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Transformative Impact of Green Jobs on Employment Opportunities for Women and Minorities in America

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Abstract: The exigence of conducting this research is the fast-growing threat of climate change in America. Climate change brings changes in American society socially and economically. This paper aims to explore how the development of green jobs impacts employment of women and ethnic minorities in the United States. The paper will utilize an approach that involves analyzing historical data, statistics, and trends to assess how green jobs could affect women and minority groups in the United States. Green jobs can be easily integrated into existing industries and provide the opportunity to improve female and ethnic minority employment in the United States. Women and ethnic minority groups are currently underrepresented in green jobs and other high-income occupations, causing significant wage gaps between them and white men. Through the pursuit in higher education and further advocating of sustainability, women and ethnic minority have the opportunity in the future to thrive in green jobs.

Keywords: Green Job, Employment, Women

1. Introduction

Climate change is a major concern in the 21st century. It has done irreversible damage across the globe. Climate change has brought more frequent and intense drought, heat waves, and storms. Aside from exacerbating natural disasters, the rising sea levels, melting glaciers, and warming oceans caused by climate change directly harm animals by destroying their natural habitats. Climate change also wreaks havoc on people's livelihoods and communities. Climate change has greatly affected America. There were 8648 wildfires in California in 2020. They burned 4,304,379 acres of land, killed 33 people, and destroyed 11,116 structures [1]. In late August 2021, Hurricane Ida hit Port Fourchon, Louisiana with a wind speed of 150 miles per hour. It caused $75 billion worth of damage and killed 107 people [1]. Natural disasters such as those will only increase in frequency and intensity due to climate change. Climate change will cause shifts in the economy, culture, and health of people in America.

Mitigation strategies are essential in slowing the progress of climate change. The United Nations has established 17 Sustainable Development Goals, aiming to promote sustainability from social, economic, and environmental perspectives worldwide. They are in the 2030 Agenda for Sustainable Development, which aims to promote prosperity while protecting the planet and the environment. The 17 Sustainable Development Goals are No Poverty, Zero Hunger, Good Health and Well-being, Quality Education, Gender Equality, Clean Water and Sanitation, Affordable and Clean Energy,

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Decent Work and Economic Growth, Industry, Innovation, and Infrastructure, Reduced Inequality, Sustainable Cities and Communities, Responsible Consumption and Production, Climate Action, Life Below Water, Life on Land, Peace, Justice, and Strong Institutions, and Partnerships for the Goals [2]. They provide a framework for global action to combat climate change and achieve a more sustainable world.

Mitigation efforts are not solely in the realm of global initiatives. People can mitigate on an individual level by reducing greenhouse gas emissions, saving energy, consuming more sustainably, etc. Individual countries can mitigate this by developing a sustainable economy and infrastructure. Green and sustainable job development is a way to mitigate climate change while providing further employment opportunities. This paper will explore the development of green jobs and how it may impact the employment opportunities and justices of women and minority groups in America. The method the paper will use is examining historical data, statistics, and trends to analyze the impact of green jobs on women and minority groups in America.

More importantly, this study derives motivation from the increasing importance of considering the impact of sustainable green jobs development on the employment of women and ethnic minorities in America. This paper is structured as follows. Section 1 will explore the expansion of development of green jobs in the United States and analyze the challenges of implementing nationwide green jobs development. Section 2 will discuss the historic and current trends of female employment in the US, as well as analyzing how women employment could be impacted by green jobs development. Section 3 will discuss the historic and current trends of ethnic minority employment in the US, as well as analyzing how ethnic minorities employment could be impacted by green jobs development.

2. Development of Green Jobs in the United States

Many green jobs emerged in the past decade in reaction to the sustainable movement fueled by the climate crisis. Some of the most popular green jobs include renewable energy specialists, energy efficiency consultants, climate scientists, environmental engineers, sustainable agriculture specialists, foresters, conservationists, green building designers, and climate policy analysts. Green jobs have the potential to mitigate the climate crisis by introducing more sustainable practices while offering new employment opportunities. This section will focus on the development of the emerging green jobs and the benefits of their developments on the environment.

2.1. Challenges and Inconsistencies of Implementing Green Jobs in America

The energy sector contributes to the most greenhouse gas pollution and emission in the US. In 2022, around 33% of the total U.S. energy-related carbon dioxide (CO2) emissions were attributed to the electric power industry; the electric power sector accounted for roughly 31% of the CO2 emission [3]. Fortunately, the development of renewable energy could help reduce the environmental pollution created by the energy sector. In addition to reducing pollution, development of renewable energy also drives economic growth, benefiting human development. There are some challenges, however, for the full implementation of renewable energy.

The economic challenges in adopting renewable energy nationwide include high initial costs, prolonged payback periods, limited credit access, and insufficient government financial support. These complications, from upfront investments to slow returns and financial barriers, must be solved to promote widespread adoption of renewable energy. Technical challenges also exist in the full implementation of renewable energy. The limited capacity to design, install, operate, manage, and maintain renewable-based modern energy services restricts the further implementation of renewable energy. The expansion of renewable energy is hindered not just by technological and financial constraints, but also by informational and human resource challenges. The deficit in comprehensive

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knowledge concerning renewable energy and energy efficiency obstructs the creation of informed and impactful policies. Moreover, this gap underscores the need for enhanced data dissemination and education in the field, as well as a strategic focus on developing skilled professionals who can navigate and promote the transition to sustainable energy practices.

