

THE FUTURE OF GRADUATE SCHOOLS: BUSH INSTITUTE / SMU THOUGHTS



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with references to why universities
– & graduate schools in particular –
are vital to local economies,
why they're under stress, &
some possible ways forward



Cullum Clark

Council of Graduate Schools Annual Meeting
Washington, DC, December 2025

OUTLINE

- ❑ George W. Bush Institute-SMU Economic Growth Initiative
- ❑ Anchor institutions: The vital roles of universities & graduate schools in urban economies
- ❑ Are master's degree programs worth it? Some data on the issue
- ❑ Tectonic stresses
- ❑ Thoughts on ways forward



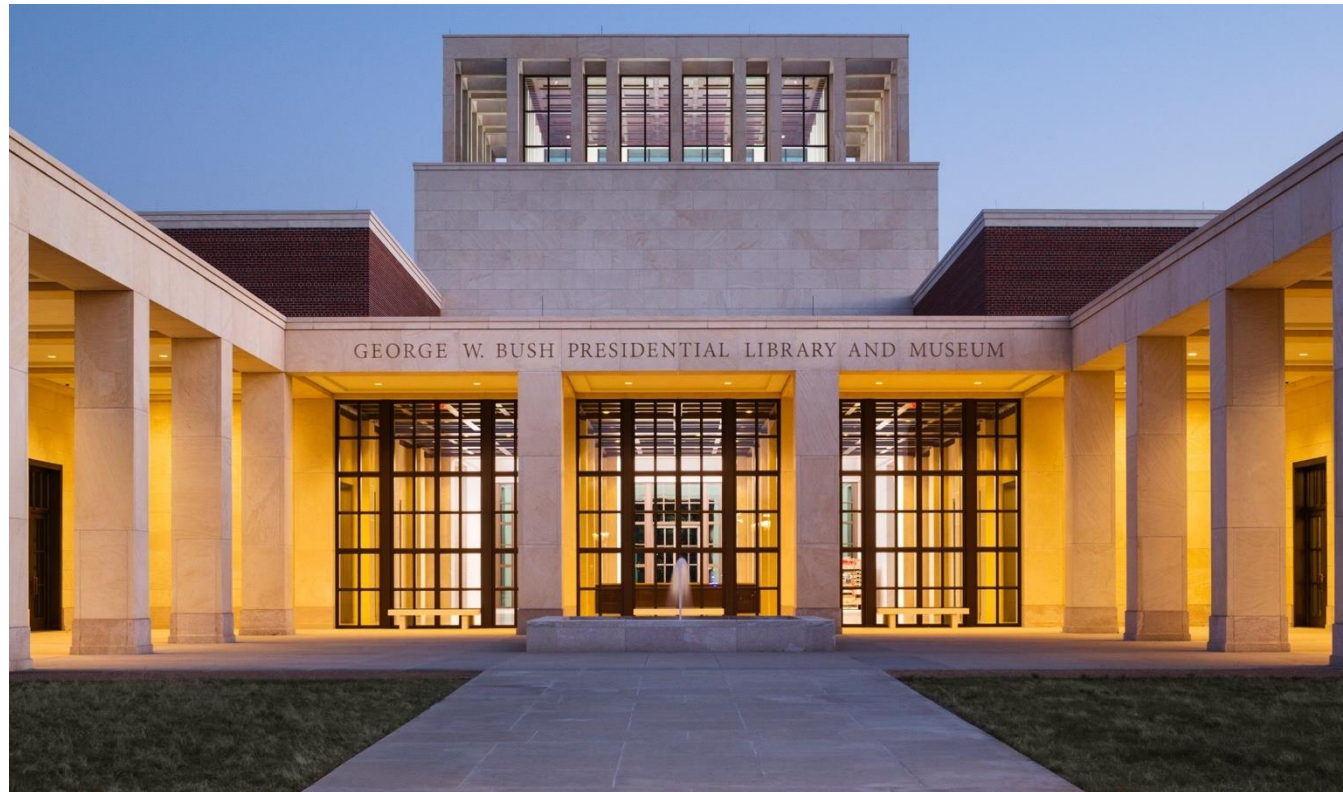
ABOUT FORECASTS ...

