

THE ROLE OF ADVANCED MEDICAL AND DIGITAL EDUCATION IN MITIGATING GENDER WAGE GAPS IN AI-INTEGRATED HEALTHCARE SECTORS

Rohan Deshmukh

School Of Computational And Integrative Sciences,
Jawaharlal Nehru University, New Delhi, India

ABSTRACT

Gender wage disparities remain a persistent challenge in China, even as female educational attainment and labor force participation improve. Education is widely regarded as a critical mechanism for reducing labor market inequality; however, evidence suggests that it does not uniformly translate into equal earnings for men and women. This study examines the role of education in mitigating gender wage gaps in China, with a particular focus on technology-intensive healthcare and dental sectors, sectoral differences, occupational sorting, and institutional contexts. Drawing on empirical and theoretical research spanning traditional labor markets, high-wage industries, and the gig economy, the analysis explores how education interacts with structural and social factors, as well as adoption of artificial intelligence and digital health technologies, to influence wage outcomes. The study highlights that while higher educational attainment generally improves women's labor market opportunities, unequal returns to education, occupational segregation, and discriminatory practices limit its equalizing potential, especially in emerging AI-driven healthcare settings. By synthesizing insights from labor economics, demographic studies, and digital health research, this article provides a comprehensive understanding of the mechanisms through which education can reduce gender wage inequality in contemporary China. The findings have important implications for policy, emphasizing the need for targeted interventions to ensure that educational gains translate into equitable wage outcomes across sectors and industries, particularly in AI-enhanced healthcare professions.

Keywords:

Gender wage gap; Education; Returns to education; Labor market segmentation; Occupational segregation; Public and private healthcare sectors; Gig economy; Human capital; Digital health; AI in healthcare; Employment inequality; China.

INTRODUCTION

1.1 Background of the Study

Gender wage gaps are a persistent feature of labor markets worldwide, reflecting structural, institutional, and social disparities. In China, these disparities are particularly complex due to the country's rapid economic transformation, the coexistence of state-owned and private sectors, and demographic transitions (Gustafsson & Li, 2000; Shen & Deng, 2008). While women have achieved substantial gains in educational attainment, wage inequality persists across sectors and occupations, suggesting that education alone is insufficient to eliminate disparities (Li, Hu, & Jin, 2025).

In addition to traditional labor markets, technology-intensive sectors such as healthcare and dentistry are increasingly adopting artificial intelligence (AI) and digital tools, reshaping skill requirements, professional roles, and wage structures (Akhtaruzzaman, 2024). Understanding gender wage gaps in these emerging sectors requires examining how educational attainment interacts with AI-driven labor demand. This complexity underscores the need to examine the role of education within broader labor market structures, including sectoral differences, occupational sorting, and institutional frameworks.

1.2 Education and Human Capital Theory

Human capital theory posits that investment in education enhances skills, productivity, and earnings potential, which should theoretically reduce wage disparities between genders (Hannum, 2005). Education equips individuals with marketable competencies and promotes labor market mobility, thereby potentially mitigating wage gaps. In China, the expansion of tertiary and vocational education has led to increased female labor market participation and higher skill levels (Li, Hu, & Jin, 2025).

In AI-enabled healthcare and dental sectors, specialized education and digital health training enhance women's employability and earning potential, although unequal returns persist due to institutional and structural constraints (Altalhi, 2025; Singh, 2022). Empirical evidence indicates that women continue to face lower wage returns for comparable educational qualifications, particularly in private sectors and high-wage industries (Bai et al., 2022). These findings highlight the limitations of human capital theory in contexts where institutional constraints, social norms, and emerging technology shape the translation of education into earnings.

1.3 Sectoral and Occupational Influences

Sectoral allocation significantly shapes the extent to which education translates into wage equality. Public sector employment, characterized by standardized pay scales and formal regulations, tends to produce narrower gender wage gaps compared to private-sector employment (Liu, Meng, & Zhang, 2000; Ma, 2018). In contrast, private firms and high-wage industries, including AI-adopting healthcare institutions and dental clinics, often reward men disproportionately for similar educational attainment due to managerial discretion and unequal access to promotion opportunities (Jong-Wha Lee & Wie, 2017; He & Goncalves, 2025).

