Exploring Gender Pay Inequality Across Industries and Women's Transitions to Entrepreneurship in the UK

Author: Anastasia Gabriela Vascan
University of Twente
P.O. Box 217, 7500AE Enschede
The Netherlands

ABSTRACT

The gender pay gap is still a significant problem in the UK, as women usually earn less than men in different industries. Many studies analyse gender inequality and women's entrepreneurship, but often look at these subjects separately from one another. This study will explore whether women are more likely to start their businesses in sectors with a larger pay gap, using the gender pay gap as the independent variable and the percentage of women-owned businesses in each industry as the dependent variable. The goal of the research is to determine whether industries with a significant pay inequality also experience a higher rate of women transitioning to entrepreneurship. The results are analysed through correlation and regression analysis based on the data available. This research looks at different industries to see if pay gaps play a role in women's decisions to leave regular jobs and become self-employed. This study is significant as it solves a gap in current research and may also benefit policymakers and companies. It will highlight the industries from which women may be leaving because of inequality, which may be helpful in improving working conditions as well as encouraging gender equality.

Graduation Committee members: 1. Dr. Maximilian Goethner;
2. Dr. Rainer Harms

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Pay gap, Entrepreneurship, Industry, Women, UK

During the preparation of this work, the author used Grammarly and Quillbot in order to check the grammar, spelling and paraphrase the sentences that lacked in coherence. After using this tool/service, the author reviewed and edited the content as needed and takes full responsibility for the content of the work.

1. INTRODUCTION

The gender pay gap remains a significant issue in the UK. According to the Office for National Statistics, in 2023, women earned 14.3% less than men on average, and the gap was even wider in specific sectors, such as finance, construction, and professional services (ONS, 2023). Jones and Kaya (2023) found that women have a lower percentage in performance-related pay roles and get much smaller rewards than men, especially within the private sector. Furthermore, Llados-Masllorens and Ruiz-Dotras (2022) suggest that some women feel limited in their current jobs and perceive entrepreneurship as a way to achieve greater control, flexibility, and satisfaction in their professional aspirations.

Although some women choose entrepreneurship as a way of addressing workplace dissatisfaction, it remains unclear which specific industries women are most likely to leave and how industry-level pay gaps might influence this decision (Blau & Kahn, 2017; Jewell et al., 2020). This highlights a significant knowledge gap regarding industry-specific inequality, particularly in understanding how pay gaps may influence women's decisions to transition into entrepreneurship. Recent studies review the gender pay gap without examining entrepreneurship (Blau & Kahn, 2017; Jewell et al., 2020), and others use entrepreneurial outcomes separately from wage disparity (Llados-Masllorens & Ruiz-Dotras, 2022; Kritikos et al., 2024). In the UK context, there is no research examining the interplay between these two variables at the industry level. This research question investigates whether women's increased transition from employment to self-employment across specific industries with higher wage disparity is related to wage differences. The study will correlate gender pay gaps by industry to the density of women-owned businesses to provide evidence that will indicate whether industry-level pay gaps impact women's decision to leave the workplace and start a business.

The research question:
In which UK industries do women transition from lower-paid employment to entrepreneurship?

This research is academically significant because it explores a relationship that has yet to be fully explored, in detail, in a UK context. It looks at how gender pay inequality relates to women starting businesses in different sectors, offering a new way to think about fairness and equality at work. It is also relevant because we can see which fields women are leaving due to unfair pay. This knowledge could help employers, policymakers, and support groups identify more effective ways to close the gap and enhance workplace conditions.

2. THEORETICAL FRAMEWORK

2.1 Defining the Gender Pay Gap

Blundell (2021) defined the gender pay gap as the broad difference in earnings between men and women. In the past, the gender pay gap was explained by differences in education, work experience, and different job roles (Blau & Kahn, 2000). However, over time, education and employment experience have played a smaller role in explaining the pay gap because they no longer explain the majority of the difference any more. Despite this shift, significant pay differences are still present. Blau and Kahn (2017) argue that the persistent gap is now driven by occupational and industry segregation. In other words, men and women tend to be employed in different sectors and roles, with women being more concentrated in healthcare, education, or administrative work, while men are more present in finance, engineering, or construction. These sectors often pay different wages, which contributes significantly to the overall pay gap. Therefore, these structural differences in employment have become an important factor in explaining the current gender pay gap.

In the UK, the gender pay gap is particularly noticeable in occupations that involve performance-related pay systems. Jones and Kaya (2023) found that women are less likely to be hired into these performance–related pay (PRP) roles, especially in the private sector, where the pay gap is higher than in the public sector. These roles often reward behaviour traits that are stereotypically associated with men, such as individual competitiveness or aggressive performance-seeking, which can be a disadvantage for women in the hiring process and during the work progression (Jones & Kaya, 2023). As a result, women may have difficulties getting these PRP jobs or being fairly evaluated, which limits their chances of achieving higher salaries. Perugini and Pompei (2024) note that in industries such as consulting or technology, it is challenging to assess someone’s performance. Therefore, this provides an opportunity for managers to make decisions on personal choice rather than actual performance, which eventually creates inevitable pay differences. According to Jewell et al. (2020), the majority of the pay gap in the UK is within firms, specifically in how firms pay and reward employees.