Aside from the economic, technical, informational and human resource challenges, policy challenges hinder the full implementation of nationwide renewable energy. The concerns for policy challenges for fully implementing renewable energy in the United States include lack of incentives for private sector involvement and inconsistent policies. The main purpose of any business is to make a profit. The main source of energy utilized by companies in the US is natural gas (Figure 1).

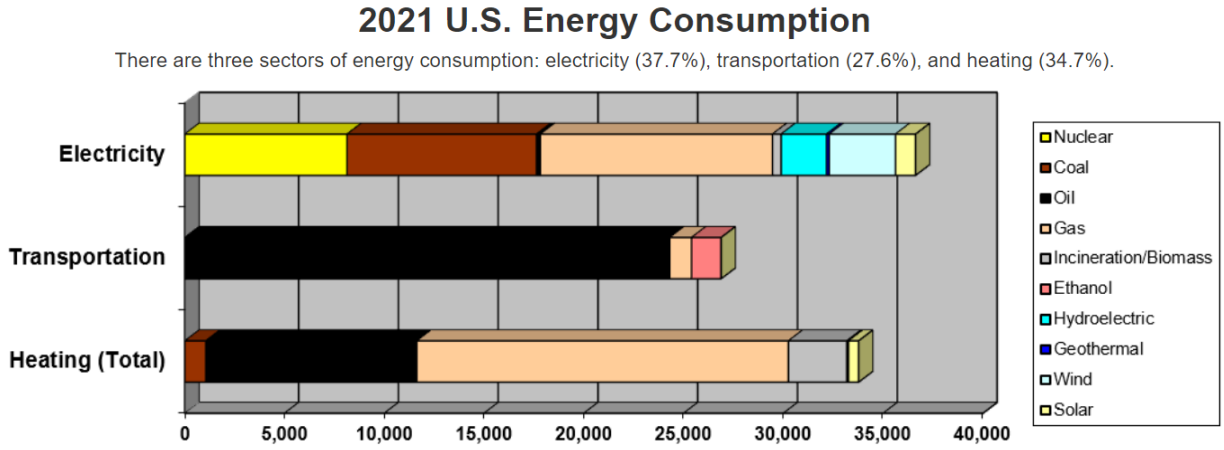

Figure 1: 2021 U.S. Energy Consumption [1]

Burning natural gas results in the formation of nitrogen oxides (NOx), which then serve as precursors to smog. Additionally, trace amounts of sulfur, mercury, and particulates are produced during the combustion process of natural gas [4]. The combustion of natural gas poses dangers to local communities, and constitutes a noteworthy contributor to global warming, both through direct burning as a fuel and through potential leaks or direct releases into the atmosphere. Smog and other chemicals formed from natural gas combustion are hazardous air pollutants which can lower the air quality of the region, causing detrimental health problems for humans and animals. However, companies continue to use natural gas as the main source of energy because natural gas is relatively inexpensive and more environmentally friendly compared to other energy sources used such as oil and coal.

Although using natural gas is less damaging to the environment than other traditional energy sources, it still has a negative impact on the environment. In order to reduce the damage brought by burning natural gas, further development of renewable energy and energy efficiency provide crucial and more affordable solutions against pollution by diversifying the electricity source away from gas. Carbon pricing methods are currently used in the US to encourage companies to reduce their carbon footprint [5]. Although carbon pricing methods such as carbon taxation and carbon cap and trade programs help reduce pollution in the US, it is not a long-term solution to climate change. They are not implemented consistently in the US. Despite its inconsistencies, carbon policies encourage the formation of green jobs in the renewable energy sector by penalizing companies' carbon emission, thus encouraging them to seek alternative energy sources to reduce emissions.

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2.2. Career opportunities in Renewable Energy Fields

There are many career opportunities created by renewable energy. Some available careers in the renewable energy field are solar and wind.

The solar energy industry has expanded rapidly ever since 2008. The growth has led to the generation of numerous new jobs within the industry, with over 208,000 people currently employed, with expectations of further substantial future expansion [6]. There are multiple options for solar energy jobs, ranging from manufacturing, system design, project development, to installation and operations. The different difficulty levels of the solar energy jobs also make the career more approachable and easily enterable. Some of the most popular solar energy related jobs are solar panel installer, solar energy technician, solar system sales representative, solar project manager, solar engineer, solar maintenance technician, solar electrician, solar designer, solar researcher, and solar consultant [7]. It is not difficult to integrate into the solar energy industry as it incorporates people from various professional backgrounds, ranging from scientists to marketers.

