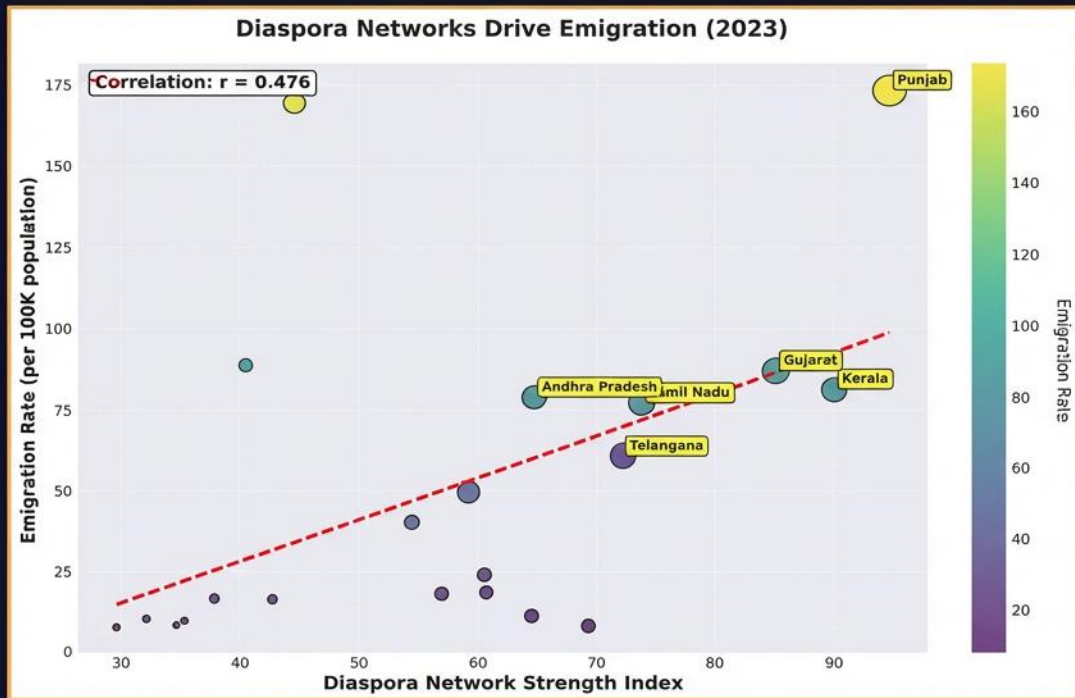
- Darker colors = stronger relationships.
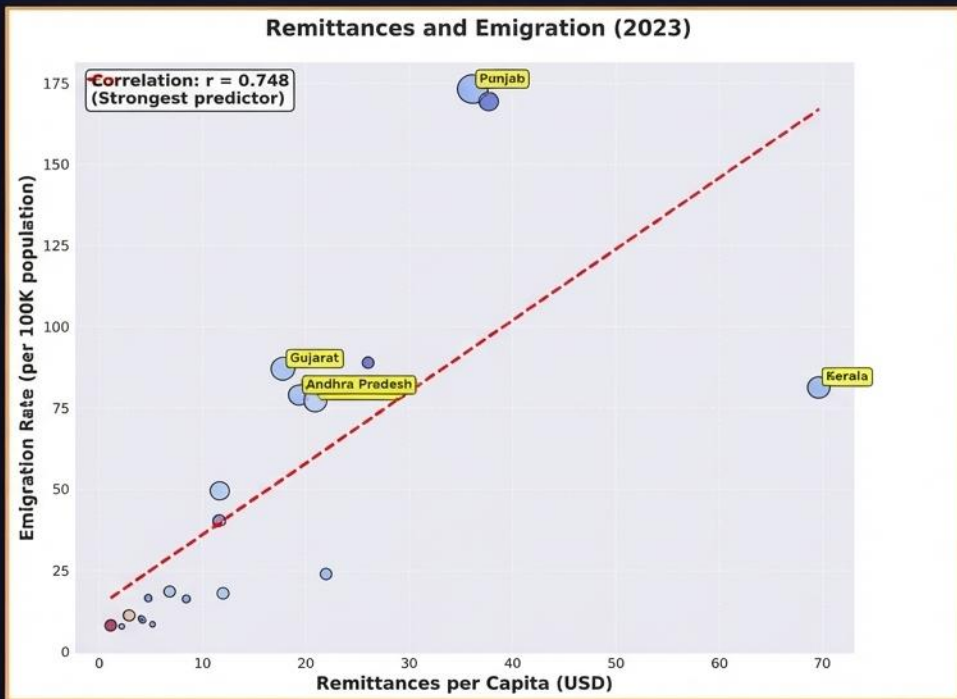
The Power of Diaspora Networks