Apart from pay, women also face issues such as inflexible working hours, fewer promotion opportunities, and being less likely to be selected for senior roles. Llados-Masllorens and Ruiz-Dotras (2022) explain that many women leave because they feel stuck, with no flexibility, no opportunity to advance, and no recognition. These issues have increased over time. Avram et al. (2024) found that women, especially mothers, often change careers in order to keep up with family responsibilities, but this shift typically comes at a cost, as they miss out on the salary increases that are usually supported by career changes. Therefore, as all these issues create a hostile environment for women to develop their potential, they are seeking out new career paths that will satisfy their needs and allow them to grow. Entrepreneurship then becomes an appealing option for women to pursue. Castellaneta et al. (2020) found that when barriers related to starting a business are lowered, more women are likely to pursue self-employment. However, this change to entrepreneurship also comes with some trade-offs, as those women who remain in male-dominated environments may feel increasingly isolated once females leave. Therefore, the pay gap should be seen not just as a simple matter of money. It is also a matter of how industries and businesses operate, which hinders women's development and drives them toward alternative opportunities outside of traditional employment.

2.2 Drivers towards Entrepreneurship

In recent years, the number of women starting their businesses in the UK has grown steadily, increasing from approximately 1.5 million in 2020 to around 1.8 million in 2023 (House of Commons, 2024). However, many women still face significant challenges when entering entrepreneurship. Often, their reasons for becoming entrepreneurs are related to the desire for more control over their time, a better balance between work and family, and more opportunities for development than they had in regular jobs (Llados-Masllorens & Ruiz-Dotras, 2022). Moreover, education plays a key role in shaping women's ability to succeed as entrepreneurs. Gawel (2021) highlights that not only is a woman's level of education important, but the overall educational level of men in society also influences the level of support the environment provides for female entrepreneurs. This means that in societies where men have higher levels of education, they may be more open-minded and supportive toward female entrepreneurship, contributing to a more encouraging environment for women in business. This shows that cultural, social, and economic factors can either increase or reduce gender differences in attempts to create a business.

In addition to overcoming challenges, research also highlights that female entrepreneurship benefits not only individual women but also contributes positively to the businesses and industries in which they are involved. Skare et al. (2025) examined the impact of female entrepreneurs on digital transformation and eco-innovation within organizations. They found that, although the gender pay gap was not a significant factor in that context, the presence of women entrepreneurs made a substantial difference in driving innovation forward. Their study also highlighted that female entrepreneurial activity was statistically significant in enhancing eco-innovation outcomes, particularly in digitally transforming environments across European countries. Therefore, this demonstrates that supporting women who start their businesses not only serves their personal goals, such as having a more flexible work schedule or better income, but also plays a crucial role in broader innovation and the development of society as a whole.

However, despite an increasing number of women in entrepreneurship, they continue to face ongoing discrimination based on gender that might limit their chances of success and recognition in the corporate world. Tonoyan and Strohmeyer (2021) explained that entrepreneurship is often seen as a "male" activity rather than a female one. Because of this bias, women leading businesses in male-dominated fields are often judged or taken less seriously. Therefore, this can make it more challenging for women to secure funding, hire staff, or attract new customers.

Lastly, the most common barrier that women are facing when starting a business is the financial aspect, which remains a major structural limitation that can turn entrepreneurial desire into action. Sauer and Wilson (2016) showed that women, especially single women in the UK, often face financial constraints that stop them from starting a business. However, when they do get even small amounts of financial help, their chances of starting a business go up significantly. Therefore, this suggests that women are not only motivated by independence or ambition, they are often pushed into entrepreneurship due to a lack of opportunities in the regular job market, social expectations, and structural inequalities.

2.3 Connection between Gender Pay Gap and Female Entrepreneurship

A considerable amount of research has been conducted on gender disparity and women's entrepreneurship. However, there is still limited research that directly analyses the relationship between gender pay gaps and

female entrepreneurship, especially from an industry-level perspective. Kritikos et al. (2024) found, using data from Finland, that women starting their businesses tend to work in service-based sectors, such as retail, education, and administration, where a significant number of women already exist in the workforce. The research highlights that when women exit their traditional jobs, they usually decide to stay within the same sectors they worked in before, but take on different positions, such as entrepreneurship. The results of this research primarily relate to Finland, and it is unclear whether similar patterns apply in the UK.