- ❑ What happened when Nobel Prize-winning economist Ken Arrow pointed out that his long-term weather forecasts before the Normandy Invasion were no better than random chance:

“The Commanding General is well aware that the forecasts are no good. However, he needs them for planning purposes.”



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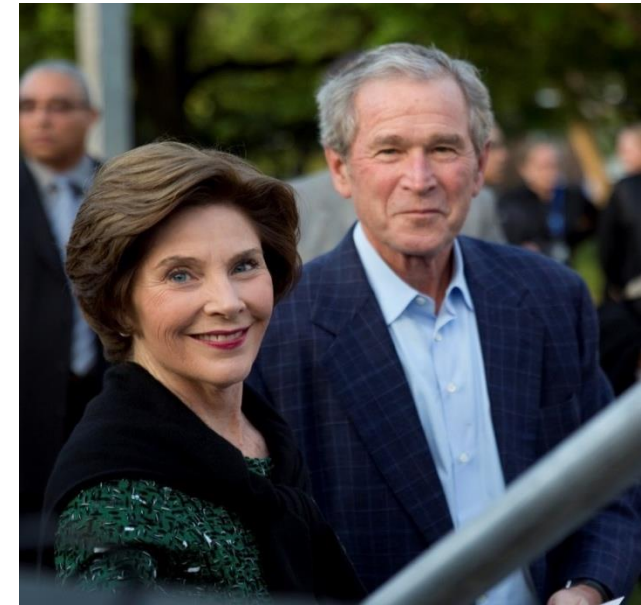
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WHAT DRIVES US

We celebrate the goodness of our Nation and pursue with optimism the timeless values of:

- Freedom
- Opportunity
- Accountability
- Compassion



“We believe in open societies ordered by moral conviction. We believe in private markets humanized by compassionate government. We believe in economies that reward effort, communities that protect the weak, and the duty of nations to respect the dignity and the rights of all.”

- President George W. Bush
November 13, 2003





World Changers Shaped Here

- ACC member and R1 University with rapidly growing federal, foundation, and industry-funded research
- Scenic campus in Dallas' historic University Park neighborhood

Global Hub

Dallas-Fort Worth is the 4th–largest U.S. metro, and an international center for business, tech, energy, arts, and healthcare

Competitive Funding

Comprehensive PhD support model fueled by Moody Foundation \$100M gift

Invitation to Collaborate: SMU welcomes partnerships in research, graduate program development, and national initiatives shaping the future of graduate education

