

INSTITUTIONAL METRICS & DATA SOURCES

United States Context

A Comprehensive Reference for Researchers,
Policy Analysts & Practitioners

Topics Covered:

- Institutional Development Metrics
 - Property Rights Protection Indices
 - Employability Metrics (U.S.)
 - Types of Productivity Shocks
 - Metrics Measuring Productivity Shocks
 - Exchange-Based Institutional Data Sources
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1. Metrics for Measuring Institutional Development

1.1 Political & Governance Institutions

1.1.1 Electoral & Democratic Health

Metric	Description
Voter Turnout Rates	Participation levels in federal, state, and local elections
Electoral Integrity Scores	Competitiveness and fairness of elections
Gerrymandering Indices	Degree of partisan redistricting
Campaign Finance Transparency	Disclosure and limits on political funding

1.1.2 Government Effectiveness

Metric	Description
World Bank Government Effectiveness Index	Quality of public services and government
Federal Budget Execution Rates	Government's ability to implement budgets
Legislative Productivity	Bills passed, gridlock measures
Regulatory Quality & Compliance	Quality and adherence to regulations

1.2 Rule of Law & Justice

Metric	Source
World Justice Project Rule of Law Index	World Justice Project
Court Case Resolution Times & Backlogs	U.S. Courts / NCSC
Incarceration Rates and Recidivism	Bureau of Justice Statistics
Civil Rights Enforcement Metrics	U.S. DOJ Civil Rights Division
Corruption Perception Index	Transparency International
Prosecutorial Independence Scores	Academic / WJP

1.3 Economic Institutions

Metric	Source
Property Rights Protection Indices	IPRI / Heritage / Fraser
Contract Enforcement Efficiency	World Bank B-READY
Ease of Doing Business Rankings	World Bank
Federal Reserve Independence Measures	Federal Reserve
Financial System Stability	FDIC Stress Tests
Antitrust Enforcement Activity	FTC / DOJ

1.4 Key Composite Indices

Index	Publisher
Freedom in the World	Freedom House
Rule of Law Index	World Justice Project
Corruption Perceptions Index	Transparency International
Democracy Index	Economist Intelligence Unit
Social Progress Index	Social Progress Imperative
Varieties of Democracy (V-Dem)	University of Gothenburg

2. Property Rights Protection Indices — Data Sources

2.1 International Property Rights Index (IPRI)

- **Publisher:** Property Rights Alliance (PRA)
- **Website:** <https://internationalpropertyrightsindex.org>
- **Measures:** Legal & political environment, physical property rights, intellectual property rights
- **Coverage:** 130+ countries including the U.S.
- **Frequency:** Annual

2.2 Fraser Institute — Economic Freedom of the World

- **Publisher:** Fraser Institute
- **Website:** <https://www.fraserinstitute.org>
- **Measures:** Legal system quality, property rights security, contract enforcement
- **Coverage:** 165 jurisdictions
- **Frequency:** Annual

2.3 World Bank — B-READY Index

- **Publisher:** World Bank Group
- **Website:** <https://www.worldbank.org>
- **Measures:** Property registration efficiency, legal protections, contract enforcement
- **Note:** Replaced the former Doing Business index in 2024
- **Frequency:** Annual

2.4 Heritage Foundation — Index of Economic Freedom

- **Publisher:** Heritage Foundation
- **Website:** <https://www.heritage.org/index>
- **Measures:** Property rights, judicial effectiveness, government integrity
- **Coverage:** 184 countries
- **Frequency:** Annual

2.5 World Justice Project — Rule of Law Index

- **Publisher:** World Justice Project
- **Website:** <https://worldjusticeproject.org>
- **Measures:** Civil justice, property rights enforcement, absence of corruption
- **Coverage:** 142 countries
- **Frequency:** Annual

2.6 Lincoln Institute of Land Policy

- **Publisher:** Lincoln Institute
- **Website:** <https://www.lincolninst.edu>
- **Measures:** Land use regulation, property taxation, eminent domain trends
- **Coverage:** U.S. states and municipalities
- **Frequency:** Periodic reports & datasets

2.7 USDA Economic Research Service (ERS)

- **Publisher:** U.S. Department of Agriculture
- **Website:** <https://www.ers.usda.gov>