So far, few studies have linked gender pay gaps in specific industries to the number of women who decide to start businesses in those same sectors. It is well known that inequality can push women out of jobs and that they often become self-employed in familiar fields, but we do not know which UK industries are most affected by this. Therefore, this study will examine the missing piece by comparing gender pay gaps across industries with the number of women starting businesses in those sectors. This research aims to identify the strongest connections, therefore improving support for women considering entrepreneurship. It also contributes to the understanding of how inequality in the workplace can lead to changes on the broader economy.

2.4 Hypothesis

The literature reviewed in the previous section indicates that the gender pay gap continues to influence women's career choices, including income, job satisfaction, promotion opportunities, and access to flexible work arrangements. Studies suggest that when women experience continuous inequality, such as wage inequality, restricted opportunities for advancement, or exclusion from leadership roles, they may consider alternative career paths, including entrepreneurship (Llados-Masllorens & Ruiz-Dotras, 2022; Castellaneta, Conti, & Kacperczyk, 2020).

Previous studies, especially the research conducted by Kritikos et al. (2024), suggest that women's transitions to self-employment often take place inside the same industries in which they were before working. These transitions are often influenced by previous knowledge and familiarity with service-oriented sectors, such as education and retail. Nonetheless, while the link between wage inequality and entrepreneurship is well determined, the exact link between industry-specific pay disparities and female entrepreneurship rates is still little examined, especially in the UK.

This study aims to investigate whether UK industries with a larger gender pay gap are associated with a higher percentage of women-owned businesses within the same sectors. Existing literature suggests gender pay gap may work as a structural "push factor", encouraging women to exit traditional employment due to restricted advancement or unfair wages (Llados-Masllorens & Ruiz-Dotras, 2022; Castellaneta et al., 2020; Kritikos et al., 2024).

Hypothesis:

Industries in the UK with higher gender pay gaps are expected to show higher proportions of female self-employment, particularly in service-oriented sectors where women are more likely to respond to inequality by starting their own businesses.

The hypothesis presented identifies the key premise of this study: that women may exit a position due to structural barriers (for example, the wage gap) and move towards self-employment. The expectation, as the hypothesis presented, is that, in industries with greater gender pay gaps, a greater percentage of self-employed women will be seen, particularly in-service sectors where women are more present. The hypothesis is related directly to the research question and builds upon the earlier discussion by analysing how gendered economic outcomes differ between sectors in the UK context. The next section will outline the approach taken to evaluate the hypothesis, including the analytical approach and statistical models to examine the patterns in the UK regional data.

3. METHODOLOGY

This study employs a quantitative research approach, utilizing secondary data analysis. Since the aim is to investigate patterns across various industries in the UK, using existing national datasets is both efficient and appropriate. Secondary data analysis allows for the exploration of relationships between wage inequality and female entrepreneurship on a large scale, without the need to collect new data. This makes it possible to identify regional-level trends and connections between gender pay gaps and the percentage of women-owned businesses across industries. The analysis relies on a cross-sectional dataset derived from publicly available data for the

year 2023, which provides information on the economic and demographic conditions at that time. This study relies on one main data source:

- **ONS Business Demography Data** – This dataset provides comprehensive information on business ownership demographics, including the number and percentage of women-owned businesses across UK industries. It also includes regional indicators, gender employment shares, wage inequality measures, and sectoral employment characteristics.

3.1 Variables

The study is based on two important variables, which are essential for finding out whether industry-level gender wage differences influence female involvement in entrepreneurship in the UK. All variables have been extracted from the national dataset and structured in a way that allows for consistent comparison across regions and industries.

3.1.1 Independent Variable: Gender Pay Gap

The gender pay gap is used as the independent variable in this study. The independent variable used in the data set is labelled as *Wage_gap_pct*. It is calculated based on the difference in average hourly earnings between men and women as a proportion of male earnings (ONS, 2023). A positive measure of this variable indicates that, on average, men earn higher wages than women in the respective industry and state. This measure provides evidence of structural differences in hourly wage rates in different local labour markets and indicates how these wage discrimination patterns are correlated with female self-employment. The analysis utilises regional-level data in order to capture changes in geographic pay inequality, which may help understand how local labour market activity correlates with entrepreneurial choices of women. This calculation follows the standard definition used in gender wage gap literature (Blau & Kahn, 2017; OECD, 2022).

$$Gender\ Py\ Gap\ (\%) = \left(\frac{Male\ Earn - Fem.Earn}{Male\ Earn}\right) \times 100$$

The reason for controlling this variable is based on previous studies indicating that gender wage disparities are not just economic but also an indication of broader issues such as limited career progression, inflexible work environments, or discrimination in achieving leadership positions. Therefore, organizations characterized by more inequality or exclusion, together with increased gender wage differences, could result in an increased number of women leaving to start their firms. As a result, regions or sectors with greater inequality may be less inclusive, and possibly affect the choices women make to enter self-employment.