Email us: smugrad@smu.edu

Interdisciplinary Focus

Research clusters in AI, data science, immersive learning, urban environments

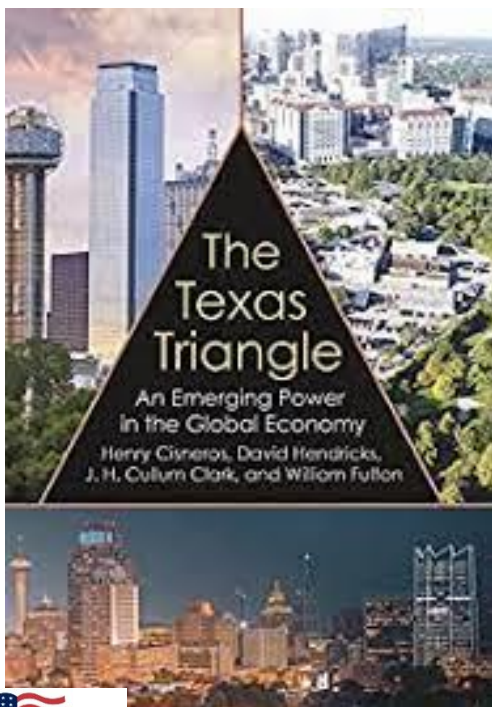
Workforce-aligned

High demand master's programs tailored to emerging industry needs



OUR WORK ON ECONOMIC GROWTH & OPPORTUNITY

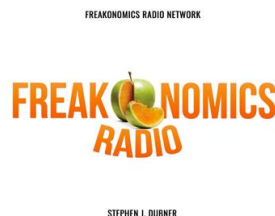
Cities & economic opportunity



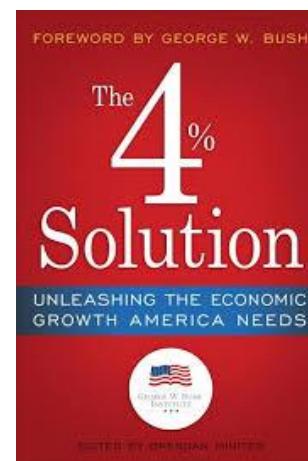
“Big D Is a Big Deal

DFW is becoming the de facto capital of America’s Heartland.”

City Journal



Democratic capitalism & trade



Key principles:

- U.S. preeminence in science, technology, & education
- Economic freedom & light-tough regulation
- Fiscal responsibility
- Resolute commitment to national security & U.S. economic leadership



BUSH INSTITUTE-SMU REPORT (2024)

ENGINES OF OPPORTUNITY:

How Eds and Meds Institutions Can Become
More Powerful Drivers of Prosperity in America's Cities



OUR ANSWER

- Innovation



- Place



- Talent



UNIVERSITIES: VITAL ANCHORS

- **Strength of research in local eds & meds institutions:
highly predictive of metro-area outcomes –**
 - Income levels – including for lower-skilled workers
 - Upward mobility
 - Social capital
- **Population share with bachelor's degree or more:
highly predictive of metro-area incomes**



HOW ABOUT POPULATION SHARES WITH A GRADUATE DEGREE?

- **Data from 100 largest metros: Share ranges from 5.7% to 25.6% (2020)**
- **Variation in graduate/professional degree share beats variation in bachelor's share in accounting for –**
 - Overall incomes
 - Incomes for bachelor's degree holders
 - Incomes for grad/professional degree holders
- **BUT consider ACTUAL less PREDICTED grad/professional share:**
 - Range: -4.5% to 12.7%
 - 5% positive variation predicts: 17% higher median household income, 12% higher income for bachelor's holders, & 13% higher income for graduate/professional degree holders

FUELING INNOVATION

- University “innovation impact” scores predict:
 - Private-sector R&D investment
 - Venture capital investment
 - Life science jobs
 - Overall innovation rank
- Why?
 - Ideas spread best at short distance
 - Business innovation growing MORE dependent on university research



MORE INNOVATION EFFECTS

- Consider again: actual less predicted population share with a graduate/professional degree –
 - Top 15 of America's 100 largest metros outperform bottom 15 by
 - 2.2X for business R&D investment as share of metro-area GDP
 - 18 positions in average innovation ranking: 28th vs 46th



VARIATION ACROSS INSTITUTIONS

	Innovation Impact Productivity: High vs Lower Performing Institutions (mean of 2nd through 6th ranked to mean of 2nd, 3rd, 4th, 5th, & 6th from bottom)				
	Largest	Next Largest	Medium- sized	Academic Medical Centers	Overall
	Productivity edge: high vs. low performers n	3.1 48	3.6 49	7.0 49	3.5 25

- **Determinants of productivity:**

- Faculty quality (National Academies members)
- Size & background of technology commercialization staff & resources
- Foreign-born as % of metro area population

Qualitative finding: High-ranking institutions perform well because they've decided to do so

BUILDING GREAT PLACES

- **Universities have very big physical footprints**

- Key questions:
 - New development: reinforcing sharp separation from surrounding city – or building connections?
 - Collaborative placemaking with local partners?
 - Attractive, accessible places where people want to live, learn, work, & play?
 - New housing near campus?

