

AI, SKILLS, AND THE FUTURE OF (NO) WORK

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جامعة جورجتاون قطر
GEORGETOWN UNIVERSITY QATAR



CELEBRATING TWO
DECADES IN QATAR

FACTS:

- ❖ The rate at which new technology is being created has accelerated.
- ❖ The rate at which it is being adopted and is being impactful has accelerated.
- ❖ These changes cause fundamental shifts in labor markets, welfare, businesses, humanity.





PART I: The Academic

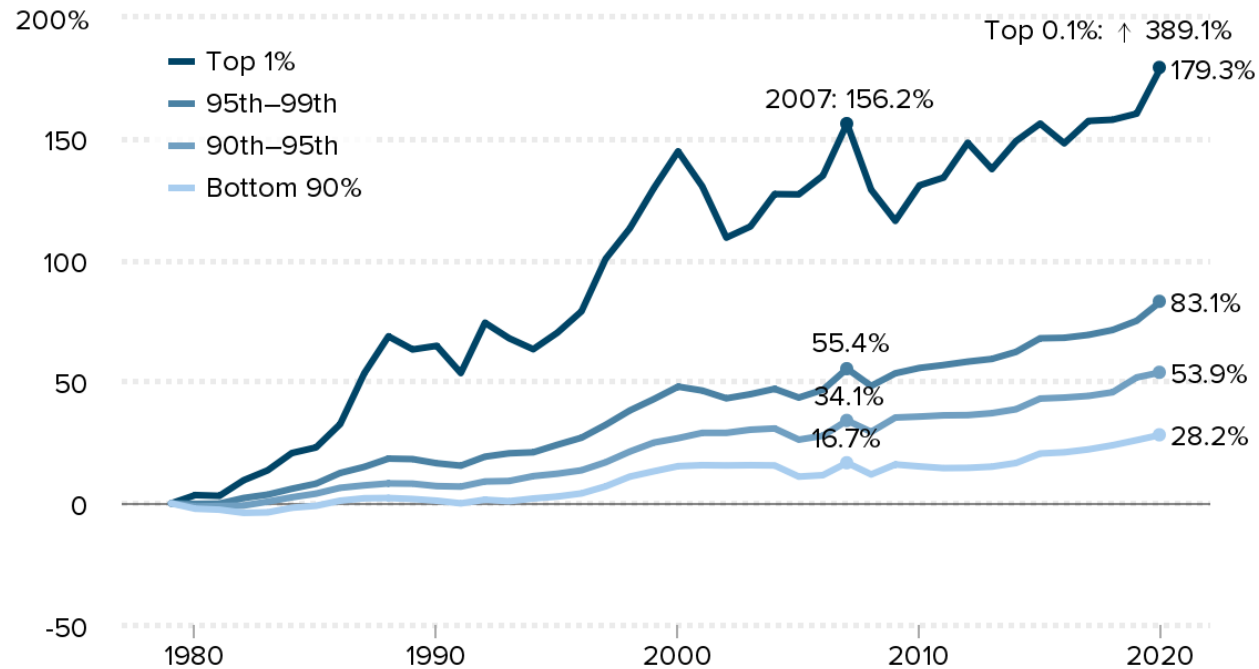
Insights on current labor
markets and inequality





01. Inequality is rising

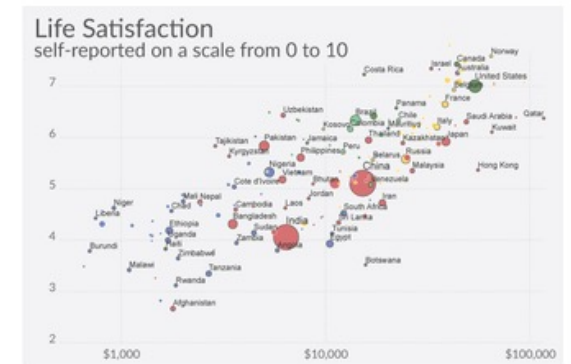
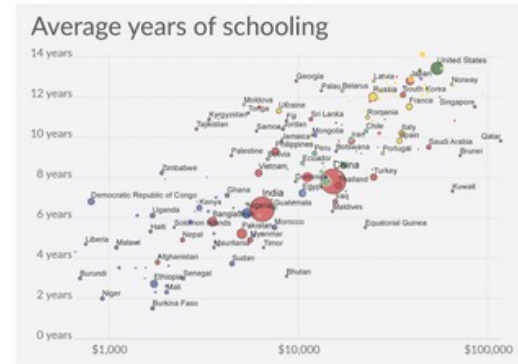
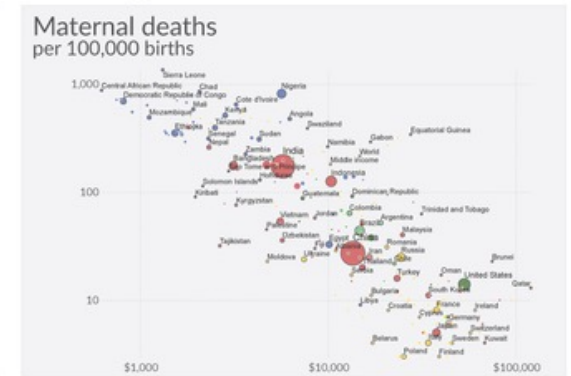
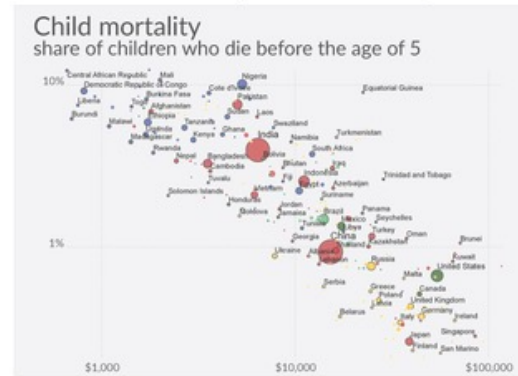
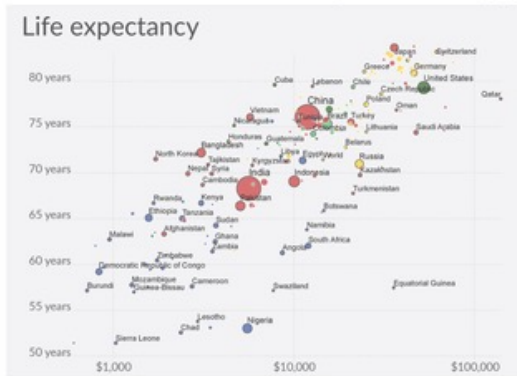
Cumulative percent change in real annual wages, by wage group, 1979–2020