Wind energy is another fast-growing green industry. In 2021, wind power constituted 32% of the growth in the US. energy capacity, supporting 120,000 Americans and generating sufficient energy to supply 40 million homes in the country [8]. The wind market reports for 2021 reveal that the continued growth of domestic wind power is emerging as a vital contributor to clean and cost-effective energy generation. This aligns with President Biden's objectives of achieving 100% clean electricity by 2035 and establishing a net-zero economy by 2050 [8]. The wind energy industry offers jobs to people with varying degrees of education, from bachelor's degrees to PHD. Common types of wind energy careers include project development, component manufacturing, construction, operations, education training, and research. Some green jobs centered wind farm developers, project managers specializing in wind energy, wind resource analysts, electrical engineers focused on wind energy, environmental specialists in the field, wind energy analysts, operation and maintenance (O&M) technicians, construction managers in wind energy, grid integration engineers, health and safety officers within the wind energy sector, quality control inspectors, and community relations managers for wind energy projects.

There are more green jobs development outside of the renewable energy sector. Some examples of them are environmental engineers, recycling plant workers, sustainable architects, organic farmers, conservation scientists, water quality analysts, green building inspectors, environmental educators, sustainable transportation planners, wildlife biologists, climate analysts, sustainable forestry managers, waste management specialists, green chemistry researchers, and eco-friendly product designers. They are diverse and all come from different backgrounds, which makes workers integrate easily into the green workforce.

3. Impacts of Green Jobs Development on Women in America

Equal wage and employment opportunities for women gained significant momentum in the 1960s. The Equal Pay Act of 1963 (EPA) passed in June 1963 spearheaded the civil rights legislation centered around employment discrimination [9]. It protected both men and women who perform equal work in the same establishment from wage discrimination due to different sex. Through the various civil rights developments and women's rights movement since then, women's opportunity at fair employment and equal wages have increased substantially [9]. However, wage gaps still exist for women in the US. This section will explore the history of employment for women in the US, current employment for women in the US, and how the development of green jobs could impact the employment of women in the US.

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3.1. History of Female Employment in America

American women first entered the workforce in the 1800s due to the Industrial Revolution. One of the earlier examples of women entering the workforce is Lowell, Massachusetts. Francis Cabot Lowell, a wealthy Boston merchant, wanted to establish an entire community involved in textile production [10]. He chose to hire young women to work in the mills because young women could not form a permanent working class since they would leave in a few years to become wives and mothers, and women were less expensive and easier to control. Although they could earn money through their labor, the women were strictly controlled by their employers. Aside from doing their daily tasks in the mills, those women also had to comply with social expectations of being gentle women who were eligible for marriages [10].

Lowell's community ended in the mid 1800s as the price of textiles decreased. In order to keep making profits, Lowell decided to cut labor costs by mandating workers to manage more machines. The working conditions in the mills worsened: people were going deaf due to the loud noises of the machines and the rate of lung diseases rose because of the lack of ventilation in the mills. In response to the inhumane working conditions, the Lowell women formed the Lowell Female Labor Reform Association, which fought against the long working days and unhealthy working environment [10]. Although women were treated unfairly in the mills, Lowell's community pioneered employment of women in America.

Women's rights in the US took a big step forward in 1919. The 19th amendment was passed that year and it gave legal suffrage rights to American women. The advancement in women's political rights also provided women more opportunities in the workforce. Before then, most women remained home and only poor or unmarried young women worked outside the home. However, from the 1930s to the mid-1970s, the economic involvement of women saw a continual increase; more married women were joining the American workforce. Even with increasing participation of women in the American workforce, they were still expected to have temporary careers and secondary earners that supported their husbands. In the 1970s, Figure 2 shows that around half of the single women and 40% of the married women in the US were involved in the labor force [10].

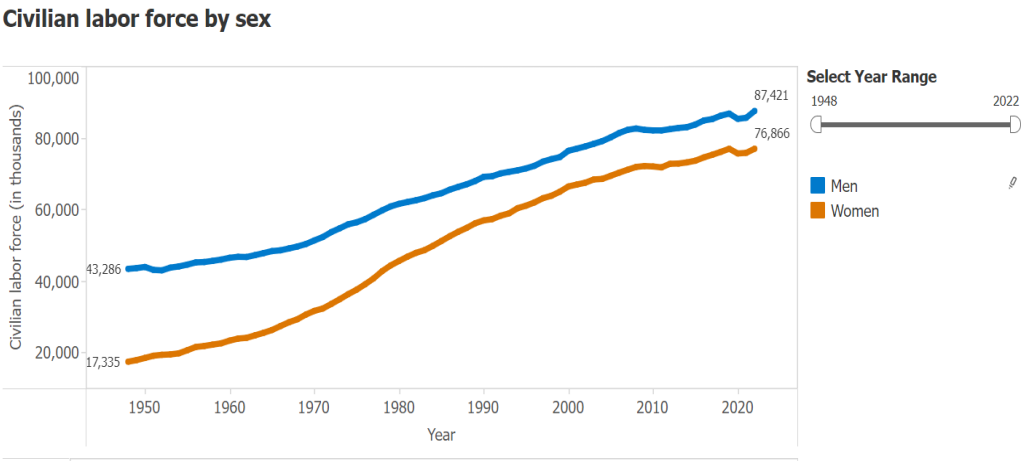

Figure 2: Civilian labor force by sex [10]

By the late 1900s, more women sought after higher education which opened more employment opportunities for them. Women began going into previous male dominated fields such as doctors, lawyers, managers, and professors. The wage gap between male and female in the job was a major concern. In Figure 3 women on average only made around 70% of what men made in the same professions in 1990 [10].