- **INNOVATION DISTRICTS –
the hottest trend in urban placemaking**



BUILDING TALENT PIPELINES

- **Three effects:**

- Educational attainment for homegrown population – about half of degree seekers stay close to home
- Graduates from elsewhere tend disproportionately to stick around
- Cities that outperform for innovation & overall prosperity attract talented people from elsewhere



A SIMPLE MODEL OF “STICKINESS”

	Graduate/Professional			Undergrad			Grad + Undergrad (4-yr insts)
	Native-born	Foreign-born	TOT	Native-born	Foreign-born	TOT	
All U.S. 4-Year Institutions:							
Absolute number	2,400,000	800,000	3,200,000	10,600,000	700,000	11,300,000	14,500,000
Estimated number leaving home state/country for program	1,080,000	800,000	1,880,000	2,650,000	700,000	3,350,000	5,230,000
%	45%	100%	59%	25%	100%	30%	36%
Estimated number who will stay in state where institution is located	432,000	176,000	608,000	450,500	28,000	478,500	1,086,500
% of number leaving home state/country	40%	22%	32%	17%	4%	4%	7%
% of total age cohort			4%			2%	6%
% of college-educated age cohort			10%			6%	16%
SMU:							
Absolute number	4,140	634	4,774	6,723	392	7,115	11,889
Estimated number leaving home state/country for program	858	634	1,492	3,521	392	3,913	5,405
%	21%	100%	31%	52%	100%	55%	45%
Estimated number who will stay in state where institution is located	489	159	648	1,528	20	1,548	2,195
% of number leaving home state/country	57%	25%	43%	43%	5%	22%	18%



BUT DO MASTER'S DEGREES PAY OFF FOR GRADUATES?

- **College wage premium:**

- Defined as: $(\text{wages for bachelors}) / (\text{wages for HS diploma})$
- Flat since 2000 at **1.65-1.70X**, up from $\sim 1.1X$ in 1950
- Reflects: Rising demand for high-skilled workers

- **Master's to bachelor's premium:**

- Flat since mid-1990s as **1.20-1.25X**
- BUT: vast heterogeneity across fields & institutions
- Analysis on next slide corrects for this:
compares master's to bachelor's in same field at same institution –
212 programs across 13 fields & 93 institutions in 31 states
 - Source: College Scorecard, Department of Education

Figure 1: College to high school earnings gap, overall and by gender

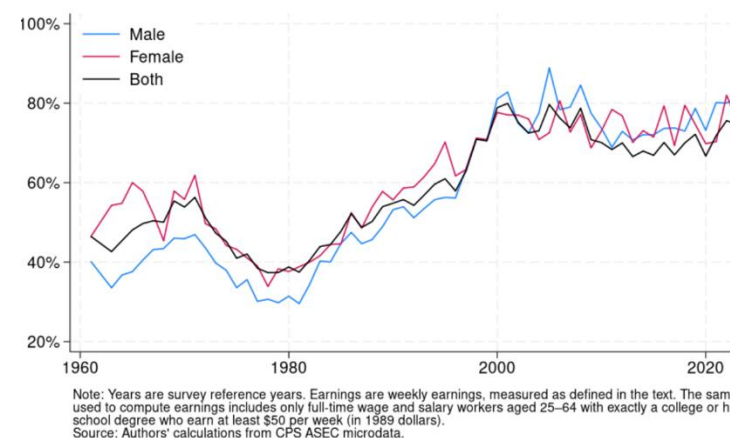
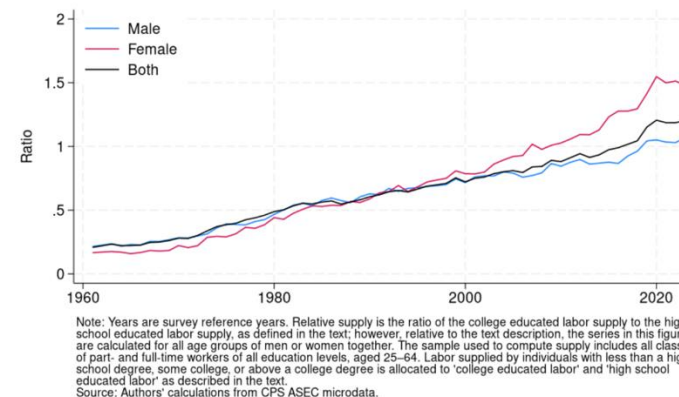