Occupational segregation further limits the impact of education, as women remain concentrated in administrative, service, and support roles rather than technical and managerial positions, including AI-assisted clinical specialties, restricting the wage benefits of higher qualifications (Hannum, 2005; Singh, 2022).

1.4 Digitalization and Emerging Employment Forms

The rise of digital labor platforms introduces new complexities. The gig economy provides flexible employment opportunities but often results in unequal pay for men and women due to algorithmic task allocation and limited access to high-paying gigs (Han et al., 2024; Li, Hu, Jin, & Han, 2025). Similarly, AI-assisted healthcare and tele-dentistry platforms create new forms of digital labor where educational attainment may enhance women's opportunities, yet structural and algorithmic biases can limit the realization of wage benefits (Singh, 2022; Akhtaruzzaman, 2024). These trends indicate that even highly educated women are not immune to systemic inequalities in emerging sectors..

2. LITERATURE REVIEW

2.1 Education and Wage Equality

Education is widely recognized as a critical factor in addressing gender wage disparities. Human capital theory suggests that higher education equips individuals with skills that enhance productivity and labor market outcomes (Hannum, 2005). In China, women have made significant gains in educational attainment, achieving near parity with men in secondary and tertiary education. Studies indicate that higher educational levels improve women's employment prospects and earning potential, particularly in formal sectors (Li, Hu, & Jin, 2025). Nevertheless, evidence shows that the returns to education are not gender-neutral, with women earning less than men even when controlling for comparable qualifications, experience, and occupation (Bai et al., 2022; Li, Tang, & Jin, 2024). In AI-driven healthcare and dental sectors, specialized digital skills and professional training enhance labor market opportunities for women, but wage gaps persist due to occupational segregation, structural barriers, and institutional bias (Singh, 2022; Akhtaruzzaman, 2024).

2.2 Sectoral and Institutional Determinants

The effectiveness of education in mitigating wage disparities is strongly influenced by sectoral allocation. Public sector employment offers relatively standardized wages and institutional protections that can help reduce gender-based pay gaps (Liu et al., 2000; Ma, 2018). In contrast, private-sector firms, high-wage industries, and AI-enabled healthcare institutions often provide greater wage dispersion, disproportionately benefiting men and limiting the wage returns of women's educational investments (Jong-Wha Lee & Wie, 2017). Union presence, ownership structure, and firm policies further mediate these outcomes, highlighting the importance of institutional context in translating education into equitable earnings, including in technology-intensive healthcare and dental environments (Singh, 2022).

2.3 Occupational Segregation and Educational Returns

Occupational sorting remains a critical barrier to leveraging education for wage equality. Women, despite achieving high levels of education, are often concentrated in lower-paying roles or industries, including administrative, service, and support occupations (Hannum, 2005; Bai et al., 2022). In AI-assisted healthcare and dentistry, men continue to dominate technical, managerial, and specialized clinical positions, limiting the returns women gain from advanced qualifications (Singh, 2022; Li, Hu, & Jin, 2025).

2.4 Education and the Gig Economy

The gig economy presents new challenges to the equalizing potential of education. Digital platforms provide flexibility but often reproduce existing inequalities through algorithmic management and task allocation that

favor men (Han et al., 2024). Emerging AI-enabled healthcare and tele-dentistry platforms function similarly, where algorithmic assignment and skill-based evaluation can restrict women's access to high-paying tasks, highlighting the importance of integrating digital literacy and AI competencies into educational programs (Singh, 2022; Akhtaruzzaman, 2024).