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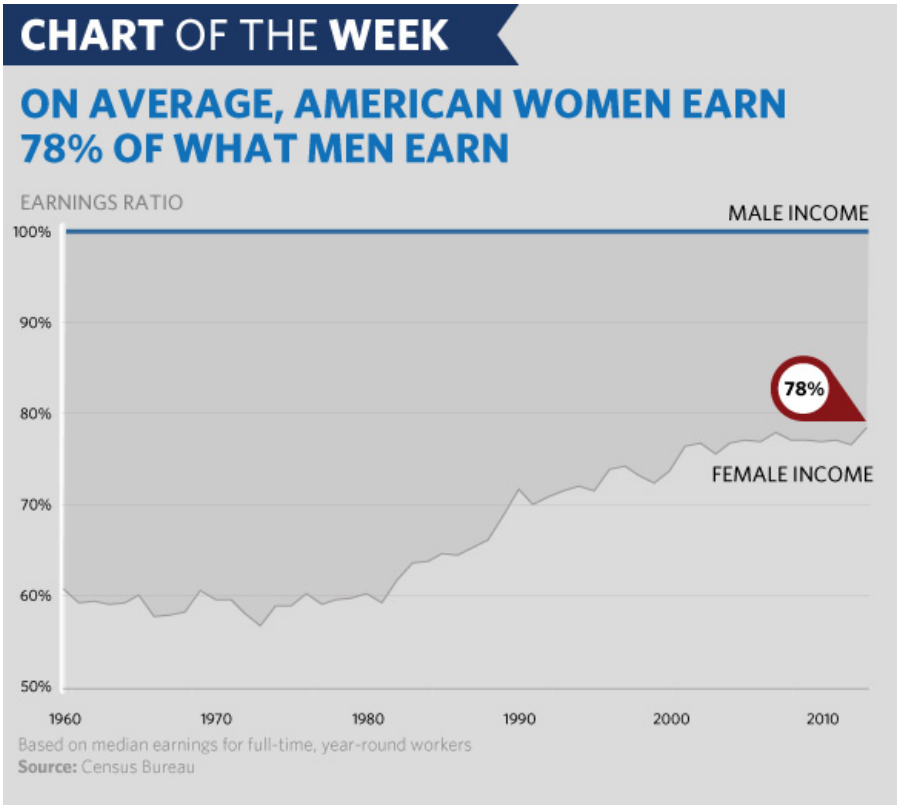

Figure 3: ON AVERAGE, AMERICAN WOMEN EARN 78% OF WHAT MEN EARN [10]

3.2. Current Trends in Female Employment in America

Most women in the US today work full time. Around 75% of prime age women are employed and 84% of the employed women work full time [11]. Overall employment rate in the US was negatively impacted during the COVID pandemic but steadily rose up to pre pandemic levels in late 2022 due to the American Rescue Plan and other fiscal policies in reaction to the pandemic. After the pandemic, there was improvement in the employment in women with minor children due to the reopening of schools and childcare services. The proportion of working mothers has risen significantly. Regardless of their youngest child's age, employment to population ratios were higher at the end of 2022 compared to the pre-pandemic levels in 2019. Overall, employment for women in the modern labor market is far more positive than before.

Despite the improvement of employment for women in the US, there still exists a wage gap between women and men in the same industries. The wage gap worsens with age. Female workers from the age 16 to 24 have average weekly earnings 8% lower than the average weekly earnings of their male counterparts [11]. Female prime age workers, 25 to 54, earn 16% less than male workers. For women who age from 55 to 64, they earn 22% less than men at the same age [11]. Even worse, women who are older than 65 years old earn 27% less than men [11] (Figure 4).

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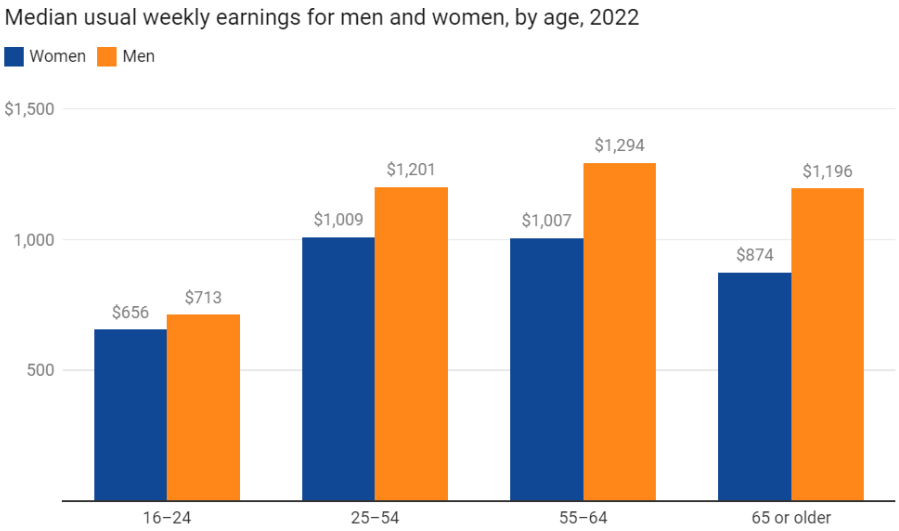

