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Promoting Gender Equality Through Entrepreneurship

ZAYNA AARBI

For many, recent stories have illustrated the distressing reality of women's rights. These issues are exasperated by economic inequality, specifically in businesses, only one-third owned by women. To prevent injustice, policymakers use economics to equalize power. By increasing women-owning businesses, policymakers may reduce inequality and improve welfare for women. However, evidence shows income gaps between businesses, correlated to ownership gender. To increase gender equality, policymakers should not only attempt to increase women-owned businesses but improve income inequality by increasing credit access for women and improving bargaining power regarding domestic responsibilities. Increasing women-owned businesses will improve equality and welfare.

In a study by Anderson and Eswaran, female autonomy in Bangladesh was investigated. Autonomy was indicated by household decision-making power, mobility, control over economic assets, and self-perception of agency, factors that measure women's quality of life. The study found women with independent income had the most autonomy. They conclude, "women's outside options, as reflected by their unearned assets, are positively related to their autonomy. Working for an independent income is a significant determinant." Thus, women entrepreneurs generally have more autonomy. Encouraging more women to own businesses will increase autonomy, thereby improving welfare. This finding is consistent with a Pareto bargaining model,

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The Impact of Remote Working on Wage after 2020: Data Science and Cybersecurity Industry Analysis

XINYE LUO

Abstract

This paper examines the impact of remote work on wages, with focus on data science and cybersecurity industries. The shift to remote work has altered employment patterns, yet its effects on wage structures remain unclear. Using regression analysis, this study explores how work mode, experience level, company size, and job title influence wages. The results suggest that remote work is not a strong predictor of salary, with experience level being the most significant factor. While data science dataset reflect significance of job title, cybersecurity dataset indicates company size have impact on salaries. These findings contribute to discussion on wage-setting dynamics in the post-pandemic labor market.

Introduction

Although 6.5 percent of workers worked from home in 2019, the COVID-19 pandemic accelerated the transition to remote work, reshaping employment structures and wage-setting behaviors. Remote work introduces cost-saving benefits such as reduction in transportation costs, elimination of office space, and flexibility in time. However, whether these benefits translate into higher or lower wages remains uncertain.

Some argue that remote work reduces wages because employers adjust compensation based on cost-of-living, particularly when hiring from lower-cost regions. Others suggest that remote work increases wages for highly skilled roles, particularly in industries like data science and cybersecurity, where digital work environments allow for collaboration.

My study investigates the relationship between remote working and wages, focusing on data science and cybersecurity professionals. By analyzing wage data from these industries, I will examine whether remote employees earn more or less compared to their in-office counterparts and which factors influence salary.

Data

To examine the relationship between remote work and wage outcomes, I select two datasets from Kaggle, with focus on roles within the data science and cybersecurity sectors. These fields are chosen due to their representation in remote-capable workforces and their relevance in the post-pandemic labor market. The datasets include information on salaries, job titles, employment types, experience levels, and company characteristics.

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The Impact of Remote Working on Wage after 2020: Data Science and Cybersecurity Industry Analysis

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The data science dataset contains salary records for professionals in data science fields. It consists ofapproximately 6,600 data from companies around the world, with focus on positions like data analysts, machine learning engineers, and data scientists. Each record includes information on job title, experience level, employment, work model, company size, and company location. The salary values are standardized to U.S. dollars.

The second dataset comprises roughly 1,350 records specific to cybersecurity professionals. It includes details on employment type, remote ratio, salary, and company characteristics. The job roles span from entry-level security analysts to senior engineers and architects.

Methodology

My study employs the Ordinary Least Squares regression model to investigate how remote work and factors such as experience level, job title, and company size influence wage levels. The analysis is conducted separately for data science and cybersecurity professionals.

Results

The results from the regression analysis on the data science salary dataset reveal that work mode does not have a statistically significant effect on wages. The p-value on work mode is not significant, indicating that remote work arrangements do not influence compensation levels in data science field. Experience level proves to be the strongest predictor of salary. The results reflect a clear and significant positive relationship between experience level and wage. Company size did not show statistical significance in this dataset. Job title is statistically significant at the 95% level.

In contrast, the regression results for the cybersecurity salary dataset present a different story. All variables included in the OLS regression are statistically significant at the 5% level, suggesting a stronger relationship between each variable and wage levels. Notably, work mode has a measurable effect on salary, highlighting that the compensation structure in cybersecurity is more sensitive to employment type than in data science.