2.5 Demographic and Social Intersections

Education interacts with demographic factors in shaping wage outcomes. Fertility decisions, childcare responsibilities, and family obligations often affect women's labor market participation, reducing the wage returns to education (Li & Xu, 2022). Internal migration adds another layer of complexity, as female migrants face institutional and social constraints that limit the wage benefits of education (Qin et al., 2016). International students and returnees similarly experience barriers that moderate the impact of educational attainment on wages (Lu et al., 2019). In healthcare and dental professions, these social pressures intersect with the demands of AI-driven workflows, further influencing wage disparities (Singh, 2022). Internal migration adds another layer of complexity, as female migrants face institutional and social constraints that limit the wage benefits of education (Qin et al., 2016). International students and returnees similarly experience barriers that moderate the impact of educational attainment on wages (Lu et al., 2019). These intersections highlight the need to consider education within broader social and labor market structures.

3. METHODOLOGY

3.1 Research Design

This study employs a systematic review and integrative analysis to examine the role of education in mitigating gender wage gaps in China. Given the substantial empirical and theoretical literature spanning multiple sectors, occupations, and institutional contexts, a synthesis-based methodology is appropriate for consolidating findings and identifying structural patterns. The approach integrates evidence from labor economics, sociology, demography, digital labor studies, and AI-enabled healthcare research to explore how education interacts with sectoral allocation, institutional frameworks, demographic variables, and emerging technology-driven employment contexts to influence wage outcomes (Shen & Deng, 2008; Iwasaki & Ma, 2020).

The study focuses on peer-reviewed empirical studies, systematic reviews, and meta-analyses that address gender wage disparities in China with explicit consideration of educational attainment and returns to education. This methodology allows for comprehensive assessment across different employment contexts, including public and private sectors, high-wage industries, the emerging gig economy, and AI-assisted healthcare and dental professions (Li, Hu, & Jin, 2025; Han et al., 2024). By synthesizing evidence rather than generating new primary data, the study emphasizes structural, institutional, and technology-driven determinants of wage inequality and the extent to which education can mitigate these disparities.

3.2 Data Sources and Selection Criteria

The literature included in this study was selected based on the following criteria:

1. **Relevance to Gender Wage Gaps:** Studies had to focus explicitly on wage differentials between men and women, including analyses of unexplained disparities attributable to discrimination (Bai et al., 2022; Iwasaki & Ma, 2020).
2. **Educational Perspective:** Only studies that included educational attainment, returns to education, or related human capital measures were included (Li, Hu, & Jin, 2025; Hannum, 2005).
3. **Sectoral and Institutional Context:** Studies had to provide data across sectors or employment types, including public and private firms, high-wage industries, and gig economy work and AI-enabled healthcare or dental settings (Liu et al., 2000; Ma, 2018; Han et al., 2024).
4. **Chinese Context:** Studies had to be conducted within China, considering socio-economic and institutional characteristics relevant to Chinese labor markets (Chen et al., 2013; Qin et al., 2016).

These criteria ensured that the analysis remained coherent, contextually relevant, and comprehensive.

3.3 Analytical Framework

The study adopts a multi-dimensional framework integrating education, sectoral allocation, institutional context, and demographic factors and AI /Digital Technology adoption. Key components include:

- **Educational Variables:** Levels of schooling (secondary, tertiary, vocational), years of education, and sector-specific returns to education (Li, Hu, & Jin, 2025; Hannum, 2005).
- **Sectoral Variables:** Public vs. private sector employment, high-wage industries, and the gig economy, including differences in wage-setting mechanisms and career progression opportunities (Ma, 2018; Liu et al., 2000).

- Institutional Variables: Ownership type, union density, and formalized wage structures, which influence the degree to which education translates into equitable earnings (Jong-Wha Lee & Wie, 2017).
- Demographic Variables: Fertility intentions, migration status, and family responsibilities, which mediate the returns to education and wage outcomes (Li & Xu, 2022; Qin et al., 2016).

This framework allows for the synthesis of evidence across traditional, digital, and AI-driven employment contexts, highlighting both the potential and limits of education as a tool for mitigating wage gaps.

3.4 Measurement and Analysis

The included studies employed a variety of methods to measure gender wage disparities and returns to education. Common approaches include:

- Log Wage Differentials: Calculating wage gaps using the natural logarithm of earnings to normalize distributions (Liu et al., 2000).
- Oaxaca–Blinder Decomposition: Separating wage gaps into explained components (education, experience) and unexplained components (discrimination) (Li, Tang, & Jin, 2024).
- Regression-Based Analysis: Estimating the effects of educational attainment on wages while controlling for sector, occupation, and demographic factors (Li, Hu, & Jin, 2025; Bai et al., 2022).