In order to account for these dynamics, the model controls for several variables from the dataset, including industry dummies, the share of women in employment (Share_Female), and the regional unemployment rate (Unempl_Rate). These controls assist in isolating the relationship between wage inequality and the likelihood of women entering self-employment by accounting for labour market conditions and sector specification.

3.1.2 Dependent Variable: Percentage of Women-Owned Businesses

The dependent variable is the proportion of self-employed individuals who are women in each region. In the dataset, this is represented by the variable *Share_Self_Fem_Self*. This variable indicates the number of female-owned businesses across various sectors, sourced from the ONS Business Demography database.

This variable is important because it can be viewed as an indicator of the level of activity among women entrepreneurs within a particular industry. This is especially relevant because past studies have indicated that gender pay inequality could be a “push factor,” leading women to leave traditional employment for self-employment/entrepreneurship (Llados-Masllorens & Ruiz-Dotras, 2022). Therefore, we would expect industries that show higher levels of gender pay inequality would show higher numbers of women-owned firms since women may react to unequal conditions at work by starting their businesses.

3.1.3 Moderating Variable: Industry Structure

The research uses several industry composition variables to find out if the correlation between the gender pay gap and female entrepreneurship varies across sectors. The moderating variables in the dataset are presented as percentages of total employment for certain industries (i.e. construction, education, and manufacturing) across each region. These variables are treated as continuous variables because they represent sectoral employment shares, rather than assigning regions to specific categories. This treatment enables the study to investigate whether the strength of the relationship between the gender pay gap and women's self-employment varies by

the dominant industry structure in a given Local Authority District (LAD) and to illustrate how sectoral context moderates gendered entrepreneurial structures through the inclusion of interaction terms.

3.2 Analytical Strategy

The analysis will begin with descriptive statistics that will investigate the distribution of the gender pay gap and the rates of women-owned businesses across various industries within the different regions of the UK. Following this, a multiple linear regression analysis is performed using R software. The regression tests whether regions with larger gender pay gaps also show a higher share of women in self-employment, and whether this relationship changes based on construction sector dominance. The model includes an interaction variable between the gender pay gap and industry share to test if the association between wage inequality and self-employment is moderated by industry structure. The regression model can be represented as:

$$WomenOwn_i = \beta_0 + \beta_1 PayGap_i + \beta_2 IndustryShare_i + \beta_3 (PayGap_i \times IndustryShare_i) + X_i\beta + \epsilon_i$$

Where:

- $WomenOwn_i$: Proportion of women-owned businesses in industry *i*
- $PayGap_i$: Gender pay gap in industry *i*
- $IndustryShare_i$: Proportion of total employment in a specific industry (e.g., construction, education) in region *i*
- X_i: Control variables (e.g., age, ethnicity, unemployment)
- ϵ_i: Error term

This model structure helps identify the industry-specific variations regarding the relationship between wage gaps and women's self-employment performance.

4. RESULTS

In line with the analytical strategy described in the methodology, this section presents and investigates the results of the statistical analysis examining variation in the relationship between the gender pay gap and female self-employment at the industry level across the UK. The analysis is conducted using a cross-sectional regional dataset from the Office for National Statistics (ONS). Descriptive statistics and multiple linear regression are used to identify trends within female entrepreneurship and pay inequalities between sectors of industry. All findings result from the dependent variable measuring the proportion of self-employed women (Share_Self_Fem_Self) and the independent variable that measures the regional gender pay gap (Wage_gap_pct), along with industry-specific interaction terms and control variables.

4.1 Descriptive Statistics

The first part of the research is based on descriptive statistics to explain the distribution of the gender pay gap and female self-employment across diverse UK industries. *Table 1* presents the average gender pay gap and the average rate of female self-employment across principal sectors, derived from unweighted averages across local authority districts (LADs) where each industry dominates. The gender pay gap was determined using the standard formula:

$$Gender\ Py\ Gap\ (\%) = \left(\frac{Male\ Earn - Fem.Earn}{Male\ Earn}\right) \times 100$$

while the female self-employment rate was obtained by multiplying the proportion of active self-employed women (Share_Self_Fem_Act) by 100.