Diaspora Networks Drive Emigration (2023)
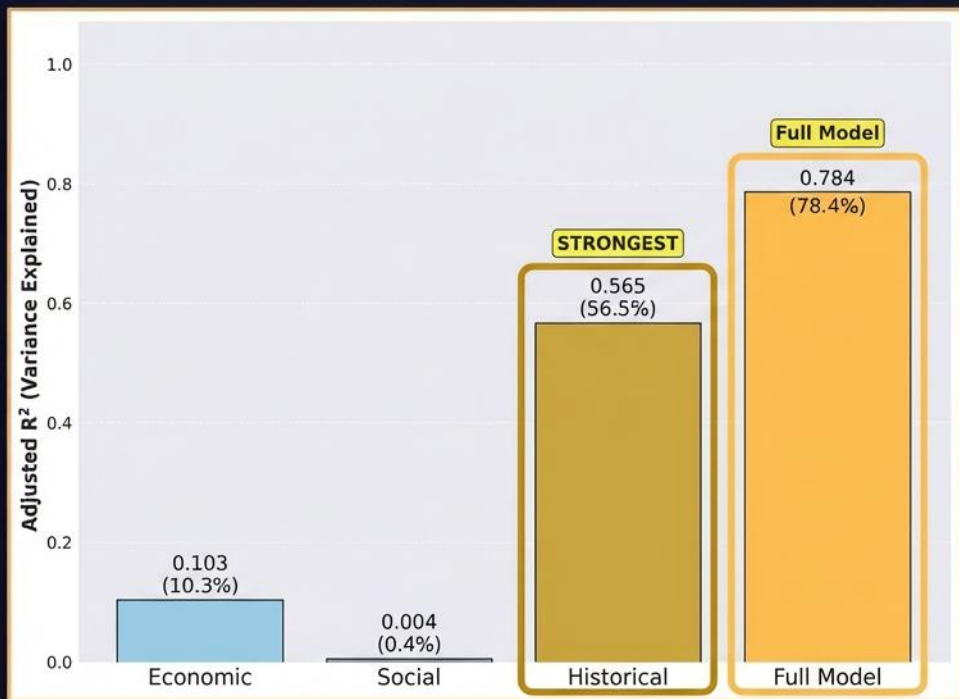
- **Strong positive relationship (r=0.476, p<0.001)** between diaspora strength and emigration.
- States with larger established diasporas have significantly higher emigration rates.
- Demonstrates a clear '**chain migration**' effect.
- The trend line confirms communities facilitate subsequent migration.

Remittances: Both Cause and Effect

Remittances and Emigration (2023)

Correlation: r = 0.748
(Strongest predictor)

Punjab · Gujarat · Andhra Pradesh · Kerala

Emigration Rate (per 100K population) vs Remittances per Capita (USD)

- **Strong positive relationship (r=0.748, p<0.001)** between remittances per capita and emigration.
- **STRONGEST predictor** among all measured variables.
- **Bidirectional relationship:** States receiving more remittances also send more emigrants.
- **Network effect** in action, demonstrating a reinforcing cycle.

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Explaining Emigration Patterns: Model Comparison

- **Historical/Network factors** dominate explanatory power (56.5%).
- **Economic factors** show weak predictive performance (11.2%).
- **Social factors** have minimal
- **Full Model** explains most variance (78.4%), reinforced by network effects.
- **Network factors** are the **STRONGEST** predictor across models.