- **Measures:** Agricultural land ownership, farmland tenure, property rights in rural contexts
- **Coverage:** U.S. only
- **Frequency:** Periodic

2.8 Comparative Summary

Source	Geographic Focus	Property Type	Access
IPRI	Global (incl. US)	Physical + IP	Free
Fraser Institute	Global	Economic/Legal	Free
World Bank B-READY	Global	Business/Land	Free
Heritage Foundation	Global	Economic	Free
World Justice Project	Global	Civil/Legal	Free
Lincoln Institute	U.S. focused	Land/Real Estate	Free
USDA ERS	U.S. only	Agricultural	Free

3. Metrics for Measuring Employability in the United States

3.1 Official Federal Labor Market Metrics — BLS

Metric	Definition	Frequency
U-3	Official unemployment rate	Monthly
U-6	Broadest measure — includes underemployed & part-time for economic reasons	Monthly
Employment-Population Ratio	% of civilian population employed	Monthly
Labor Force Participation Rate (LFPR)	% working or actively seeking work	Monthly
Mass Layoffs Statistics	Large-scale job cuts by sector	Quarterly

3.2 WIOA Core Metrics — U.S. Department of Labor

The Workforce Innovation and Opportunity Act (WIOA) is the primary federal framework for measuring employability outcomes in the United States.

WIOA Metric	What It Measures
Employment Rate — 2nd Quarter After Exit	Are participants employed 6 months after leaving a program?
Employment Rate — 4th Quarter After Exit	Are participants still employed 12 months later?
Median Earnings — 2nd Quarter After Exit	What are participants earning 6 months out?
Credential Attainment Rate	Did participants earn a recognized credential?
Measurable Skill Gains	Did participants improve skills during the program?
Effectiveness Serving Employers	Did the program meet employer hiring needs?

Data Source: WIOA reports are published by all 50 states and aggregated at the federal level at <https://www.workforcegps.org>

3.3 Education-to-Employment Metrics

3.3.1 College Scorecard (U.S. Dept. of Education)

Metric	Description
Post-Graduation Earnings	Median earnings 1, 5, 10 years after enrollment
Employment Rate by Major	% employed by field of study
Debt-to-Earnings Ratio	Student loan burden vs. income
Completion Rate	% who finish their program
Return on Investment (ROI)	Net earnings gain vs. cost of degree

3.4 Labor Market Demand — JOLTS

Metric	Description
Job Openings Rate	Unfilled positions as % of total jobs
Hire Rate	New hires as % of employment
Quit Rate	Workers voluntarily leaving (signals worker confidence)
Layoff & Discharge Rate	Involuntary separations
Job Matching Efficiency	Ratio of hires to job openings

3.5 Population-Specific Metrics

3.5.1 Youth (Ages 16–24)

Metric	Source
Youth Unemployment Rate	BLS
NEET Rate (Not in Education, Employment, Training)	BLS / OECD
Youth Labor Force Participation Rate	BLS
High School Dropout Employment Gap	NCES / BLS

3.5.2 Veterans

Metric	Source
Veteran Unemployment Rate	BLS — Current Population Survey
Veteran Employment Rate by Discharge Status	DOL — VETS Program
Transition Assistance Program (TAP) Outcomes	Dept. of Defense / DOL

3.5.3 People with Disabilities

Metric	Source
Employment Rate — People with Disabilities	BLS / ODEP
Disability Employment Gap	ODEP / ADA National Network
Supported Employment Outcomes	Rehabilitation Services Administration

3.6 Composite U.S. Employability Indices

Index	Publisher	What It Ranks
Workforce Readiness Index	U.S. Chamber of Commerce Foundation	State pipeline strength
Opportunity Index	Opportunity Nation	Youth opportunity by state & county
State New Economy Index	ITIF	Knowledge economy & workforce adaptability
Annie E. Casey KIDS COUNT	Casey Foundation	Child & youth wellbeing
Brookings Metro Monitor	Brookings Institution	Metro-level inclusion & mobility

Index	Publisher	What It Ranks
EPI State of Working America	Economic Policy Institute	Wages, jobs, inequality by state

4. Types of Productivity Shocks

Definition: A **productivity shock** is an unexpected event that significantly changes the productive capacity of an economy, firm, or sector — either positively or negatively.