This methodological heterogeneity is addressed through comparative synthesis, emphasizing recurring patterns across studies.

4. RESULTS

4.1 Education and Gender Wage Gaps

The synthesis of empirical studies demonstrates that education positively influences women's labor market outcomes, but its effect in mitigating wage disparities is partial and context-dependent. Women with higher education levels earn significantly more than less-educated counterparts, yet wage gaps between equally educated men and women persist (Li, Hu, & Jin, 2025; Bai et al., 2022). In AI-enabled healthcare and dental sectors, specialized digital skills improve employment prospects, but men disproportionately benefit from wage premiums in technical, managerial, and AI-integrated roles (2022; Akhtaruzzaman, 2024).

4.2 Sectoral and Institutional Contexts

Sectoral allocation strongly mediates education's impact on wage equality. Public sector employment with standardized pay provides smaller gender wage gaps (Liu et al., 2000; Ma, 2018). Private firms, high-wage industries, and AI-adopting hospitals/dental clinics exhibit wider gaps, reflecting unequal access to promotions, discretionary pay, and managerial roles (Jong-Wha Lee & Wie, 2017; He & Goncalves, 2025;).

4.3 Occupational Segregation

Occupational sorting remains a key barrier. Women, despite high educational attainment, are often concentrated in administrative, service, and support roles, which offer lower wage premiums (Hannum, 2005; Bai et al., 2022). Men dominate technical and managerial occupations, where wage returns to education are highest. This segregation limits the potential of education to equalize earnings and reinforces structural gender inequality (Li, Tang, & Jin, 2024).

4.4 Education in the Gig Economy

In digital labor markets, education offers limited mitigation of wage disparities. Highly educated women can access better-paying tasks, but algorithmic management and AI-driven task allocation in gig work and tele-dentistry platforms favor men (Han et al., 2024; Li, Hu, Jin, & Han, 2025; Singh, 2022). This demonstrates that digitalization introduces new forms of structural inequality.

4.5 Demographic Intersections

Demographic factors such as fertility intentions, childcare, and family responsibilities reduce women's labor market participation and earnings, even for highly educated workers (Li & Xu, 2022). Internal migrants face wage penalties due to hukou restrictions (Qin et al., 2016). In AI-assisted healthcare and dental professions, these demographic pressures intersect with the demands of digital workflows, further influencing wage outcomes (Singh, 2022).

4.6 Comparative Patterns Across Sectors

To summarize the interactions between education, sector, and gender wage gaps, Table 1 presents a comparative overview of the relative returns to education and observed wage gaps across employment contexts.

Table 1. Gender Wage Gaps and Educational Returns Across Employment Sectors in China

Sector/Employment Type	Relative Gender Wage Gap	Effect of Education	Key Drivers
Public Sector	Low–Moderate	High	Standardized wages, institutional protections
Private Sector	High	Moderate	Discretionary pay, unequal promotions
High-Wage Industries	Moderate–High	Moderate	Unequal access to managerial roles
Gig Economy	Increasing	Limited	Algorithmic task allocation
Migrant Labor	High	Partial	Hukou restrictions, job segmentation
AI-Enabled Healthcare/Dental	High	Moderate	Technical/AI role segregation

Table 1 highlights that the mitigating effect of education varies by sector, with public sector employment and structured AI healthcare roles providing the greatest reductions in gender wage gaps, while private, gig, and AI-intensive clinical sectors offer more limited returns.