Table 1. Average Gender Pay Gap and Female Entrepreneurship by Industry

Industry	Average Gender Pay Gap (%)	Average Female Self-Employment (%)
Education	5.1	34.2
Health	7.5	32.8
Finance	24.7	17.3
Construction	15.8	8.9
Utilities	11.3	11.3
Manufacturing	19.4	15.6
Trade	10.2	26.3
Mining	14.4	18.7
Agriculture	16.5	27.4
Accommodation	13.8	31.7
Information	18.6	22.9

The gender pay gap throughout this analysis is defined as the percentage disparity between male and female median earnings, and as seen in *Table 1,* it shows significant variation across different industries. The sectors with the greatest proportion of women are education and health, where the wage gaps are low (5.1% and 7.5%, respectively), and the self-employment of women is high in these sectors (34.2% and 32.8%, respectively). On the other hand, when looking at industries such as finance (24.7%), manufacturing (19.4%), and construction (15.8%), these industries show higher wage gaps and substantially lower self-employment figures for women (17.3%, 15.6%, and 8.9%, respectively). In general, the evidence highlights that male-dominated industries have larger wage gaps and a lower number of women entrepreneurs and that industries that are gender-balanced, or female-dominated, have a lesser wage gap and more women entrepreneurs.

4.2 Regression Analysis Results

In order to investigate variation in the impact of the gender pay gap on women's self-employment by industrial context, a multiple linear regression model with interaction terms was employed. Results show how associations between wage inequality and self-employment vary according to industrial structure. Specifically, interaction effects were specified between the gender pay gap and the employment share of specific industries (e.g., Construction and Administration), to allow the analysis to identify industry-specific moderating effects. The outcome variable remained the share of self-employed women, measured as a percentage of self-employed persons by region within the UK.

Table 2. Regression Coefficients of Gender Pay Gap Impact on Female Entrepreneurship

Industry	Coefficient	Std. Error	p-value
Administration	-0.0612	0.0170	**0.0004 *** **
Construction	-0.0182	0.0071	**0.0113 ** **
Public defense	0.0191	0.0082	**0.0314 * **
Profsci	-0.0108	0.0051	0.0337 *
Real Estate	-0.0534	0.0292	0.0684
Electr	0.0660	0.0375	0.0794
Waste	0.0820	0.0470	0.0816

Information	-0.0104	0.0060	0.0847
Accommodation	0.0156	0.0099	0.1190
Trade	-0.0067	0.0054	0.2179
Other services	-0.0194	0.0177	0.2760
Education	0.0078	0.0083	0.3465
Finance	-0.0052	0.0060	0.3857
Manufacturing	-0.0029	0.0389	0.4539
Health	0.0007	0.0070	0.9216

Table 2 presents the regression results, which reveal several key aspects of the relationship between the gender pay gap and female self-employment across industries. The regression results indicate that the main effect of the gender wage gap is positive and statistically significant ($\beta = 0.00188$, $p = 0.0088$), which suggests that the share of self-employed women increases with the level of gender wage inequality across regions. However, this process is not uniform across industries.

The results indicate statistically significant negative interaction effects in the construction ($\beta = -0.0182$, $p = 0.0113$), administrative ($\beta = -0.0612$, $p = 0.0004$), and professional, scientific and technical services sectors ($\beta = -0.0108$, $p = 0.0337$) that suggest that where there is gender wage inequality in a male-dominated industry or industry with a degree of inflexibility, there is less likelihood that women respond to this inequality by engaging in more self-employment. In conjunction with the previous finding related to the regionally dominant sectors, we can infer that structural constraints, culture, or occupational barriers inhibit entrepreneurial action to respond to wage inequality in these industries.

On the other hand, there is a positive and statistically significant interaction in the public defence industry ($\beta = 0.0191$, $p = 0.0314$), which suggests that if there are wage inequalities in this context, women engage in self-employment more strongly. This may represent a push toward entrepreneurial options in settings with limited upward mobility or dwindling wages in the formal public sector.

Moreover, the finance, education, health, and especially trade industries displayed no statistically significant interaction effects, suggesting that the relationship between wage disparity and self-employment remained relatively stable and consistent in self-employment in these industries, regardless of the size of the regional economy within the specific industry. While finance displayed the highest average wage gap, its interaction ($p = 0.3857$) shows no consistent, reported result, indicating that the relationship between wage disparity and self-employment could be influenced by the size of the industry for self-employment.

Overall, the regression findings indicate that gender wage inequality and entrepreneurship among females are highly dependent on industry structure. Wage inequality does not uniformly drive self-employment, but interacts with characteristics of industries that either restrict or enable entrepreneurship.

4.3 Interaction Effects by Industry: Administration vs. Health

To examine how the gender pay gap and female self-employment differ across sectors, two industries with contrasting characteristics, Health and Administration, were chosen for visual comparison, using interaction plots. In the scatterplots, each dot represents a UK region.