Figure 5: Relative supply of college educated to high school educated labor, overall and by gender



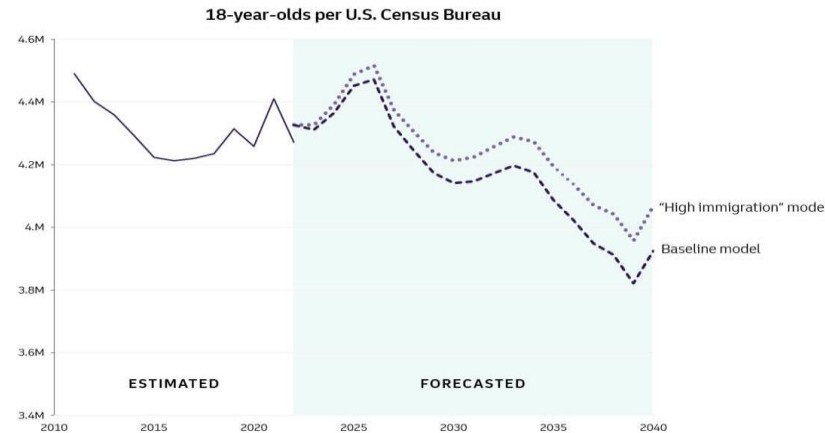
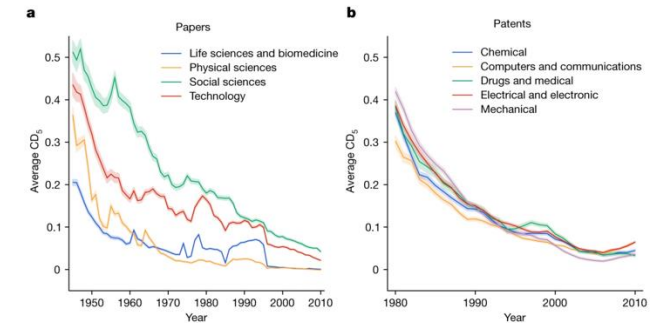
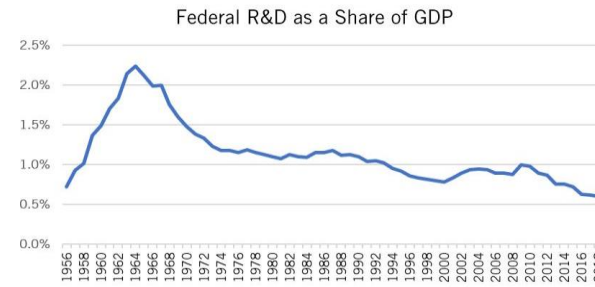
THE MASTER'S WAGE PREMIUM