Figure 4: Median usual weekly earnings for men and women, by age, 2022 [11]

Women with lower education suffer even more and experience greater occupational segregation, where a particular demographic group is disproportionately represented in a certain job category, could be due to systematic historical exclusion. On the other hand, employment of women with four-year college degrees or more increased by 2.7%, which is a gain of 818,000 jobs [12].

3.3. Future of Female Employment in the Green Industries

Green jobs provide new employment opportunities for women. Women are largely underrepresented in the fast-growing green industry. In the renewable energy workforce, women constitute just 31%, and they account for only 23% of managerial positions in water utilities [13]. These disparities start before hiring, with a ratio of 62 women for every 100 men considered as green talent [13]. Although the green jobs revolution provides more employment opportunities to Americans overall, researchers from Urban Institute have stated that the development of those jobs are concentrated in male dominated industries. For example, in the largest solar technology company in the nation, NextEra Energy, the female workforce comprises only 24% of the 15,000 employees [14] (Figure 5).

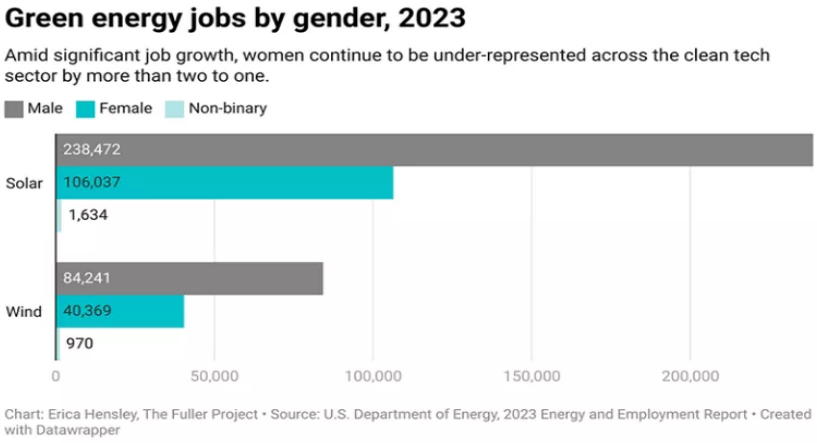

Figure 5: Green energy jobs by gender, 2023 [14]

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The prospect of increasing employment opportunities for women in the green job sector remains promising. Individuals possessing advanced educational qualifications are particularly well-positioned to be assimilated into the green job market. The percentage of women with higher education is increasing steadily in the US in recent years. With higher education and new advancement in gender equality, it can be expected for women's future participation in green jobs to rise in America (Figure 6).

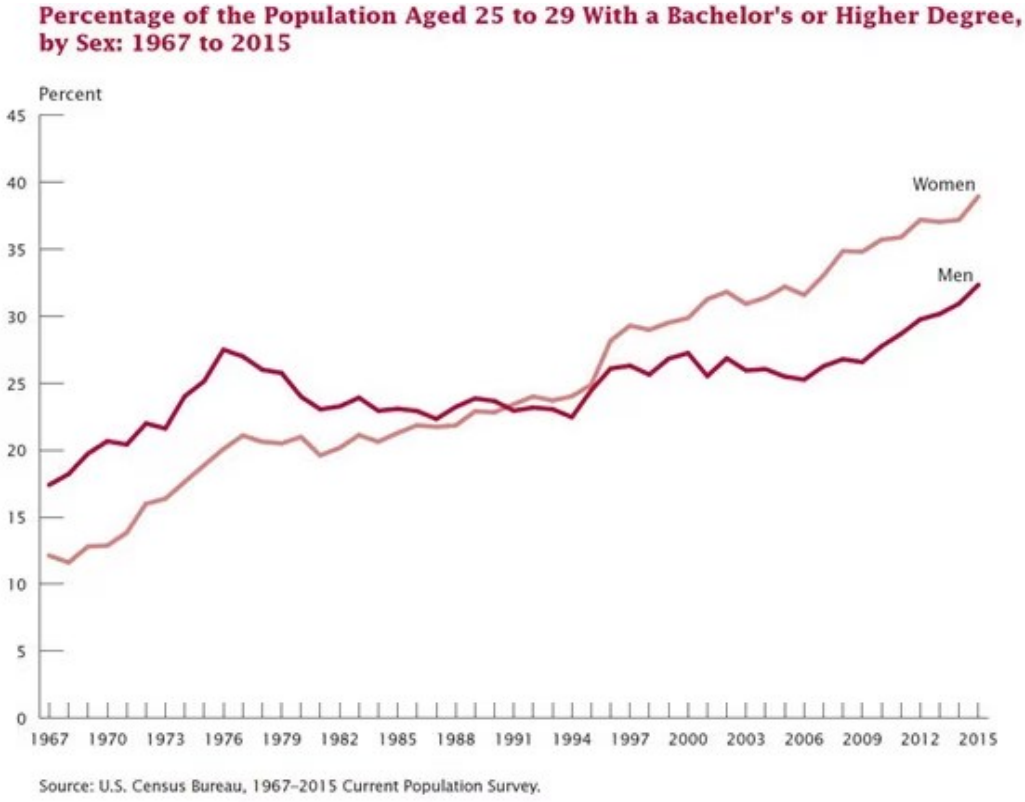

Figure 6: Percentage of the Population Aged 25 to 29 With a Bachelor's or Higher Degree [14]