4.1 Classification by Direction

Type	Description
Positive Productivity Shock	Unexpected increase in output per unit of input (e.g., new technology)
Negative Productivity Shock	Unexpected decrease in output per unit of input (e.g., natural disaster)

4.2 The 12 Major Kinds of Productivity Shocks

#	Type	Examples
1	Technology Shocks	Internet, AI, automation breakthroughs
2	Supply / Input Shocks	Oil embargoes, supply chain disruptions
3	Weather & Climate Shocks	Droughts, hurricanes, floods
4	Health & Pandemic Shocks	COVID-19, 1918 Spanish Flu
5	Policy & Regulatory Shocks	Tax reform, deregulation, tariffs
6	Human Capital Shocks	GI Bill, brain drain, immigration
7	Financial & Investment Shocks	2008 Financial Crisis, Marshall Plan
8	Infrastructure Shocks	U.S. Interstate Highway System
9	Trade & Globalization Shocks	China WTO entry, NAFTA

#	Type	Examples
10	Geopolitical & War Shocks	WWII, Russia-Ukraine war
11	Diffusion Shocks	Lag between invention and productivity impact
12	Sectoral / Structural Shocks	Dot-com boom, fracking revolution

4.3 Classification by Scope

Scope	Example
Global	COVID-19, World Wars, Global Financial Crisis
National	U.S. Tax Reform, Federal Infrastructure Bills
Regional/State	Hurricane Katrina, California Drought
Sectoral	Fracking in Energy, AI in Tech
Firm-Level	Patent breakthrough, key executive departure

4.4 Classification by Duration

Duration	Type	Example
Temporary	Short-lived disruption	Seasonal weather, brief strike
Permanent	Lasting structural change	Industrial Revolution, Internet
Cyclical	Recurring pattern	Business cycle fluctuations

4.5 Key Theoretical Frameworks

Framework	Key Scholars
Real Business Cycle (RBC) Theory	Kydland & Prescott
New Keynesian DSGE Models	Woodford, Gali
Endogenous Growth Theory	Romer, Lucas
Schumpeterian Creative Destruction	Schumpeter, Aghion
Total Factor Productivity (TFP) Analysis	Solow Residual Model

5. Metrics that Measure Productivity Shocks

5.1 Total Factor Productivity (TFP) — The Solow Residual

The Solow Residual **is** TFP — they are the same concept expressed differently. Any output growth that cannot be explained by capital and labor growth is the Solow Residual.

Production Function:

$$Y = A \cdot F(K, L) = A \cdot K^\alpha \cdot L^{(1-\alpha)}$$

TFP (Solow Residual):

$$A = \frac{Y}{K^\alpha \cdot L^{(1-\alpha)}}$$

Growth Rate Form (used empirically):

$$\frac{\Delta A}{A} = \frac{\Delta Y}{Y} - \alpha \frac{\Delta K}{K} - (1 - \alpha) \frac{\Delta L}{L}$$

Y	= Real Output (GDP)
K	= Capital Input
L	= Labor Input
α	= Capital's share of income (≈ 0.33 in the U.S.)
$(1 - \alpha)$	= Labor's share of income (≈ 0.67 in the U.S.)
A	= TFP / Solow Residual

5.2 Key U.S. TFP Data Sources

Institution	Publication	Frequency
BLS	Multifactor Productivity (MFP) Statistics	Annual
BEA	GDP & Industry Accounts	Quarterly/Annual
Federal Reserve (FRED)	TFP Data Series (TFPBS)	Quarterly
San Francisco Fed	Fernald TFP Series (utilization-adjusted)	Quarterly
Penn World Tables	Cross-country TFP	Annual
The Conference Board	Total Economy Database	Annual

5.3 Labor Productivity Metrics

Metric	Description	Source
Output per Hour Worked	GDP / Total Hours Worked	BLS Productivity & Costs

Metric	Description	Source
Output per Worker	GDP / Number of Employed Workers	BLS
Unit Labor Cost (ULC)	Labor Cost / Output	BLS
Labor Productivity Growth Rate	% change in output per hour	BLS Quarterly Release

5.4 Capital Productivity Metrics

Metric	Description	Source
Capital Productivity	Output / Capital Stock	BEA Fixed Assets Tables
Capital Utilization Rate	Actual vs. Potential Capital Use	Federal Reserve G.17
Capacity Utilization Rate	% of productive capacity in use	Federal Reserve (monthly)

5.5 The Fernald TFP Series — Most Important Quarterly Measure

The **Fernald TFP Series** is the most cited quarterly TFP series in U.S. macroeconomic research, produced by John Fernald at the Federal Reserve Bank of San Francisco.