	n	Median Wages				Years to recover ...	
		Bachelors (adj)	Masters	Premium (\$)	Premium (%)	Tuition Tuition	Tuition + Oppty Cost
Median across 13 fields				\$17,135	1.32	2.3	8.9
Median across 212 programs				\$18,003	1.28	1.9	8.0
Computer science	14	\$139,744	\$197,332	\$57,588	1.41	0.6	5.4
Statistics / Biostats / Math	9	\$96,849	\$140,240	\$43,391	1.45	1.0	5.4
Nursing	33	\$86,050	\$124,233	\$38,184	1.44	1.4	5.9
Public health	17	\$56,159	\$85,138	\$28,979	1.52	1.7	5.6
Public administration	11	\$55,197	\$80,506	\$25,309	1.46	1.6	6.0
Education	14	\$45,026	\$64,051	\$19,025	1.42	1.5	6.3
Psychology	37	\$53,882	\$71,016	\$17,135	1.32	2.6	8.9
Urban & regional planning	7	\$62,432	\$79,361	\$16,929	1.27	2.3	9.7
Landscape architecture	3	\$59,414	\$71,107	\$11,694	1.20	4.9	15.1
Civil engineering	28	\$91,179	\$98,858	\$7,679	1.08	3.5	27.2
Art	24	\$41,078	\$47,442	\$6,364	1.15	6.7	19.6
Economics	7	\$107,198	\$111,221	\$4,023	1.04	8.8	36.0
Journalism	8	\$66,439	\$70,008	\$3,569	1.05	11.9	36.0
Private	71	\$87,684	\$109,579	\$17,217	1.25	2.3	12.1
Public Flagship	92	\$67,058	\$86,988	\$15,303	1.30	1.9	11.0
Public Regional	49	\$59,556	\$84,218	\$18,708	1.41	1.4	13.8



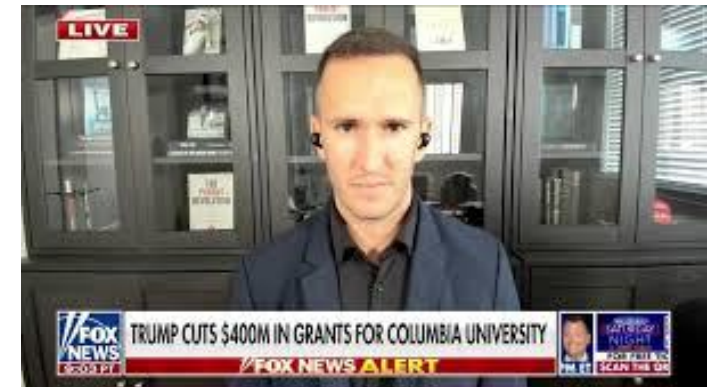
TECTONIC STRESSES, c. 2024

- Overly narrow & incremental **research**
- Threats to **free inquiry**, **free expression**, & **objective research**
- **Relevance & rigor** – 56% of bachelor's holders say not worth the cost (*WSJ-NORC* 2023)
- Outdated **accreditation** systems
- Unsustainable **financial models**
- Growing **demographic pressures**
- Low **public trust** – just 42% express confidence (Gallup 2025)



AS FOR 2025 ...

- **Research funding** in jeopardy
- Immigration policies threaten international students as well as financial models
- All-time low in **public & political support**



THOUGHTS ON WAYS FORWARD

- **OVERALL IMPERATIVES:** Relevance, reform, sustainability, trust
- **INNOVATION:**
 - Promote transformational research – change incentives
 - Whole-of-institution commitment to innovation & entrepreneurship
 - Strengthen the tech commercialization operation
 - Build outside business & investor relationships relentlessly
- **PLACE:**
 - Great urban placemaking – live, learn, work, play
 - Revitalization of downtowns & left-behind neighborhoods
 - Innovation districts



THOUGHTS ON WAYS FORWARD

- **TALENT:**

- Two predictions –
 - Demand for learning opportunities we currently associate with graduate schools: very likely to keep growing
 - Demand for traditionally structured programs: maybe not
- Some (modest) suggestions –
 - Create more discrete, efficient learning opportunities
 - Increase time, space, & life stage flexibility / reduce costs
 - Increase collaboration with employers / industry-recognized certifications
 - Increase holistic student support
 - Be nimble, innovative, humble, & hungry!



Build a better future.

THANK YOU!