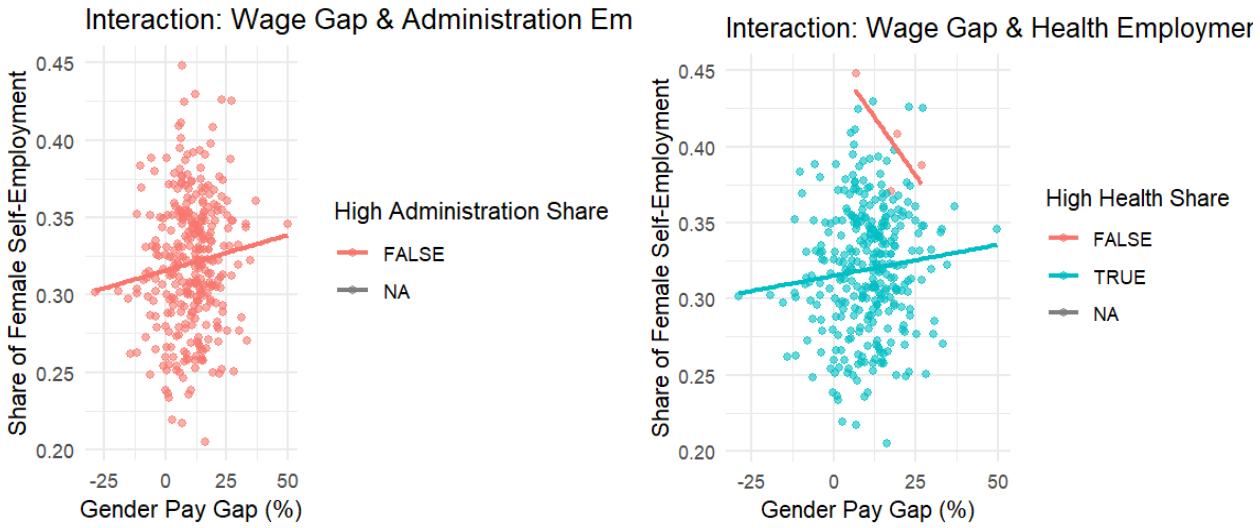

Figure 1. Gender Pay Gap and Female Self-Employment by Industry (Admin vs. Health)

The x-axis displays the gender pay gap (%), and the y-axis shows the share of female self-employment in that region. The colour of each dot indicates whether the region has a high share of employment in the given industry. Specifically, regions with an industry share above 10% (i.e., share > 0.1) are labelled TRUE and represented in blue, while those with a lower share are labelled FALSE and shown in red. Regions with missing or excluded data are coded as NA, shown in grey. A linear regression line is plotted separately for the TRUE and FALSE groups to illustrate the trend in each subgroup.

4.3.1 Administration Sector

The plot for the Administration sector indicates a slight positive relationship between the gender pay gap and the percentage of female self-employment, but only in regions where employment in the administrative sector is low (highlighted in red, labelled as *FALSE*). This tendency may suggest that in areas with little administrative employment, women may be more likely to work for themselves in response to wage inequity. However, there are no observations with a TRUE classification (i.e., there are no regions with greater than 10% employment in administration) limits the capacity for comparisons across employment concentration levels. The lack of TRUE classified regions at the 10% threshold suggests the Administration sector is more evenly distributed or the sector's regional concentration is overall low.

4.3.1 Health Sector

In contrast, the Health sector demonstrates a strong and unambiguous positive correlation between the gender pay gap and female self-employment in regions where health employment is higher (coloured blue, TRUE). This implies that in settings where women are more present in health-related jobs, wage inequality may act as a more powerful “push” factor for women to become entrepreneurs. In addition, in regions with low health employment (FALSE, red), the trend seems to be negative, which suggests that cultural or institutional barriers in those regions may hinder women’s entrepreneurial responses to wage disparities.

4.3.2 Comparison & Interpretation

This comparative analysis provides strong evidence for the hypothesis that the link between gender wage inequality and female self-employment is dependent on the industry. In female-dominated or socially supportive industries (i.e. Health), wage inequality may encourage higher rates of entrepreneurship, likely linked to transferable skills, networks or normative support for women-led enterprises. Whereas in male-dominated and rigid institutional sectors, such as Administration, where women are underrepresented and employment shares are relatively uniform, the relationship between wage inequality and female self-employment appears weak or even absent. Overall, these plots help explain why gender pay gaps lead to different outcomes in entrepreneurship depending on the occupational structure of the region. They also help reinforce the importance of examining industry structure when considering how structural inequalities impact women's economic behaviours.

4.4 Robustness Check

4.4.1 Robustness Check 1: Industry Fixed Effects

In order to further test the robustness of the main findings, a robustness check was performed by re-estimating the same regression model, including industry fixed effects. This addresses the possibility that the association between the gender pay gap and female entrepreneurship could be confounded by unobservable characteristics of the specific industry of interest, such as institutional barriers, labour practices, or sectoral gender norms. By controlling for these industry fixed effects in the analysis, it will test whether the positive relationship observed in the main results is robust across the heterogeneous structure of the UK labour market.

