A Statistical Analysis of Unemployment crisis concerning Graduates and Post Graduates!

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Abstract:

The unemployment crisis among graduates and postgraduates is a complex issue with significant economic and social implications. Below is a statistical analysis based on recent data and studies, focusing on unemployment rates, underemployment, contributing factors, and disparities across demographics and regions. The analysis draws on credible sources and highlights key trends, with a critical examination of the data.

1. Unemployment Rates Among Graduates and Postgraduates United States

- **Recent College Graduates (Bachelor's Degree or Higher, Ages 22–27):**

o As of May 2024, the unemployment rate for recent college graduates in the U.S. was approximately **4.5%**, a significant decrease from **9%** in September 2020, but still above the national average of **4%** for all college-educated workers.

o In Q1 2025, the unemployment rate for recent graduates spiked to **5.8%**, the highest since 2021, indicating a deteriorating labor market.

o By major, unemployment varies significantly:

▪ **Fine Arts**: 12.1% unemployment rate (February 2023).

▪ **Philosophy**: 9.1% unemployment rate (February 2023).

- **General Education**: 1.7% unemployment rate, showing stronger employability.

o Posts on X suggest an alarming trend, with some claiming unemployment for recent graduates (ages 20–29 with bachelor's degrees) reached **12%** in 2024, a 4% increase from the previous year, though this lacks corroboration from primary sources.

- **Postgraduates**:

o Advanced degree holders (e.g., master's, Ph.D.) generally face lower unemployment rates. For example, in 2025, the unemployment rate for recent associate degree recipients was **2.1%**, compared to **8.4%** for advanced degree recipients and **15.3%** for four-year college graduates (ages 20s).

o However, even elite MBA graduates from top programs are struggling to find work, suggesting a broader slowdown in high-skill sectors like tech, finance, and consulting.

- **Underemployment**:

o **41.2%** of recent college graduates were underemployed in Q1 2025, meaning they worked in jobs not requiring a degree.

o A 2024 report found **52%** of recent four-year graduates were underemployed one year post-graduation, dropping to **45%** after a decade. Black graduates faced higher underemployment (**60%**) compared to white (**53%**), Hispanic (**57%**), and Asian (**47%**) graduates.

o Underemployment rates for undergraduates under 35 increased from **32%** in 1991 to **39%** in 2015, while for college graduates, it fell to **33%** by 2015.

Global Perspectives

- **Malaysia**:

o In 2020, the unemployment rate among fresh graduates surged to **25%**, up from **13.8%** in 2019, driven by employer preferences for experienced candidates, candidate attributes, and economic instability.

o A study in Klang Valley found significant correlations between unemployment and factors like employer preference ($\beta=0.104$, $p<.000$) and economic instability ($\beta=0.321$, $p<.000$).

- **China**:

o Two months post-graduation, the unemployment rate for undergraduates from rural families was **30.5%**, higher than urban counterparts, reflecting socioeconomic disparities.

o The COVID-19 pandemic exacerbated employment challenges, with industries like tourism, aviation, and hospitality seeing significant recruitment declines.

- **European Union**:

o In 2019, employment rates for recent tertiary graduates (ages 20–34) exceeded **90%** in countries like Poland, Ireland, and Germany, but were below **70%** in Greece and Italy, hit hard by the 2008 financial crisis.Tertiary graduates face lower unemployment risks compared to those with lower educational attainment, but mismatches between qualifications and job requirements persist.

- **India**:

o Post-COVID, unemployment among graduates under 25 reached **42%**, compared to **21.4%** for higher secondary and **15%** for middle school graduates, highlighting a stark graduate unemployment crisis.

- **Canada**:

o In 2024, **80%** of the unemployment rate increase (6.5% overall) came from people under 35, particularly students and new graduates, facing a "full-out screaming crisis" in the job market.

Ph.D. Graduates

- In the U.S., unemployment for Ph.D. scientists and engineers within two years of graduation was **2.1%** in 2010, dropping to **1.9%** for those 3–5 years post- degree. Claims of a "jobless crisis" for Ph.D.s are often overstated due to survey design flaws, such as the NSF's Survey of Earned Doctorates not accounting for job negotiations.

2. Contributing Factors to the Unemployment Crisis

1. Economic Conditions:

o Graduating during a recession has lasting effects. A study of U.S. white- male graduates (1979–1989) found a **6–7%** initial wage loss per 1% increase in the unemployment rate at graduation, persisting at **2.5%** after 15 years.Post-Great Recession (2009), employment rates for new graduates declined steadily, with a structural break around 2005, unrelated to recessionary scarring.

o The COVID-19 pandemic worsened outcomes, with job vacancies in Canada dropping by **9.2%** in Q2 2024, and industries like tech and finance announcing layoffs.