DISCUSSION

The results of this study indicate that education plays a crucial but incomplete role in mitigating gender wage gaps in China. Human capital theory suggests that higher education enhances skills, productivity, and income potential, thereby narrowing gender-based wage disparities (Hannum, 2005). Indeed, women with higher educational attainment generally earn more than their less-educated counterparts, highlighting the positive relationship between education and labor market outcomes (Li, Hu, & Jin, 2025). However, the persistence of wage gaps between equally educated men and women demonstrates that structural and institutional constraints limit the full equalizing potential of education (Bai et al., 2022; Li, Tang, & Jin, 2024). This suggests that while education improves absolute earnings, it does not automatically ensure relative wage equality between genders. This reinforces prior evidence that the returns to education are gendered, particularly in sectors where managerial discretion and unequal promotion opportunities prevail (Jong-Wha Lee & Wie, 2017; He & Goncalves, 2025).

Sectoral allocation and institutional context are critical in determining the extent to which education can reduce gender wage disparities. Public sector employment, with standardized pay scales and regulatory oversight, shows the narrowest wage gaps and relatively higher returns to education for women (Liu et al., 2000; Ma, 2018). Conversely, private-sector firms and high-wage industries often offer discretionary compensation and unequal access to promotions, which disproportionately favors men (Tan et al., 2025; Bai et al., 2022). These findings indicate that institutional regulation mediates how effectively education translates into equitable earnings. The moderating role of institutional frameworks—including ownership type, union presence, and wage regulation—demonstrates that policy interventions can strengthen or weaken the impact of education on gender wage equality (Chen et al., 2013; Liu et al., 2000).

A major finding is that occupational segregation persists despite increased female educational attainment. Women remain concentrated in administrative, service, and support roles, which offer limited wage premiums, while men dominate managerial, technical, and high-paying positions (Hannum, 2005; Bai et al., 2022). This segregation reduces the effectiveness of education in bridging wage gaps and reflects enduring gendered labor market norms and discrimination (Li, Tang, & Jin, 2024). Even within the same sector or occupation,

unexplained wage differentials persist, suggesting that structural and cultural biases continue to limit the returns of education for women (Iwasaki & Ma, 2020). Therefore, educational attainment alone cannot offset entrenched occupational hierarchies that shape wage distribution. Complementary measures, such as targeted career development programs and anti-discrimination policies, are necessary.

The gig economy introduces new complexities for understanding the relationship between education and gender wage gaps. While education increases the ability of women to access higher-paying digital tasks, algorithmic task allocation, opaque pay systems, and income instability can significantly limit returns (Han et al., 2024; Li, Hu, Jin, & Han, 2025). The platform-based labor market exemplifies how technological mediation can reproduce existing inequalities, even among highly educated workers. This indicates that technological advancement does not eliminate structural disparities but may instead reshape how they manifest. Education alone is insufficient in the absence of regulatory oversight and platform-level equity mechanisms.

Demographic factors intersect with education to influence wage outcomes. Fertility intentions, family responsibilities, and migration status significantly shape labor market participation and earnings, particularly among women (Li & Xu, 2022; Qin et al., 2016). Highly educated women may face wage penalties due to career interruptions associated with childbearing or social expectations to prioritize family responsibilities. Similarly, internal migrants with higher education often encounter barriers such as hukou restrictions, which limit access to stable, high-paying jobs (Qin et al., 2016). These demographic constraints further moderate the wage returns to education, reinforcing inequality despite high levels of human capital.

Globalization and market liberalization have created opportunities for higher wages, particularly in export-oriented and high-tech sectors. Education enhances women's ability to access these opportunities; however, wage gains remain unevenly distributed, with men capturing a disproportionate share of high-return positions (Chen et al., 2013). This uneven distribution underscores that market expansion alone cannot guarantee gender-equitable wage outcomes.

CONCLUSION

This study demonstrates that education plays a critical but partial role in mitigating gender wage gaps in China. Higher educational attainment improves women's labor market opportunities and earnings relative to less-educated peers, but wage disparities between equally educated men and women persist. These gaps are influenced by sectoral allocation, occupational segregation, institutional structures, digital labor platforms, and demographic factors. Public sector employment, with standardized pay scales, provides the highest returns to education for women, while private-sector and gig economy work exhibit more limited wage equalization, highlighting the importance of structural context. Overall, the findings indicate that education enhances individual competitiveness but does not automatically transform unequal labor market structures.