4. Impacts of Green Jobs Development on Ethnic Minorities in America

The United States is an amalgam of races ever since the beginning of its establishment. The mixture of ethnicities and cultures formed the unique culture of America, but also gave rise to discrimination and prejudices. The civil rights movement in the mid-1900s was a response to the long-lasting discrimination against African Americans. It advocated for the end of racial segregation and equal rights for African American. The protestors persevered in countless plights and their success in the civil right movement brought about lasting changes that shaped the US into the country it is today. The civil rights movement also brought changes in other minority groups. These changes affected society socially and economically. This section will explore the history of employment for minority groups in the US, current employment for minority groups in the US, and how the development of green jobs could impact the employment of minority groups in the US.

4.1. History of Ethnic Minority Employment in America

The earliest form of minority labor in the US began even before the establishment of the country. Importation of enslaved people came to the British colonies in the early 1600s. The enslaved people were treated as animals and provided free labor to the colonists. They were exploited and countless enslaved families were separated. Enslaved African Americans worked the most labor-intensive tasks

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such as picking cotton and working in sugar plantations. After the American Revolution, abolitionist sentiments grew, and more people began to advocate for the abolition of slavery in the US. This, along with the political imbalance of slave and free states led to the Civil, which abolished slavery in the US [15].

Even though African Americans were technically free, they had little choice in their employment. Following the end of slavery, people who were newly emancipated sought employment opportunities. Most freedmen and women entered into contractual agreements with plantation owners, rejoining the workforce as employees of their former masters. They were often forced to become sharecroppers, where they could receive a small portion of their labor on a plantation instead of money. Sharecropping tied the freed people down to the land, and it was just another form of slavery in disguise. There were few other employment options for African Americans. Men predominantly engaged in agricultural work, while women took on roles within households, serving as maids and cooks [16]. Later, the railroad became one of the most important industries that African Americans worked in [16].

Another minority group that worked primarily on railroads in the US was the Chinese. Chinese people began to immigrate to the US in the mid 1800s in search of gold during the gold rush. After they found out that discovering gold was unlikely, they started to join agricultural and factory work. Chinese immigrants played a significant role in constructing railroads in the American West, and as these laborers' achieved success in the United States, many transitioned to become successful entrepreneurs.

Due to their distinct outer appearance and culture, Chinese immigrants did not assimilate fully into American culture and were perpetually viewed as foreigners. As the number of Chinese immigrants grew, Sinophobia, hatred against the Chinese, also intensified. Some people thought that the Chinese immigrants were competing in the labor market unfairly because they were willing to work at lower prices. This led to the Chinese Exclusion Act of 1882 [17]. Not only did this act ban Chinese immigration into America for ten years, but it also prohibited Chinese people who lived in the US from becoming Americans. This trapped Chinese and other Asian people in low-income employment such as farmhands, gardeners, domestics, and laundry workers [17].

Other minority ethnic groups have also been discriminated against in American history. The native Americans were not considered Americans until 1924 [18]. They were largely excluded from American society and had little employment opportunities due to the historical prejudices of them being savages. Another minority group that faced both social and employment discrimination was Hispanic Americans. The 1930s Great Depression disproportionately affected Mexican immigrants, who, in addition to the general job crisis and food shortages impacting all U.S. workers, faced the added peril of deportation [19].

4.2. Current Trends in Ethnic Minority Employment in America

Today, minority groups continue to encounter unfair wages and employment in the United States. The disparity in wealth among ethnic groups in the United States is significant. In 2019, the median wealth of white families was approximately $184,000, whereas the median wealth for Black families stood at $23,000, and for Latinx families, at $38,000 [20]. This is partially due to the overrepresentation of African Americans and Latinos in low wage jobs. Low wage jobs typically require less education or formal training [21]. These jobs may not demand advanced degrees or specialized skills but may involve manual labor, customer service, or routine tasks. Despite contributing significantly to various industries and sectors, low wage workers receive little benefits. Some common wage jobs are retail sales associate, cashier, fast food worker, janitor/custodian, warehouse worker, security guard, home health aide, delivery driver, data entry clerk, landscaping or groundskeeping worker, housekeeping staff, and production line worker (Figure 7).