2. **Mismatch Between Education and Labor Market Needs**:

o In the EU, vertical (qualification mismatch) and horizontal (field mismatch) skill mismatches are common, reducing employability.

o In Malaysia, curricula often fail to meet job market demands, leaving graduates unprepared.

o In Canada, employers prioritize prior experience, which new graduates lack, and credentials alone are insufficient.

3. **Employer Preferences**:

o Employers favor candidates with experience, self-confidence, and specific skills, disadvantaging fresh graduates. Studies in Malaysia and elsewhere confirm this trend.

4. **Demographic Disparities**:

o In the U.S., Black, Hispanic, and AAPI graduates face higher unemployment (8–8.7%) than white graduates (5.1%) over 2021–2024, pointing to systemic discrimination.
o In China, rural graduates face higher unemployment than urban peers. In Canada, young immigrants struggle due to a lack of "Canadian experience."

5. **Technological and Structural Shifts**:

o Automation and AI reduce demand for certain graduate-level roles, while high-demand fields like computer science and medicine face capacity constraints.

o Hiring rates in the U.S. have declined steadily since 2014, with recent graduates facing a labor market resembling the 2007–2009 recession.

3. Statistical Insights and Trends

- **Long-Term Trends**:

o U.S. data from 1990–2025 show persistent challenges for recent graduates, with unemployment and underemployment rates consistently higher than for older college-educated workers.

o In Canada, university participation for ages 18–24 grew from **19%** (1995) to **30%** (2024), increasing competition in the job market.

○ EU tertiary education attainment rose from **18.8%** (2002) to **31.6%** (2019), but job quality and availability lag.

- **Wage Scarring**:

○ Graduates entering the labor market during high unemployment face persistent wage penalties. In the U.S., a 1% unemployment rate increase at graduation reduces wages by **9%** (state-level data), lasting 15 years.Median salaries for U.S. college graduates ($59,600) far exceed high school graduates ($36,600), but underemployment erodes this premium.

- **Policy Responses**:

○ China expanded postgraduate enrolments by **5%** (master's) and **1.7%** (doctoral) to absorb unemployed graduates, though infrastructure investments favour manual jobs.

○ The EU's Youth Guarantee aims to provide employment or training within four months of graduation, but outcomes vary by country.

○ In the U.S., fiscal policies post-COVID (e.g., expanded unemployment insurance) aided recovery, but racial and gender gaps persist.

4. Critical Analysis

- **Data Limitations**:

○ U.S. unemployment data for recent graduates (e.g., 5.8% in Q1 2025) rely on surveys like the American Community Survey, which may not capture nuanced job negotiation statuses. X posts citing extreme figures (e.g., 12% unemployment) lack primary source verification and may exaggerate the crisis.

○ Global comparisons are hampered by differing definitions of "recent graduate" and unemployment metrics (e.g., NSF's SED vs. standard government criteria).

- **Structural Issues**:

○ The narrative of a "graduate unemployment crisis" often overlooks that higher education still reduces unemployment compared to lower attainment levels. For example, U.S. graduates (4%) have lower unemployment than high school completers (7–8%).However, the rising supply of graduates (e.g., EU's 31.6% tertiary attainment) outpaces demand in many sectors, creating a structural oversupply.

- **Scepticism of Policy Effectiveness**:

○ Policies like China's postgraduate expansion may delay unemployment rather than solve it, as job creation lags.

o Employer emphasis on experience over credentials suggests educational reforms alone are insufficient without labor market interventions.

5. Recommendations for Further Study

● **Longitudinal Tracking**: Analyze long-term outcomes (e.g., 20 years post- graduation) to assess whether current unemployment trends reflect temporary or permanent shifts.

● **Field-Specific Analysis**: Expand data on high-demand majors (e.g., computer science, medicine) versus low-demand ones (e.g., fine arts) to guide educational choices.

● **Global Comparative Studies**: Standardize definitions and metrics to better compare unemployment across countries.

● **Intersectional Disparities**: Investigate how race, gender, and socioeconomic status interact with unemployment, building on U.S. and Chinese data.

Conclusion

The unemployment crisis among graduates and postgraduates is marked by elevated unemployment rates (e.g., 5.8% in the U.S., 25% in Malaysia, 42% in India), high underemployment (41–52% in the U.S.), and persistent wage scarring from poor economic conditions at graduation. Contributing factors include economic downturns, skill mismatches, employer preferences for experience, and demographic disparities. While higher education still offers a buffer against unemployment, the growing supply of graduates and structural labour market shifts demand targeted reforms. Policymakers should focus on aligning curricula with market needs, addressing systemic inequities, and fostering job creation in high-skill sectors. Further research is needed to refine these insights and evaluate long-term trends.

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