Source: EPI analysis of Kopczuk, Saez, and Song (2007, Table A3) and Social Security Administration wage statistics.



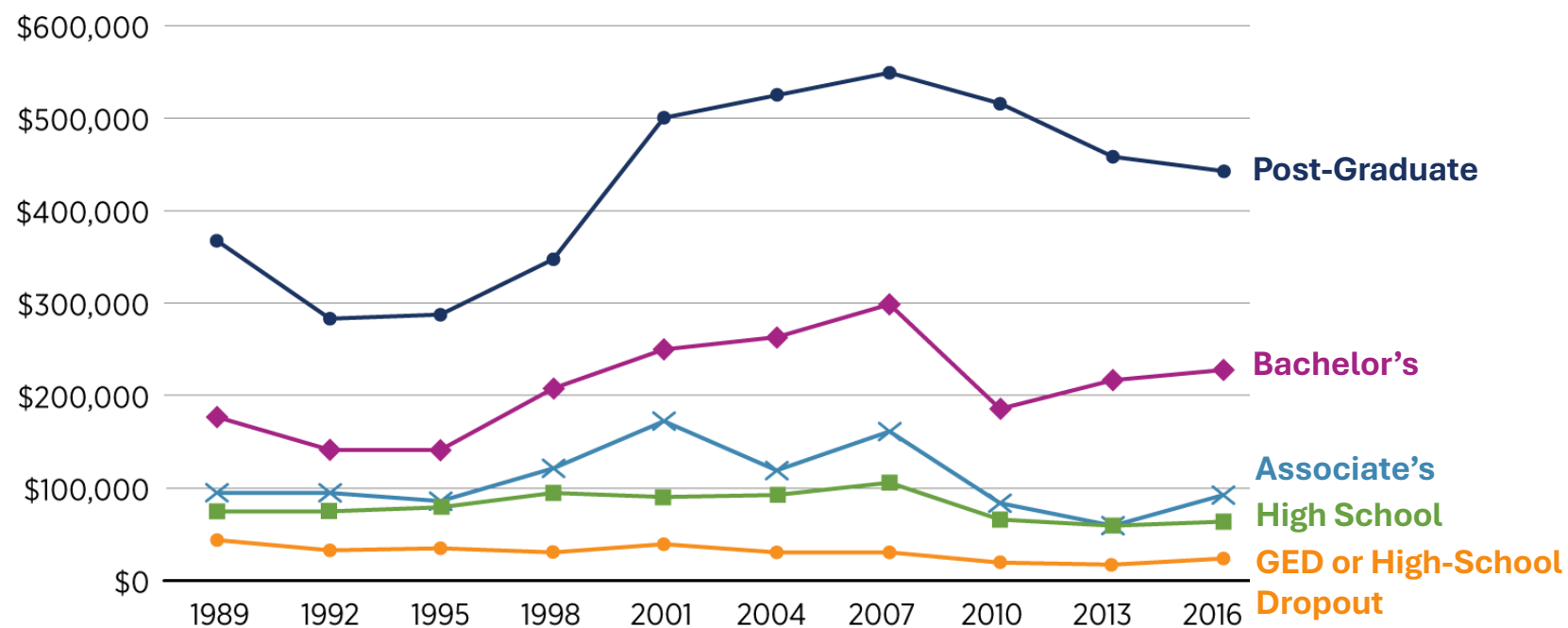
02. Income disparities matter



03. Degrees mattered

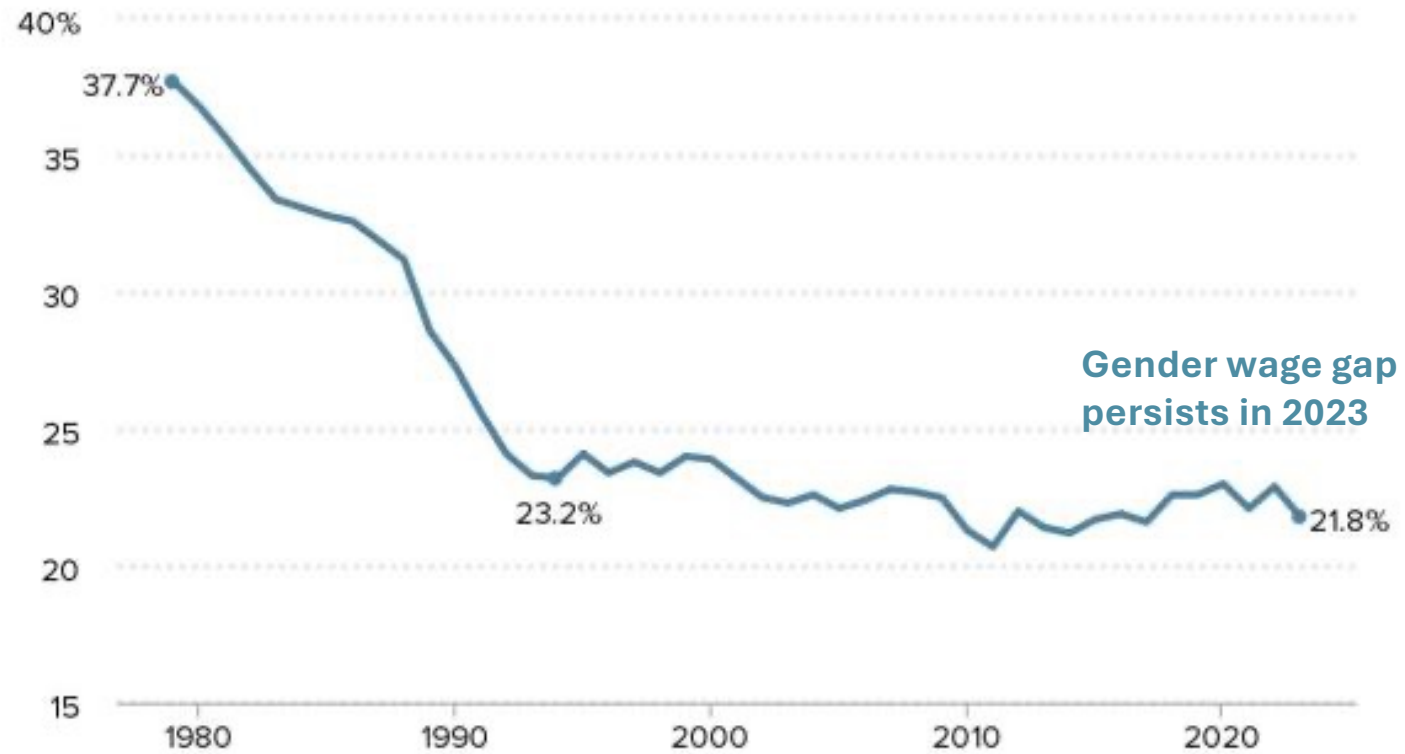
Wealth Gaps by Educational Attainment