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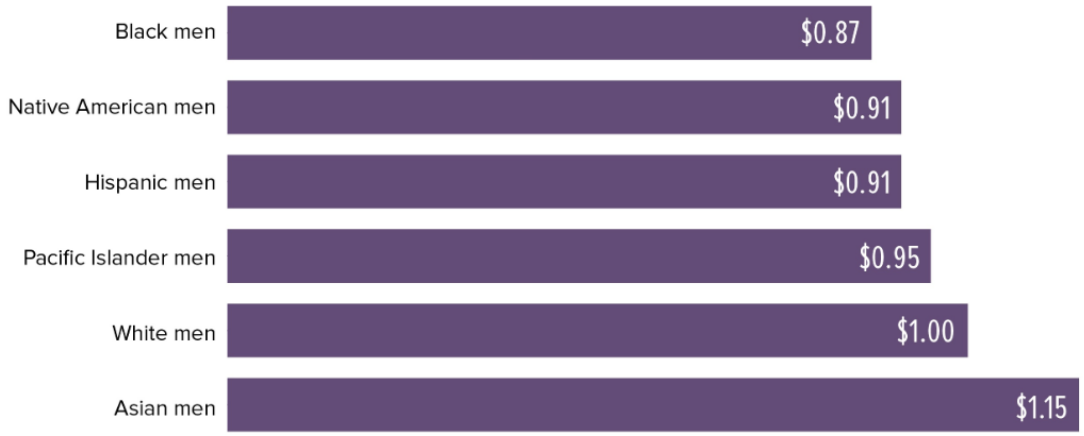

Figure 7: Race of worker [21]

Most minority groups are underrepresented in high income jobs [21]. There is significant underrepresentation of Black and Hispanic workers in high income professional fields. Despite efforts to promote diversity and inclusion, these groups often face barriers to entry and advancement in occupations related to management, business and financial operations, computer, mathematical science, architecture, engineering, social science, community service, law, education, art, and health care [20]. Factors contributing to this underrepresentation include systemic biases, limited access to quality education and resources, and persistent stereotypes (Figure 8).

	White	Black	Latinx	AAPI
Total workforce	61.4%	12.8%	17.4%	7.4%
All professionals	70.5%	10.0%	9.8%	8.9%
Management occupations	72.5%	8.9%	10.8%	7.1%
Business and financial operations occupations	69.7%	9.7%	9.1%	10.8%
Computer and mathematical science occupations	64.0%	10.5%	8.9%	16.1%
Architecture and engineering occupations	69.5%	5.9%	8.1%	15.9%
Life, physical, and social science occupations	67.6%	6.0%	8.7%	17.1%
Community and social service occupations	60.8%	20.5%	12.8%	4.6%
Legal occupations	79.8%	6.9%	6.2%	6.5%
Education, training, and library occupations	73.8%	10.0%	9.7%	5.8%
Arts, design, entertainment, sports, and media occupations	71.6%	8.2%	12.0%	7.4%
Health care practitioner and technical occupations	69.3%	10.9%	6.9%	12.2%

Figure 8: Black and Latinx workers are underrepresented in professional occupations [21]

Unlike other minority groups, Asians are overrepresented in high income jobs in America. While Asians account for 6.6% of the overall US workforce, their representation in computer and math occupations is notably higher at 23.3%, marking a substantial overrepresentation of 16.7% [22]. Asian Americans are well represented in relatively high-income fields such as architecture, engineering, and life and social sciences. They account for 36.4% of computer hardware engineers and 43.1% of medical scientists, with median weekly earnings of $2,277 and $1,544, respectively [22].

There is also a prominent overrepresentation of Asian Americans in low paying personal care and service occupations, such as hairdressers, childcare workers, and nail stylists. Specifically, Asian Americans account for 10.1% of employees in these fields, with a substantial 73.1% representation among manicurists and pedicurists [22]. In 2022, the median weekly earnings for manicurists and pedicurists were $677, reflecting a 36% difference below the national average of $1,059 [22].

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The difference in wage gap in Asian Americans comes down to the level of education they received. Asian Americans who have a bachelor's or higher degree thrive in the American economy and those who don't suffer from Asian stereotypes and discrimination in employment. Among men without a bachelor's degree, Asian Americans face the most significant disadvantages [23].

4.3. Future of Ethnic Minority Employment in the Green Industries

Green jobs continue to be occupied by a workforce that is predominantly white, regardless of the skill level or experience required for the roles. African Americans make up around 8% of clean energy employees, even though they are 13% of U.S. laborers overall. Nearly 17% of clean energy workers are Latino employees, slightly below their representation of 18% in the overall U.S. workforce [24]. However, they are often concentrated in entry-level construction positions within the clean energy sector. Approximately 8% of clean energy workers are Asians, slightly exceeding their representation in the national workforce [24]. In contrast, Pacific Islanders, Alaska Natives, and other Native Americans each account for about only 1% of the clean energy workforce in the US (Table 1).