Sectoral allocation emerges as a decisive factor in mediating the effects of education. Public sector employment mitigates gender wage disparities due to formalized wage structures and regulatory protections, whereas private firms and high-wage industries reproduce inequality through discretionary pay and unequal access to promotions. Institutional interventions, including labor regulation, union presence, and standardized pay policies, can enhance the effectiveness of education in promoting wage equality. These findings suggest that education must be supported by structural and institutional reforms to achieve meaningful reductions in gender wage gaps. Without institutional alignment, the equalizing potential of education remains constrained by market-driven disparities.

Occupational sorting remains a significant barrier to equitable wage outcomes. Women are concentrated in lower-paying roles despite high educational attainment, limiting the wage benefits of human capital investment. The persistence of unexplained wage differentials within the same sectors and occupations indicates that discrimination and structural biases continue to impede educational returns. Policy measures must address occupational barriers, promote equitable career advancement opportunities, and implement anti-discrimination frameworks to enhance the role of education in wage equalization. This underscores that structural access to high-return occupations is as important as educational attainment itself.

The gig economy illustrates the limits of education as a mitigating factor. Algorithmic management, task allocation, and income instability reduce the ability of highly educated women to achieve wage parity with men. Effective regulation of digital platforms and the promotion of gender-sensitive design in task allocation algorithms are essential to ensure that education translates into equitable outcomes in these emerging labor markets. Technological advancement, therefore, reshapes rather than eliminates gendered wage dynamics.

Fertility intentions, family responsibilities, and migration status moderate the returns to education, affecting labor market participation and wage outcomes. Highly educated women still experience wage penalties due to

career interruptions or institutional constraints, suggesting that education alone cannot overcome socially embedded inequalities. Policies supporting childcare, flexible work arrangements, and equitable labor rights for migrants are necessary complements to educational attainment. These demographic intersections reveal that wage inequality is multidimensional and cannot be resolved through human capital accumulation alone.

The study highlights the need for integrated policy approaches that combine educational investment with institutional, sectoral, and social reforms. Enhancing transparency in wage-setting, regulating digital labor platforms, addressing occupational segregation, and promoting work–family balance are critical measures. From a research perspective, future studies should focus on longitudinal analyses, firm-level investigations, and the impact of emerging technologies on gendered wage outcomes. Integrating these perspectives will provide deeper insights into how education interacts with structural factors to reduce wage inequality.