A look at median (50th percentile) household wealth over time





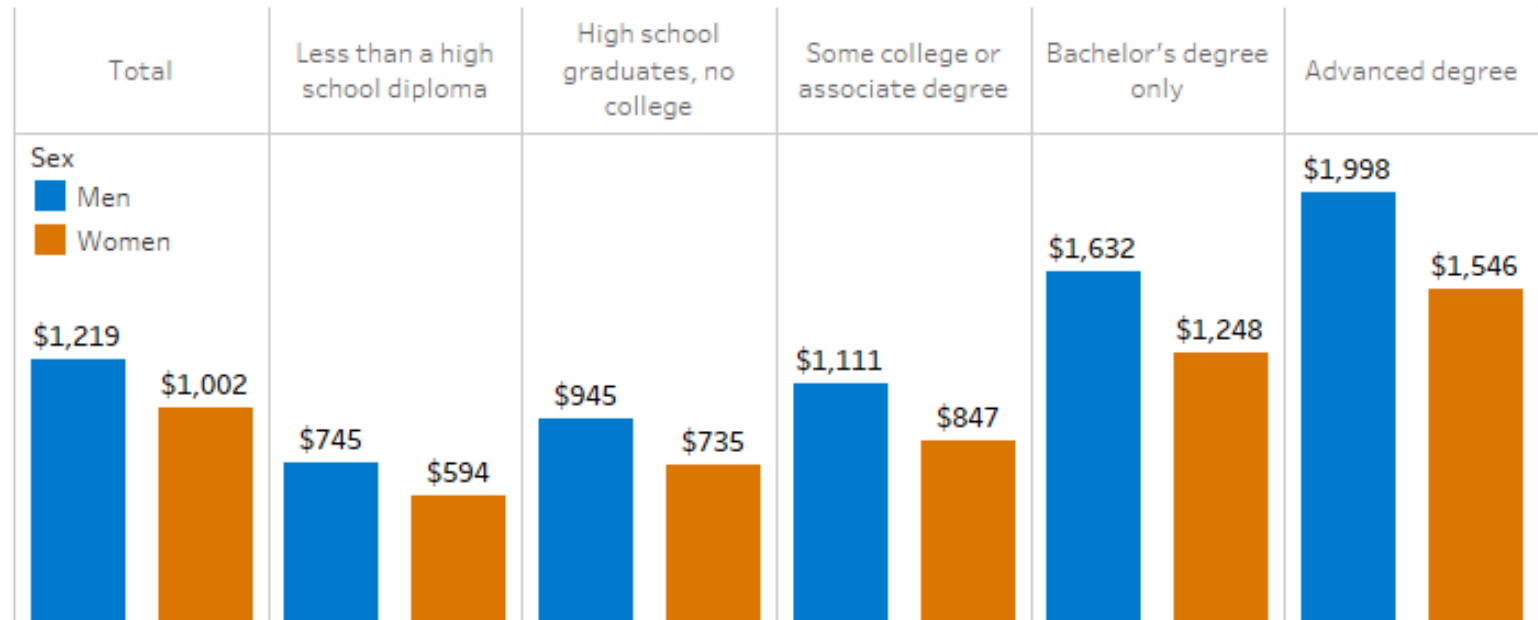
04. Women earn less





05. and it's not because of degrees

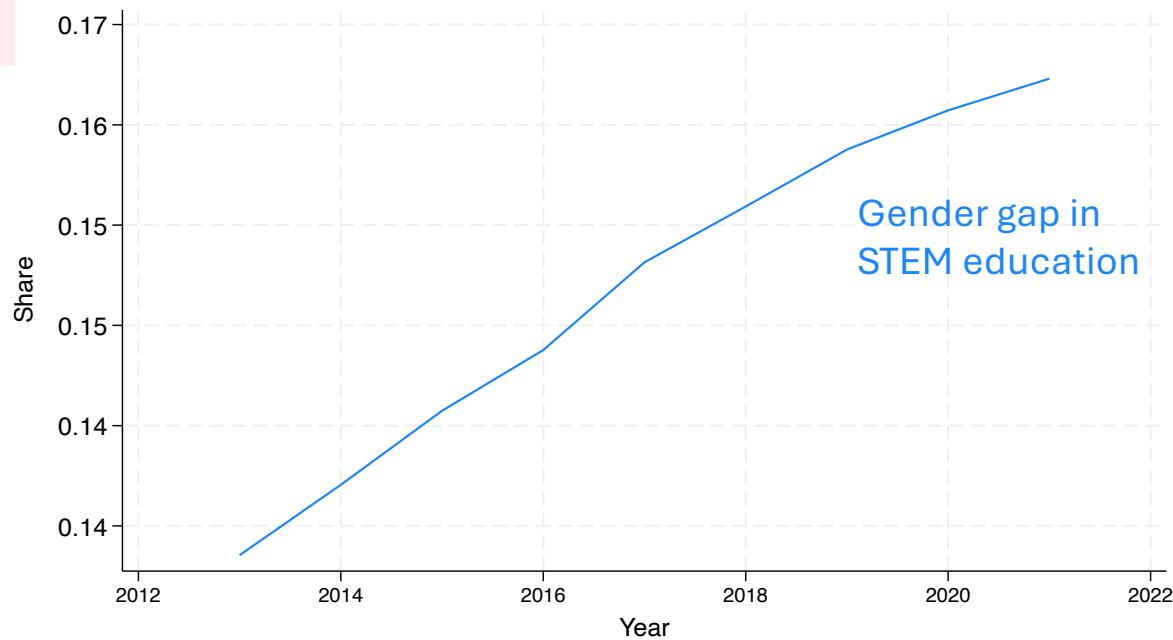
Median weekly earnings by sex and educational attainment



Notes: Based on median weekly earnings of full-time, wage and salary workers, 25 years and older. Advanced degree includes people with master's, professional, and doctoral degrees.

Data: U.S. Bureau of Labor Statistics, Current Population Survey, 2022 annual averages.