Feature	Detail
Full Title	A Quarterly, Utilization-Adjusted Series on Total Factor Productivity
Author	John Fernald, Federal Reserve Bank of San Francisco
Frequency	Quarterly
Key Feature	Adjusts for capital & labor utilization — removes cyclical bias
Why Important	Isolates true technology shocks from utilization changes
Official URL	https://www.frbsf.org/research-and-insights/data-and-indicators/total-factor-productivity-tfp/
Personal Site	https://www.johnfernald.net/TFP
Citation	Fernald (2012/2014), FRBSF Working Paper 2012-19

5.5.1 Utilization Adjustment — Why It Matters

Unadjusted TFP (Raw Solow Residual):

$$\text{Raw TFP} = \text{Technology Shocks} + \text{Utilization Changes} + \text{Measurement Error}$$

Utilization-Adjusted TFP (Fernald Series):

$$\text{Adj. TFP} = \text{Technology Shocks Only} \quad \leftarrow \text{True productivity shock measure}$$

5.5.2 How to Access and Download the Fernald TFP Series

Source 1 — San Francisco Federal Reserve (Official Host):

1. Go to: <https://www.frbsf.org/research-and-insights/data-and-indicators/total-factor-p>
2. Scroll to find “Total Factor Productivity and Underlying Variables”
3. Click the Excel/Spreadsheet download link
4. Open in Excel or import into R / Python / Stata

Source 2 — John Fernald’s Personal Website (Archived Vintages):

1. Go to: <https://www.johnferald.net/TFP>
2. Select your preferred vintage (most recent or historical archived versions)
3. Download the Excel spreadsheet
4. Read the README tab inside the spreadsheet — it explains all variables and methodological changes

Source 3 — FRED (St. Louis Fed):

1. Go to: <https://fred.stlouisfed.org>
2. Search: “Total Factor Productivity”
3. Select series: TFPBS (TFP for Business Sector)
4. Click Download → Choose CSV or Excel format
5. Select your date range

5.5.3 Key Variables Inside the Fernald Dataset

Variable	Description
dtfp	Raw TFP growth (unadjusted Solow Residual)
dtfp_util	Utilization-adjusted TFP growth — use this for productivity shocks
dutil	Utilization rate change
dlp	Labor productivity growth

Variable	Description
dkp	Capital productivity growth
dy	Output growth
dl	Labor input growth
dk	Capital input growth

5.5.4 Importing the Data — Code Examples

In R:

```
library(readxl)
tfp_data <- read_excel("Fernald_TFP.xlsx", sheet = "quarterly")
tfp_shock <- tfp_data$dtfp_util
```

In Python:

```
import pandas as pd
tfp_data = pd.read_excel("Fernald_TFP.xlsx", sheet_name="quarterly")
tfp_shock = tfp_data["dtfp_util"]
print(tfp_shock.describe())
```

In Stata:

```
import excel "Fernald_TFP.xlsx", sheet("quarterly") firstrow clear
tsset date
tslide dtfp_util
```

6. Data Sources Measuring Institutional Advancement Through Exchange

This section covers data sources that capture institutional quality as reflected through actual economic and social exchange activity — real transactional, relational, and market-based evidence of how well institutions are functioning.

6.1 Market & Goods Exchange

Dataset	What It Captures	Source
Quarterly Retail Trade Survey	Volume & quality of goods exchange	U.S. Census Bureau
Annual Wholesale Trade Survey	B2B exchange efficiency	U.S. Census Bureau
Economic Census (every 5 years)	Complete snapshot of U.S. market exchange	census.gov/economic-census

Dataset	What It Captures	Source
Commodity Flow Survey	Physical movement of goods across institutions	U.S. Census Bureau
Business Formation Statistics	New market entrants — institutional openness	U.S. Census Bureau
GDP by Industry	Sectoral exchange contribution	BEA
Personal Consumption Expenditures	Household market participation	BEA