Conclusion

This study provides evidence that remote work does not directly influence wages; instead, experience level plays a more decisive role in determining salary. Within the data science and cybersecurity industry, salary differences across work modes are minimal, suggesting that compensation is largely determined by individual qualifications and job roles rather than work arrangements.

ANNUAL SPRING NETWORKING EVENT

On May 6th, UW Economics students attended the EUB's annual networking event. There, they met various UW alumni and economics industry professionals, learned about possible careers after graduating, and socialized with other students.

BLACKROCK NETWORKING EVENT

On February 25th, UW Economics students gathered with three industry professionals to learn about their path from UW to BlackRock.

WANT TO JOIN UW ECON'S EUB?

We are the EUB, a group of UW undergrad Econ majors that advocate on behalf of the Econ majors and communicate with students, faculty, and staff. Although applications to join the club occur for the 2025-2026 year have passed, they shall reopen in Spring of 2026.

COVID-19 Influence on Exchange Rate Volatility: A Reinforcement of U.S. Economic Dominance

CALEB ROGART

Introduction

The COVID-19 pandemic created worldwide economic shocks. Lockdowns led to financial instability and foreign exchange market volatility. The pandemic caused foreign exchange to become more volatile due to economic uncertainty but also reinforced America's global economic dominance. Countries faced financial turmoil so they turned to the U.S. dollar as a safe-haven currency which strengthened the American economy. The report examines the impact of COVID-19 on exchange rate volatility and how the pandemic created reliance on the U.S. dollar, which cemented America's economic dominance.

Effect of COVID-19 on Exchange Rate Volatility

The pandemic caused an increase in financial market uncertainty as shown by the VIX index spiking to 83 on March 16, 2020, from its pre-pandemic level of 12-15 thus driving higher exchange rate volatility. Jamal and Bhat confirmed that an increase in COVID-19 fatalities was linked with an increase in exchange rate volatility. They observed by studying currency pairs that countries which experienced high mortality rates from COVID-19 had greater exchange rate volatility. This increased capital flight to safe-haven assets and the U.S. dollar appreciating as the reserve currency of the world.

Narayan used a Vector Autoregression model to study the impact of spillover shocks of G7 currencies on global exchange rate markets. He found that pandemic-related shocks account for about 37.7% of forecast errors in the exchange rate market compared to 26.1% from the pre-pandemic period. This indicates currency markets were more sensitive to external shocks which caused increased volatility globally. This led to capital flight to safe-haven assets and the U.S. dollar benefiting as the world's reserve currency.

The COVID-19 pandemic led to a rise in exchange rate volatility which had investors seeking stability, especially the U.S. dollar, as shown by factors:

1. Economic Uncertainty and Capital Flight to Safe-Haven Currencies High levels of uncertainty led investors to look for stability which triggered a rise in demand for the U.S. dollar, as shown by the upward slope of the U.S. nominal effective exchange rate after 2020. The main reserve currency has been the dollar, shown by its relative outperformance during the pandemic, but the Japanese Yen is an alternative safe-haven currency and had more stability compared to other currencies.

2. Monetary Policy and the Federal Reserve's Global Influence The monetary policies of the U.S. Federal Reserve such as near-zero interest rates and large-scale asset purchases helped to stabilize domestic markets during the COVID-19 pandemic evident by greater capital inflows to the U.S. from 2020–2023. Yilmazkuday discusses that spillover impacts of US monetary policy during the pandemic varied among countries as only countries controlling COVID-19 outbreaks could enjoy policy spillovers.

3. Global Reliance on U.S. Financial Institutions and Trade Networks Shocks to global finance and trade created by the pandemic led to increased reliance on U.S. financial institutions. Net capital inflows into advanced economies, particularly the U.S., were over $1 trillion in 2020, significantly higher than before the pandemic according to the IMF's World Economic Outlook. Additionally, increased global demand for online services during lockdowns benefited U.S.-based tech firms which further established America's economic presence.

Long-Term Economic Implications

The American ability to attract capital during the COVID-19 pandemic seemed to support America's economic dominance. However, the impact is likely more nuanced. Some economists believe trade-related capital inflows and debt-financed trade deficits can destabilize rather than support long-term economic stability. Ilzetzki, Reinhart, and Rogoff note that the G3 exchange rate stability throughout the pandemic contributed to fostering confidence in major economies, notably the U.S. dollar.