06. There are less women in STEM



36%

wage premium of women in
STEM vs non-STEM jobs

24%

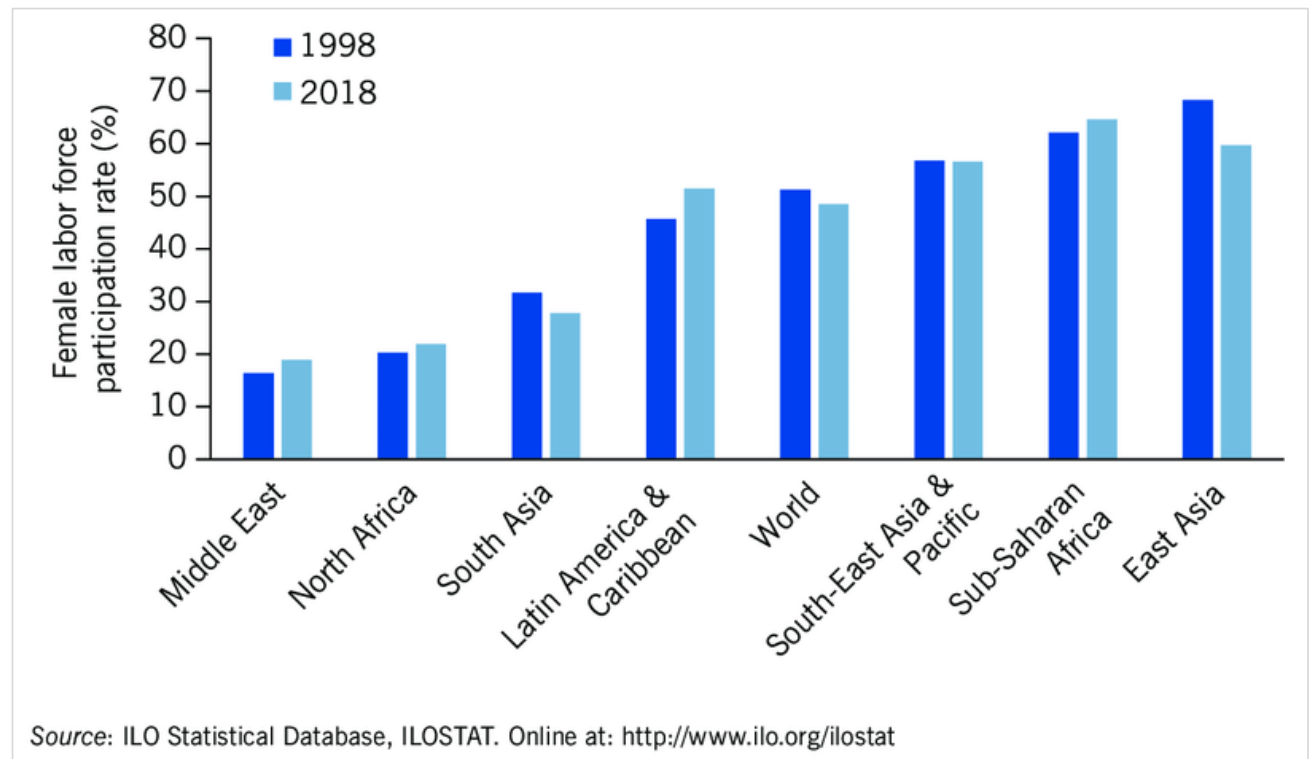
Share of female STEM
workers

Source: Antoniadis, Chatzikonstantinou, Savka (2025)

07. And in the labor force in some parts of the world

Female Labor Force Participation

- ❑ World: 48% (vs 74% for MLFP)
- ❑ MENA & North Africa: 20.2% (MLFP 72.4)
- ❑ Egypt: 22.8% (MLFP 69.6)