Table 3. Regression with Industry Fixed Effects

Variable	Coefficient	Std. Error	Significance
Wage_gap_pct	0.0002	0.0001	.
Industry Male	0.037	0.018	*
IndustrySelf_EmpWithout_Male_Self	-0.028	0.006	***
IndustrySelf_Ft_Male_Self	-0.126	0.024	***
Share under the age of 25	-0.392	0.056	***
Share_Female	1.143	0.262	***
Brexit_EPE	-0.232	0.020	***
Asian	-0.001	0.0002	***
Black	0.0003	0.0005	
Population Density	0.00000	0.00000	
Unemployment Rate	-1.249	0.172	***

The results from this robustness check are presented in Table 3. The coefficient for Wage_gap_pct shows a value of (0.0002), indicating positive values continue to persist, meaning industries with a larger gender pay gap are still associated with a greater share of women-owned businesses (controlling for differences across industries). The p-value is statistically significantly weaker than before ($p \approx 0.09$). However, the positive direction and similar magnitude of the coefficient, compared to the main results, continue to support the hypothesis that women may respond to wage inequality as a structural "push" factor, particularly in regions with higher levels of wage disparity.

Several control variables show consistent effects with the main model and further reinforce the overall robustness of the analysis. Share_Female continues to show a strong, positive association with female self-employment, indicating that more female workers encourage women in transitioning out of traditional employment into entrepreneurship. Share_Under25, Unempl_Rate, and Brexit_EPE continue to show a negative association consistent with previous findings, and indicate that regions with a younger workforce, high unemployment, and exposure to Brexit uncertainty are less likely to encourage a greater level of women's entrepreneurship.

Controls for industry fixed effects (such as IndustryMale and the two self-employment industry dummies) account for baseline differences across industries and reduce the effect of the gender pay gap from simple industry fixed effects. Even without isolating a specific industry or accounting for potential outliers, the positive association between wage inequality and female self-employment continues to emerge as a consistent trend across the labour market.

In conclusion, including the industry fixed effects provides further evidence to confirm the findings of this thesis and highlights that they and the associations are not an artefact of any one industry. The robust and consistent association between the gender pay gap and the share of female self-employment potentially indicates that structural wage inequalities continue to influence women in transitioning from traditional employment to entrepreneurship. The robustness of the industry fixed effects strengthens the validity of the overall analysis and supports the broader conclusion that reducing the current gender pay gap is important not only for achieving fairness in the labour market, but could also increase women's entrepreneurial activity.

4.4.2 Robustness Check 2: Interaction Model

To additionally confirm the robustness of the main findings, an interaction term was added between gender diversity (based on the share of female employees in each region) and the share of young workers in each region. This is to test the proposition that the relationship between gender diversity and female self-employment is contingent on the age structure of the workforce, and to evaluate if and how the age structure of the workforce moderates the relationship between the gender pay gap and women transitioning into entrepreneurship.

Table 4. Regression with Gender Diversity × Youth Interaction

Variable	Coefficient	Std. Error	Significance
(Intercept)	-0.304	0.597	
Wage_gap_pct	0.00015	0.00008	.
Share_Female	1.82	1.18	
Share_Under25	0.215	0.563	
Female_Youth_Interaction	-2.507	4.563	
Brexit_EPE	-0.241	0.025	***
Asian	-0.00111	0.00021	***
Black	0.00038	0.00048	
PopDensity	0.00001	0.00000	.
Unempl_Rate	-1.206	0.197	***
IndustryMale	0.024	0.0096	*
IndustrySelf_EmpWithout_Male_Self	-0.0228	0.0046	***
IndustrySelf_Ft_Male_Self	-0.1588	0.0074	***

The coefficient for the gender pay gap (Wage_gap_pct) remains positive (0.00015) and is still marginally statistically significant at the 10% level. This reinforces the conclusion that a larger gender wage gap corresponds with a larger share of women-owned businesses, and this finding remains stable after controlling for industry fixed effects and the intersectional interaction of gender diversity and youth. This is consistent with the results from both the main model and the first robustness check, indicating that wage inequality continues to be a structural driver, or "push" factor, of female entrepreneurship.

While the interaction term (Female_Youth_Interaction) demonstrates a negative coefficient, the result is not statistically significant. This indicates that the interaction between gender diversity and share of young employees does not substantially contribute to enhancing the impact of either on the percentage share of women-owned businesses, above and beyond their individual effects. While the data may suggest that gender diversity is a facilitator of female entrepreneurship, this effect is not modified by the age of the workforce. This continues the pattern delineating that the association between the gender pay gap and female self-employment is significant over demographic interactions.

The other control variables are consistent in direction and significance, as with the previous models. Both the share of Asian workers and the unemployment rate (Unempl_Rate) continue to be significant and negatively correlated with women's entrepreneurship rates. Brexit-related economic uncertainty (Brexit_EPE) maintains a robust, negative association with women's entrepreneurship; thus, the model in this portion controls for demographics, as well as unobserved heterogeneity from working in certain segments of the economy by using the industry dummies, determining there is no industry-level bias to these results.