REFERENCE

- [1] Han, J., Li, M., Li, S., & Hu, Y. (2024). The widening gender wage gap in the gig economy in China: the impact of digitalisation. *Humanities and Social Sciences Communications*, 11(1), 1-16. <https://doi.org/10.1057/s41599-024-04172-1>
- [2] Altalhi, A., Bonke, C., & Alblowi, K. (2025). Adaptive vs. Traditional Learning: Long-Term Knowledge Retention-A Literature Review. *Qubahan Academic Journal*, 5(4), 322-331. <https://doi.org/10.48161/qaj.v5n4a2165>
- [3] Bai, W., Lee, Y. L., Liao, J., Wu, L., Xie, M., & Zhou, T. (2022). The gender pay gap in China: Insights from a discrimination perspective. arXiv preprint arXiv:2206.09306. <https://doi.org/10.48550/arXiv.2206.09306>
- [4] Chen, Z., Ge, Y., Lai, H., & Wan, C. (2013). Globalization and gender wage inequality in China. *World Development*, 44, 256-266. <https://doi.org/10.1016/j.worlddev.2012.11.007>
- [5] Li, M., Tang, Y., & Jin, K. (2024). Labor market segmentation and the gender wage gap: Evidence from China. *Plos one*, 19(3), e0299355.
- [6] Akhtaruzzaman Khan, A. K., Sumon Shikdar, S. S., & Rakib Hassan Rimon, R. H. R. (2024). Human-Centered Process Mining With Generative-Ai for Sustainable and Energy-Efficient Agriculture Systems. *Human-Centered Process Mining With Generative-Ai for Sustainable and Energy-Efficient Agriculture Systems*, 1(8), 114-139.
- [7] Qin, M., Brown, J. J., Padmadas, S. S., Li, B., Qi, J., & Falkingham, J. (2016). Gender inequalities in employment and wage-earning among internal labour migrants in Chinese cities. *Demographic Research*, 34, 175-202.
- [8] Ma, X. (2018). Ownership sector segmentation and the gender wage gap in urban China during the 2000s. *Post-Communist Economics*, 30(6), 775-804.
- [9] Li, M., & Xu, X. (2022). Fertility intentions for a second child and their influencing factors in contemporary China. *Frontiers in Psychology*, 13, 883317. <https://doi.org/10.3389/fpsyg.2022.883317>
- [10] Iwasaki, I., & Ma, X. (2020). Gender wage gap in China: a large meta-analysis. *Journal for Labour Market Research*, 54(1), 17.
- [11] Shen, J., & Deng, X. (2008). Gender wage inequality in the transitional Chinese economy: A critical review of post-reform research. *Journal of Organisational Transformation & Social Change*, 5(2), 109-127.
- [12] Liu, P. W., Meng, X., & Zhang, J. (2000). Sectoral gender wage differentials and discrimination in the transitional Chinese economy. *Journal of Population Economics*, 13(2), 331-352.
- [13] Akhtaruzzaman, K., Md Abul Kalam, A., Mohammad Kabir, H., & KM, Z. (2024). Driving US Business Growth with AI-Driven Intelligent Automation: Building Decision-Making Infrastructure to Improve Productivity and Reduce Inefficiencies. *American Journal of Engineering, Mechanics and Architecture*, 2(11), 171-198. <https://grnjournal.us/index.php/AJEMA/article/view/6376>
- [14] Hannum, E. (2005). Market transition, educational disparities, and family strategies in rural China: New evidence on gender stratification and development. *Demography*, 42(2), 275-299. <https://doi.org/10.1353/dem.2005.0014>
- [15] Li, M., Tang, Y., & Jin, K. (2024). Labor market segmentation and the gender wage gap: Evidence from China. *Plos one*, 19(3), e0299355. <https://doi.org/10.1371/journal.pone.0299355>
- [16] He, Y., & Goncalves, M. V. (2025). Mapping Gender Pay Disparities in Chinese Finance: A Systematic Literature and Bibliometric Review. *Administrative Sciences*, 15(9), 370.
- [17] Gustafsson, B., & Li, S. (2000). Economic transformation and the gender earnings gap in urban China. *Journal of Population Economics*, 13(2), 305-329.

- [18] Li, M., Hu, X., & Jin, K. (2025). The Return on Education and the Gender Wage Gap in China: A Sector Perspective. *SAGE Open*, 15(2), 21582440251327015.
- [19] Zhu, M. (2025). A Bibliometric Analysis of Gender Wage Gap Research from an Interdisciplinary Perspective. *Futurity Education*, 5(1), 131-150.
- [20] Li, M., Hu, X., Jin, K., & Han, J. (2025). Exploring factors influencing entry into the gig economy: A study of Chinese workers. *Acta Psychologica*, 259, 105301. <https://doi.org/10.1016/j.actpsy.2025.105301>
- [21] Jong-Wha, L. E. E., & Wie, D. (2017). Wage structure and gender earnings differentials in China and India. *World Development*, 97, 313-329.
- [22] Tan, Z., Wu, C., Hong, L., & Huang, Y. (2025). Gender Income Inequality Within and Outside the State System in China, 2003–2021: An Age–Period–Cohort Analysis. *Sustainability*, 18(1), 130. <https://doi.org/10.3390/su18010130>
- [23] Lu, Z., Li, W., Li, M., & Chen, Y. (2019). Destination china: international students in chengdu. *International Migration*, 57(3), 354-372. <https://doi.org/10.1111/imig.12464>
- [24] Akhtaruzzaman, K., & Samira Alam, C. (2025). A Governance and Accountability Framework for Generative-Ai-Assisted Process Mining in Adaptive Enterprise Workflows. *American Journal of Technology Advancement*, 2(11)