08. Occupational choice drives inequality

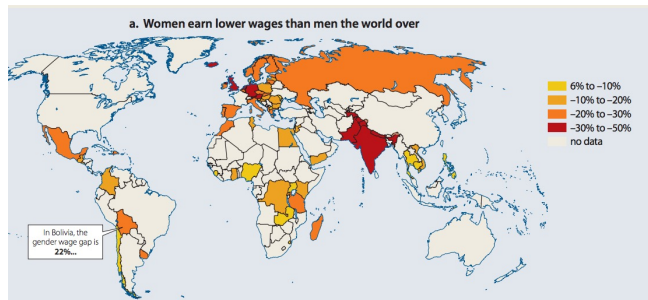


Fig 1 – Unadjusted Gender gap

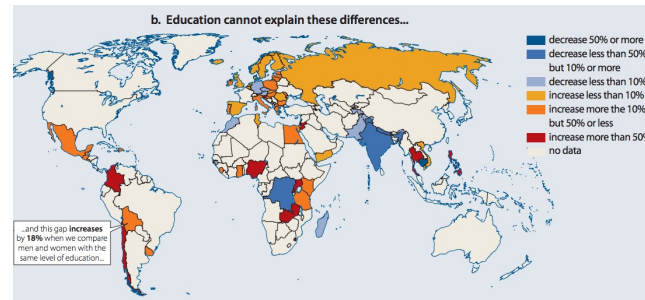


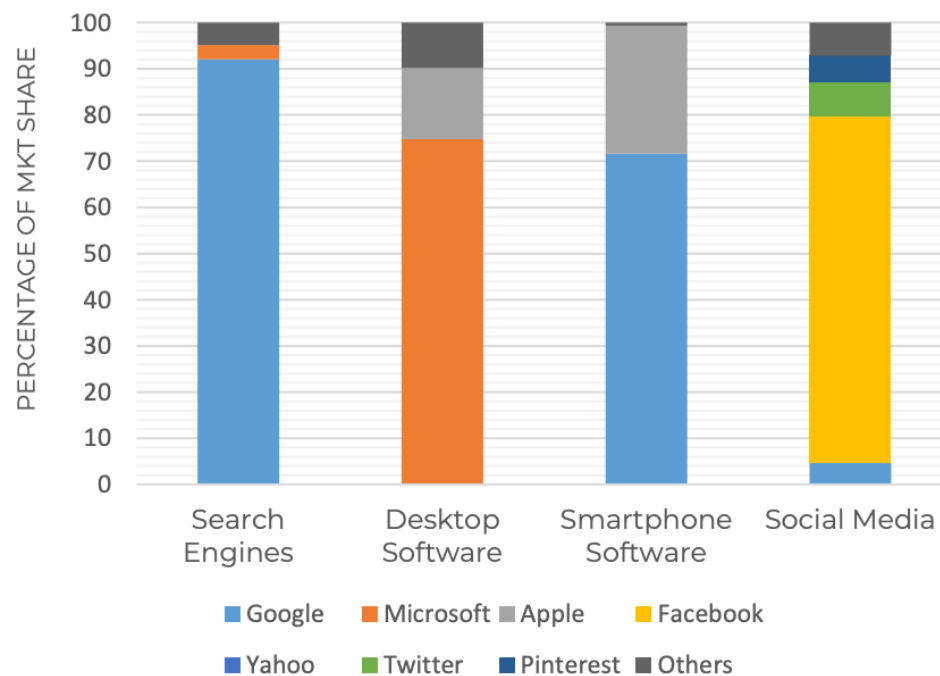
Fig 2 – Adjusted for educational differences



Fig 3 – Adjusted for occupation and industry



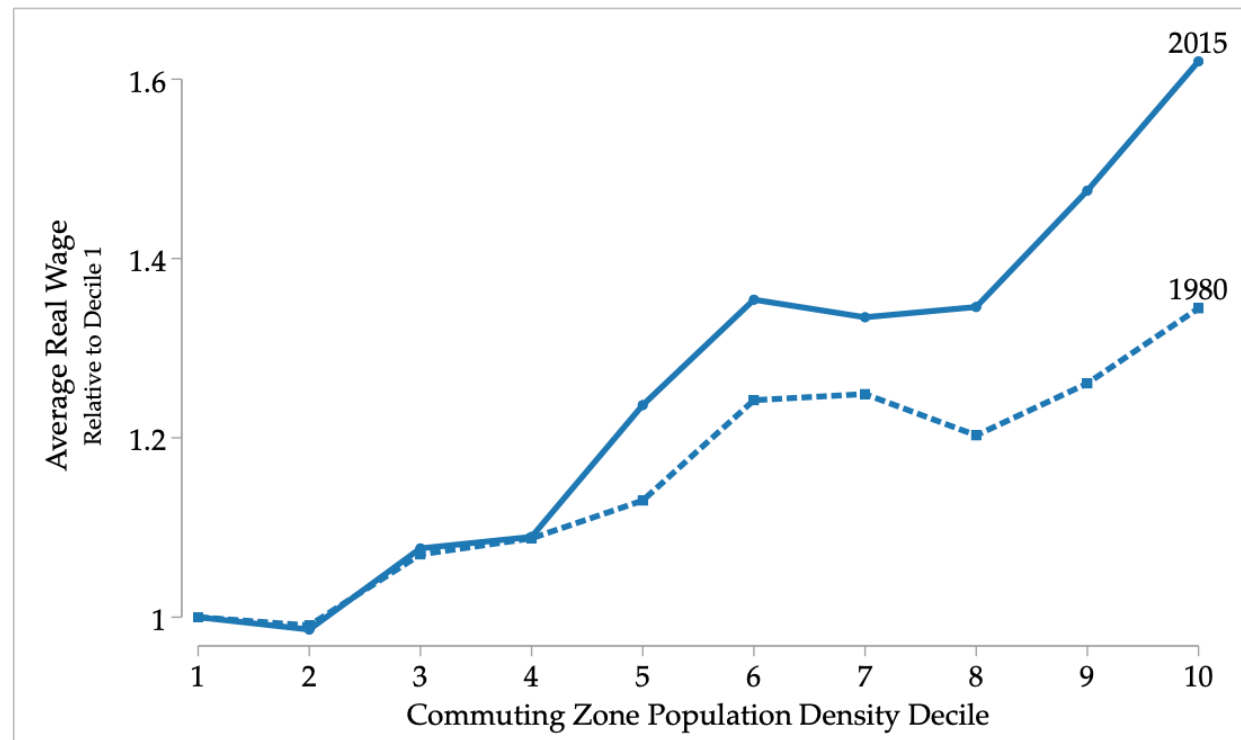
09. The rise of superstar firms



The Effects of super size firms

1. Market concentration:
 - significant market power exercised to consumer, suppliers and employees to obtain extraordinary profits.
 - Reductions in R&D investment (by laggards)
2. Labor markets
 - Downward pressure on wages
 - Reduction in labor share of GDP
3. Political power