6.2 Financial & Capital Exchange

Dataset	What It Captures	Source
Flow of Funds (Z.1 Release)	Complete financial exchange flows in the U.S.	Federal Reserve
Survey of Consumer Finances (SCF)	Household financial exchange behavior	Federal Reserve
Senior Loan Officer Survey	Credit exchange conditions	Federal Reserve
EDGAR Database	Corporate financial disclosure transparency	SEC
Bank Call Reports	Bank-level lending & deposit exchange	FDIC
Summary of Deposits	Geographic distribution of financial exchange	FDIC

6.3 Labor Market Exchange

Dataset	What It Captures	Source
JOLTS	Labor exchange flows — hires, quits, separations	BLS
Current Population Survey (CPS)	Worker-employer matching quality	BLS
Occupational Employment & Wage Statistics	Wage exchange by occupation	BLS
National Compensation Survey	Benefits & compensation exchange	BLS
LEHD	Worker-employer exchange flows over time	U.S. Census

6.4 Legal & Contract Exchange

Dataset	What It Captures	Source
Rule of Law Index — U.S. Data	Contract enforcement, civil justice exchange	World Justice Project
Federal Court Management Statistics	Volume & efficiency of legal exchange	U.S. Courts
Bankruptcy Filing Statistics	Failed exchange & institutional recourse	U.S. Courts
Patent Activity Statistics	Knowledge exchange & IP protection	USPTO
Trademark Registrations	Brand & commercial exchange protection	USPTO

6.5 Trust & Social Exchange

Dataset	What It Captures	Source
General Social Survey (GSS)	Social trust, civic participation, institutional confidence	NORC / U. of Chicago
American National Election Study	Political trust & institutional legitimacy	electionstudies.org
Gallup Trust in Institutions Poll	Annual confidence in key U.S. institutions	Gallup
Pew Research Social Trust Survey	Interpersonal & institutional trust	Pew Research
Opportunity Insights Social Capital Atlas	Geographic social capital & mobility exchange	Opportunity Insights

6.6 Trade & International Exchange

Dataset	What It Captures	Source
USA Trade Online	Import/export exchange by commodity & country	Census / BEA
International Trade in Goods & Services	Monthly trade exchange flows	BEA / Census
Foreign Direct Investment (FDI) Data	Cross-border capital exchange	BEA International

Dataset	What It Captures	Source
Trade Agreement Compliance Reports	Quality of international exchange rules	USTR

6.7 Government & Public Exchange

Dataset	What It Captures	Source
USASpending.gov	Government procurement & grant exchange	usaspending.gov
Federal Procurement Data System	Federal contracting exchange	fpds.gov
IRS Statistics of Income	Tax compliance — reflects fiscal exchange	irs.gov/statistics
Recovery.gov / oversight.gov	Transparency in public fund exchange	oversight.gov

6.8 Digital & Information Exchange

Dataset	What It Captures	Source
FCC Broadband Data	Digital infrastructure for exchange	fcc.gov
Census E-Commerce Statistics	Digital goods & services exchange	census.gov
BEA Digital Economy Satellite Account	Value of digital exchange in GDP	bea.gov
FTC Market Concentration Reports	Fairness of digital market exchange	ftc.gov

6.9 Housing & Real Property Exchange

Dataset	What It Captures	Source
Census American Housing Survey	Housing market exchange quality	census.gov/ahs
FHFA House Price Index	Property value exchange trends	fhfa.gov
HUD Fair Housing Data	Equity in housing exchange	hud.gov

Dataset	What It Captures	Source
HMDA (Home Mortgage Disclosure Act)	Mortgage lending exchange by demographic	cfpb.gov

6.10 Master Portal Reference

Portal	URL	Best For
FRED (St. Louis Fed)	fred.stlouisfed.org	All macro exchange indicators
Data.gov	data.gov	Federal open data gateway
Census Data Explorer	data.census.gov	Demographic & economic exchange
BEA Interactive Data	apps.bea.gov	National accounts exchange
USAFacts	usafacts.org	Simplified government data
Opportunity Insights	opportunityinsights.org	Social & economic mobility
BLS Data Tools	bls.gov/data	Core labor market stats
WIOA Performance	workforcegps.org	Program outcomes
College Scorecard	collegescorecard.ed.gov	Education-to-earnings
O*NET Online	onetonline.org	Occupational skills matching

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