Table 1: U.S. Labor Force Demographics, 2020 [24]

Demographic	Overall US L abor Force	Total Energy Workforce	Clean Energy Workforce	Fossil Fuel Workforce
White	76%	74%	73%	74%
Black/African- American	1 3%	1 0%	8%	9%
Asian	7%	7%	8%	6%
Native Hawaiian or other Pacific Islander	<1 %	1%	1%	<1%
American Indian or Alaska Native	<1 %	2%	1%	2%
Two or more races	2%	8%	8%	9%
People of Color	22%	28%	26%	26%
Hispanic/Latino	18%	16%	1 7%	13%
Women	48%	25%	27%	27%

Not all green jobs require higher education. Green jobs are inclusive and could provide more employment opportunities to minority groups in America. In order to incorporate minority groups into green jobs development, entry into them should be made easier. Governments and institutions can help the integration of minorities into green sectors by utilizing registered apprenticeship to encourage diversity, implementing diverse hiring practices, and hiring from local areas for future infrastructure projects.

5. Conclusion

There are economic, informational, technological, and policy-based challenges on implementing widespread green jobs. Despite all the challenges, green jobs have promising development potential as they are highly inclusive. Green jobs development encourages diversity by providing employment opportunities to people with different education levels and professional backgrounds. There are

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various aspects in green jobs such as technology, communication, operation, development, education, and etc. Although the green job sectors currently are predominantly white males, it is crucial for women and minority groups to be integrated into development of green jobs in order to ensure an equal sustainable future. Both women and minority groups are underrepresented in high income professional jobs. With the increasing advocacy for sustainable development, women have the opportunity to thrive in green jobs due to their pursuit in higher education. Minority groups will also have the opportunity to thrive in the green jobs market as more green jobs lower their barriers to entry. The future for green jobs is promising, fostering both gender and minority equality, while simultaneously safeguarding the environment.

References

[1] State of California. 2020 incident archive. Cal FIRE. https://www.fire.ca.gov/incidents/2020
[2] United Nations. The 17 goals | sustainable development. United Nations. https://sdgs.un.org/goals
[3] Murphy, F. H., & Shaw, S. H. (1995). The evolution of energy modeling at the Federal Energy Administration and the Energy Information Administration. Interfaces, 25(5), 173-193.
[4] Energy Justice Network. (2010). U.S. Energy Sources. Energy Justice Network.
[5] United Nations Climate Change . (2010). About Carbon Pricing . Unfccc.int. https://unfccc.int/about-us/regional-collaboration-centres/the-ciaca/about-carbon
[6] Energy Saver. (2023.). Explore solar energy careers. Energy.gov.
[7] Hamilton, J. (2011). Careers in solar power. US Bureau of Labor Statistics.
[8] US Department of Energy. (2022). Doe finds record production and job growth in U.S. wind power sector. Energy.gov. https://www.energy.gov/articles/doe-finds-record-production-and-job-growth-us-wind-power-sector
[9] U.S. Equal Employment Opportunity Commission. (2017). EEOC history: The law. US EEOC.
[10] Taylor, B. (2022). The Role of Women in the Industrial Revolution. Tsongas Industrial History Center. https://www.uml. edu/Tsongas/barilla-taylor/women-industrial-revolution. aspx.
[11] U.S. Bureau of Labor Statistics. (2021.). BLS series report. U.S. Bureau of Labor Statistics. https://data.bls.gov/cgi-bin/srgate
[12] Khattar, R., & Brady, M. (2023, June 2). Occupational Segregation in America. Center for American Progress.
[13] World Bank. (2023). Green jobs for women can combat the climate crisis and Boost Equality. World Bank Blogs. https://blogs.worldbank.org/climatechange/green-jobs-women-can-combat-climate-crisis-and-boost-equality
[14] Karpf, A. (2021). How women can save the planet. Hurst Publishers.
[15] McFadden, J. (2019). Equal Justice Initiative Legacy Museum:"From Enslavement to Mass Incarceration,".
[16] Blight, D. W. (2011). American oracle: the civil war in the civil rights era. Harvard University Press.
[17] National Archives and Records Administration. (2021). Chinese exclusion act (1882). National Archives and Records Administration.
[18] Congress.gov. (2020). Today in history - june 2. The Library of Congress.
[19] Ainslie, R. C. (2014). Cultural mourning, immigration, and engagement: Vignettes from the Mexican experience. The New Immigrant in American Society: Interdisciplinary Perspectives on the New Immigration, 355.
[20] Wilson, V., Miller, E., & Kassa, M. (2021). Racial representation in professional occupations by the numbers. Economic Policy Institute, 8.
[21] Miller, S. (2020). Black workers still earn less than their white counterparts. Society for Human Resource Management.
[22] Escueta, E., & O'brien, E. (1991). Asian Americans in Higher Education: Trends and Issues. Research Briefs, 2(4), n4.
[23] Kim AT, Kim C, Tuttle SE, Zhang Y. COVID-19 and the decline in Asian American employment. Res Soc Stratif Mobil. 2021 Feb;71:100563. doi: 10.1016/j.rssm.2020.100563. Epub 2020 Oct 8. PMID: 33052161; PMCID: PMC7543758.
[24] Sazima, I., Sazima, C., Francini-Filho, R. B., & Moura, R. L. (2000). Daily cleaning activity and diversity of clients of the barber goby, Elacatinus figaro, on rocky reefs in southeastern Brazil. Environmental Biology of Fishes, 59, 69-77.