10. Wage growth in urban cities is higher than in rural



...and it is all due to business services



PART II: The Researcher

Some cool and important
new findings on labor market
dynamics





STUDYING THE FUTURE OF WORK



- ❖ To understand the future of work, we need to know how labor market dynamics are changing.
- ❖ Use leverage data from **1.5 billion job vacancies** posted online in the US and China for our study.



THE FUTURE OF WORK

Plumbing

Skill	2014	2019	Growth
Plumbing Design	605	1,971	2.3
Mechanical, Electrical, and Plumbing (MEP) Design	1,525	4,357	1.9
Commercial Plumbing	2,382	6,691	1.8
Plumbing Installation	418	1,134	1.7
Plumbing Systems	11,787	30,005	1.6
Plumbing Tools	429	1,082	1.5
Plumbing Fixture Installation	225	536	1.4
Plumbing Maintenance	4,544	10,663	1.4
Plumbing	199,046	445,228	1.2
Plumbing Repairs	11,132	24,334	1.2
Residential Plumbing	1,848	3,201	1.07



THE FUTURE OF WORK

Massage

Skill	2014	2019	Growth
Sports Massage	267	3,911	13.7
Deep Tissue Massage	1,211	6,142	4.1
Swedish Massage	248	1,014	3.1
Hot Stone Massage	667	2,254	2.4
Chair Massage	449	1,156	1.6
External Cardiac Massage	85	218	1.6
Massage Therapy	16,515	39,535	1.4
Massage	14,447	30,594	1.1
Prenatal Massage	88	186	1.1
Therapeutic Massage	1,487	1,983	0.3
Patient Massage	52	54	0.0

THE FUTURE OF WORK

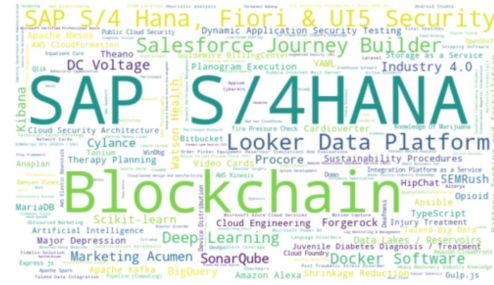
Skill	2014	2019	Growth
3D Printing	2,412	12,263	4.1
AWS	2,254	16,418	6.3
Opioid	895	8,269	8.2
Bitcoin	71	755	9.6
Major Depression	313	4,529	13.5
Fintech	819	12,715	14.5
Knowledge Of Marijuana	49	6,324	128.1
Blockchain	9	7,702	854.8

**And a few
more**



THE FUTURE OF WORK

(a) Common



Business
Operations
Specialists
(SOC2 131)

(b) New



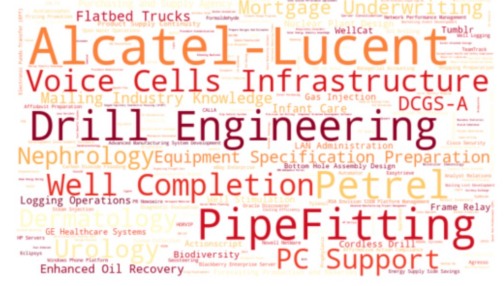
Engineers
(SOC2 172)

(c) Disappearing



Judges,
Lawyers,
and Related
Workers
(SOC2 231)

Can check by
occupation
as well



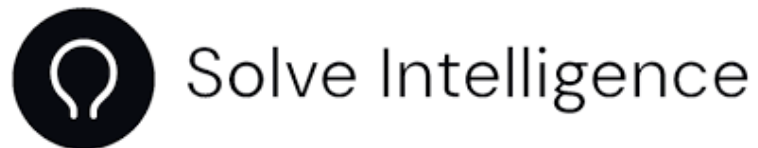


PART III: The Venture Capitalist

Insights from analyzing early-stage investments in AI startups



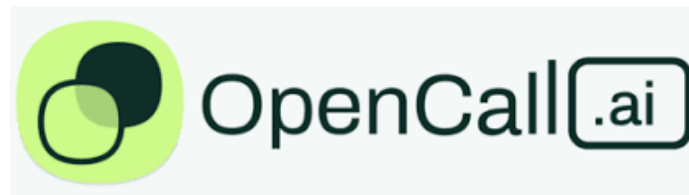
Examples in VC early stage B-B AI investments



Automates patent filing



Automates debt collection calls



Automates support calls centers



Automates FDA submissions

What investments in AI startups reveal

❑ B2B AI already adversely affects many business verticals:

- Call centers: 97% jobs will be gone
- Patent filings: 80%
- In general, 10-97% job losses across verticals

❑ Valuation is highly correlated with the number of jobs destroyed.