Surprising Insights: Economic vs Social Factors

1. Economic factors STRONG;WEAK (11.2% variance) - migration NOT poverty-driven.

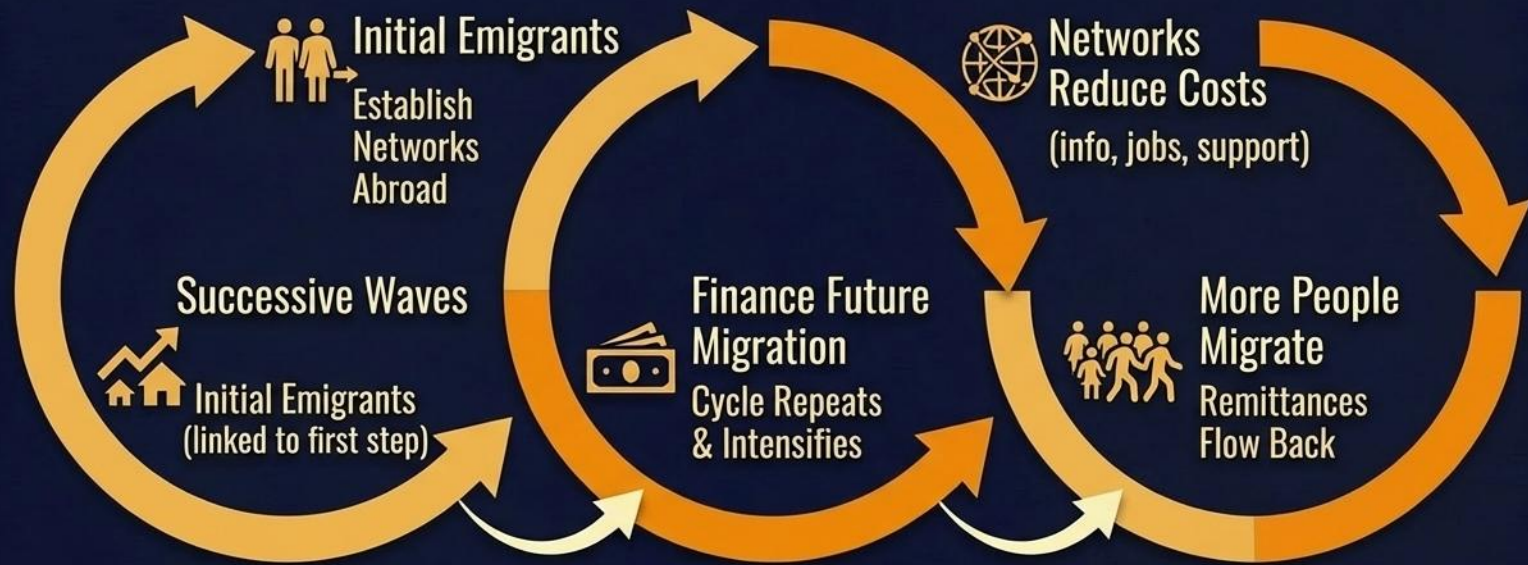2. Social factors STRONG;NEGATIVE (literacy/education negatively correlated) - brain drain vs retention trade-off.

3. Wealthier states have STRONG;HIGH emigration (Gujarat example) - aspirational migration.

4. Education STRONG;NOT a predictor - selective migration, not universal.

Chain Migration: The Self-Reinforcing Cycle

Initial Emigrants
Establish Networks Abroad

Networks Reduce Costs
(info, jobs, support)

Successive Waves
Initial Emigrants (linked to first step)

Finance Future Migration
Cycle Repeats & Intensifies

More People Migrate
Remittances Flow Back

EXAMPLES: Punjab (Canadian/UK diaspora) • Kerala (Gulf diaspora) • Gujarat (US/UK networks)

Key Takeaways

Historical diaspora networks, NOT economic development, drive state-level emigration patterns

Network effects self-reinforcing (explain **56.5%** of variance) → Economic push factors weak (only 11.2%) → Migration aspirational, not desperation-driven

Policy implications: Understanding these dynamics crucial for managing remittances, addressing brain drain, and predicting future patterns.

Thank You

Questions?

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