Conclusion

The COVID-19 pandemic instigated economic disruption and increased exchange rate volatility. The uncertainty was a vindication of America's economic dominance. Nations, particularly the Eurozone economies and Japan, had weak rebounds due to delayed policy responses. Swift financial actions by the United States Federal Reserve, together with the increasing global reliance on U.S. financial institutions and the dollar's safe-haven status, allowed the U.S. economy to stabilize and recover more rapidly.

IMPORTANT EVENTS

Paul Heyne Seminar
Thursday, May 29th
Savery 139
5:30 PM

Graduation
Tuesday, June 10th
HUB Ballroom
4:30 PM

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where when the threat point of one person increases, the Pareto efficient utility also increases. For women, higher threat points correlate with outside options to support independent lifestyle. Thus, independent income will increase women's threat point and result in more utility within marriage. By increasing women who own businesses, policymakers increase autonomy women experience, improving quality of life.

However, increasing women who own businesses does not cover the story because gender inequality persists even among business owners. The World Bank reports that female-owned businesses make 34% less in monthly profits than male-owned. Kiefer, Heilman, and Pett found that female-owned firms earned 40% less revenue than male-owned firms and were smaller, with less employees, and had shorter survival rate. This difference is apparent when comparing businesses identical in productivity. Kazianga and Wahhaj discovered that male-controlled plots were more profitable than female-controlled plots despite controlling for variables affecting productivity. They concluded this difference resulted from cultural norms. Furthermore, gender inequality persists when investments are made. A study in Ghana discovered that cash grants improved monthly profits for men and had little effect for women. Similar results were found in Sri Lanka. Overall, women businessowners benefit less than their male counterparts. Therefore, even if women-owned business increased through policy, female businessowners would earn less profit despite having same qualities, and inequality would persist.

This disparity in profit can be attributed to constraints on credit access. Greater capital allows for increased productivity, investments, and riskier ventures. Therefore, lack of credit access may explain reduced profits of women businesses. Karanja, Nyakarimi, and Mwangi identified three barriers to receiving loans: collateral requirements, high interest rates, and lack of financial literacy. Many sources found that women own less assets that would suffice as collateral. Lack of collateral imposes risk on lenders, causing higher interest rates. Women are less likely to have financial connections. This relates to financial literacy, in which women score lower than men. Lack of financial literacy impairs ability to attain loans, save, and invest. To remedy inequality, policymakers can encourage lowering collateral requirements through subsidizing riskier loans, establishing financial literacy courses, and networking women. Reforms that involved lowering collateral requirements led to increased credit access for women by nearly 30%.

The other barrier for women entrepreneurs is domestic responsibilities. A study found that mothers whose partners went on paternity leave were more likely to start business. Delecourt and Fitzpatrick found that women with children earned 48% lower profits, indicating childcare responsibilities prevented additional earnings. Jasmine Jaim found that women with familial obligations had limited time for business operations and were forced to downsize their business. The societal expectation for women to tend house impacts their ability to run business. This gap is attributable to bargaining power. In the Pareto model, utility increases if Pareto weight increases, associated with bargaining skills. Deininger and Liu found women in India who participated in self-help groups experienced increased bargaining power and were more likely to start business. Increased bargaining power allows women more say in how time is split between domestic duties and entrepreneurial responsibilities. Policymakers must improve women's bargaining power through initiatives like self-help groups.

Gender inequality persists across time and space. To improve equality, policymakers can implement policies that encourage more women to own businesses. However, policymakers must also address credit access and bargaining power. By improving women's abilities to start businesses and supporting existing ones, gender equality is attainable, economically sound, and worthwhile.

ANNOUNCEMENTS

Economics Tutoring

The EUB offers free tutoring every weekday at various times every quarter! Check the schedule on the EUB website to see tutoring times. If you need help with an upper-level class, however, make sure you check the website to see which tutor can help.

Contribute to the Economizer

The Economizer will be seeking guest writers for our Autumn quarter issue. Interested writers should check their emails from the department in the early Autumn quarter for submission instructions.

The Economizer is a quarterly newsletter published by the Economics Undergraduate Board. The articles herein do not necessarily reflect the views of the department or its faculty.

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