PART IV: The Philosopher

Main insights on the

Future of Work



01. Skills matter, not degrees

The rise of “super skills”

- ❑ Switch from degree- to skills-based hiring
- ❑ Emerging degree reset.
- ❑ Must prioritize skills-based training



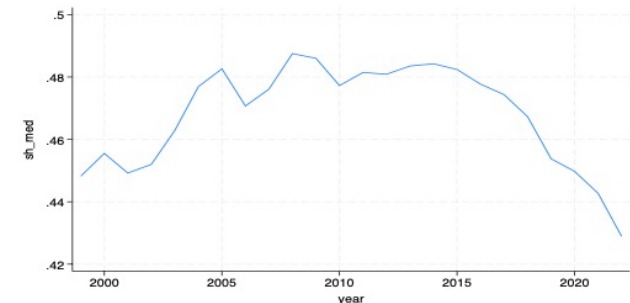


02. Skills matter, not degrees

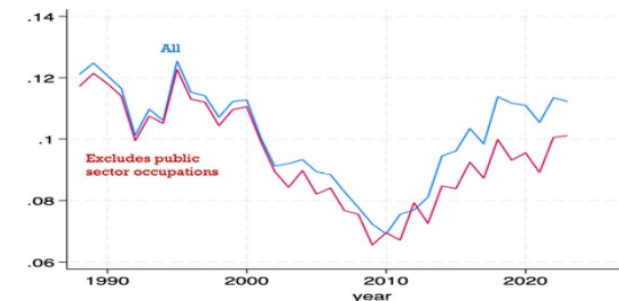
2. Occupations are converging

- ❑ “Distance” between occupations is shrinking.
- ❑ Wages are converging and mobility is rising.
- ❑ Gender gap in stem is rising

(a) Coefficient of variation for the median wage across SOC4



(c) Labor mobility across SOC4





02. AI will destroy jobs and tasks

Finding entry-level jobs will become harder because of

1. Degrees/skills mismatch
 2. Drop in demand: Large number of jobs replaced by AI
- ❑ Bigger hurdle to jump (in terms of skills) to secure a job

Industries | Finance

Goldman Tells Staff It Will Cut More Jobs as AI Saves Costs

Technology

Sequoia Capital Invests in AI Tool That Could Replace Junior Bankers

Rogo says its AI platform helps make investment bankers' work faster and smarter



03. Some countries will suffer more

Concentrated benefits, dispersed costs.

- ❑ Developing countries exporting services (e.g. Philippines) will suffer greatly due to loss of jobs and weak state finances to support retraining and unemployment benefits.
- ❑ *Trouble in the horizon?* Impact of AI on job loss will be high, ability of State to support unemployed will be low



04. The future of less work

Ingredients of future of work

1. Three or four day work-weeks
2. Universal basic income will be required (but not always available)
3. Inequality will significantly rise (and the middle class will shrink)
4. Will be spending a higher share of our lives online for non-work related activities.



05. Decay of values and happiness

A generation of unhappy people

1. Relative deprivation and feeling of being left out will rise
2. Frustration and depression will be on the rise
3. The feeling of *relative* economic decline is already leading to political polarization, populist voting, anti-global attitudes.
4. Can also lead to increase in crime, civil unrest, political violence and extremism



05. Decay of values and happiness

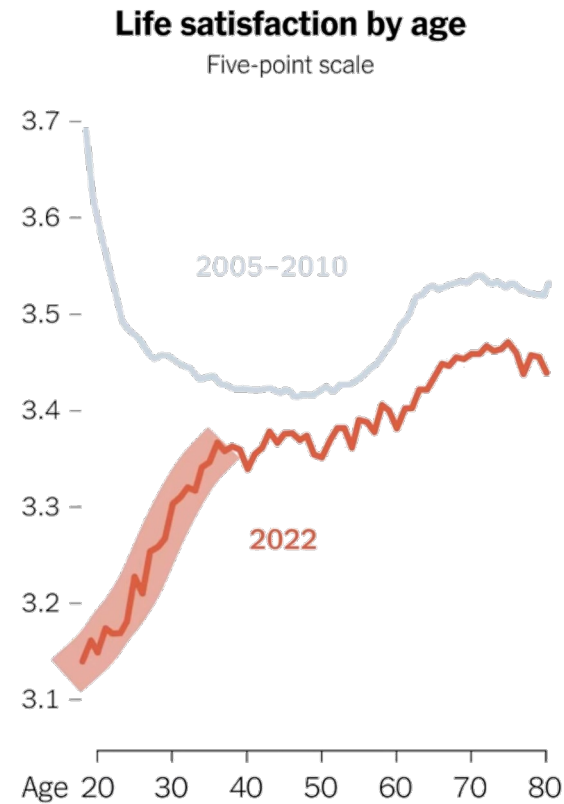
A generation of unhappy people





05. Decay of values and happiness

A generation of unhappy people



THANK YOU



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