Both robustness checks, industry fixed effects and gender diversity and youth interactions, confirm that the positive relation between the gender pay gap and women's entrepreneurship is stable to changes to model specification. In both additional analyses, the primary results remain constant, showing that industries and regions with a greater pay gap continue to have a larger number of women-owned businesses. This provides strong evidence that the results are robust and support the core conclusion that structural pay inequalities play a significant and consistent role in driving women's transitions to entrepreneurship in the UK.

5. DISCUSSION

The relationship between gender pay inequality and women's entrepreneurship does not look the same in every industry. The results from above suggest that industry context becomes an important factor in understanding the link whether high gender pay gaps relate to more women starting their own business. This section compares how this relationship differs across industries, linking these differences to known barriers and factors from the literature framework. Therefore, statistically proven, in some sectors a large wage gap pushes women toward self-employment, while in others that push effect is muted or even reversed. Below, we explore these industry comparisons in detail, highlighting examples from the highest, lowest, and mid-range ends from the results obtained.

5.1 Interpretation and Industry Differences

5.1.1 Male-Dominated and Inflexible Sectors

The observed variations across industries highlight the need to consider industry-specific characteristics such as the percentage of women employed in the industry, gender norms, and barriers to entry, in order to understand whether gender pay gaps operate as a push factor that encourages women to be entrepreneurs or a pull factor that discourage women from self-employment. For example, in male-dominated sectors such as construction, where women are a small part of the workforce, a strong negative relationship was found, indicating that in sectors experiencing considerable gender pay gaps, there are lower levels of women's entrepreneurship or engagement. Such findings are consistent with recent evidence presented in Gaweł and Mroczek-Dąbrowska's (2021) paper that in industries characterised by low female representation and high inequality, the gender pay gap acts predominantly as a symbol of discrimination, thereby discouraging women from entrepreneurial entry rather than motivating them.

In such sectors, a large pay gap may signal deep structural discrimination and exclusionary culture, which may discourage women from pursuing personal ventures. In construction, the low levels of women may sometimes be dictated by structural barriers such as job segregation and lack of access to relevant professional networks or financial capital, and the cumulative effect of cultural and structural factors results in worsening gender wage inequities. Thus, these overlapping cultural and structural factors illustrate why fewer women either work or operate businesses in highly unequal industries. Consequently, the results highlight the notion that the gender pay gap in highly publicly unequal industries is more a reflection of deeper institutional discrimination, and correlates more with institutional theories of entrepreneurship, than a simple economics “push” effect (Gaweł & Mroczek-Dąbrowska, 2021, p. 3).

5.1.2 Low-Correlation Industries

On the other hand, sectors dominated by female employees, such as education and healthcare, showed no correlation or a weak correlation between wage inequality and female entrepreneurship. These sectors are mainly governed by public or semi-public institutional work arrangements that require pay scales to be uniform and public, limiting the potential for pay discrimination. Wage uniformity is often a result of stronger labour protections and established salary ladders that are aimed at reducing income differences between genders (Blau & Kahn, 2017).

Additionally, these industries typically provide increased job security, benefits, and flexibility, which diminishes women's need or desire to separate from earnings-based employment in order to become self-employed. In these fields, moving away from the workplace may be based more on personal desires and lifestyle as opposed to institutional inequalities. In conclusion, while wage gaps persist in these fields, they appear to have less of an effect on women’s motivation to engage in entrepreneurship because institutional protections reduce some of the discouraging factors associated with wage disparities.

5.1.3 Moderately Affected Industries

The results also revealed that certain industries, such as administrative services, finance, and professional industries, fall within the moderate range of correlation. These industries, while not as male-dominated as construction or as regulated as healthcare, present a complex mix of gender integration and gender inequality. Moderate positive correlations between the gender pay gap and self-employment for women were observed throughout the analysis. It appears that women in these industries are entering into self-employment due to a perception of limited mobility or earning potential, which is relative to men who are working in similar positions within the same industries.

Pathak et al. (2013) argue that in gender-diverse industries, but is hard to achieve career growth, women leave for the option of entrepreneurship in order to create independence and equality. For example, in administrative services, women are employed in clerical and support positions, which in many cases leads to limited promotion opportunities and stagnant salaries. The increased proportion of women starting their own business in professional industries such as consulting, human resources, or virtual support can be viewed here as strategic exits from unsatisfactory employment structures.

Similarly, in finance and professional services, performance-based pay systems can also increase existing gender gaps as a result of subjectivity in performance evaluation and implicit bias. Jones and Kaya (2023) have shown that performance pay systems, particularly in the private sector, tend to reward men due to an inclination to male-coded behaviours such as competitiveness. The choice to pursue entrepreneurship in these environments may reflect an effort to gain control over pay, recognition, and promotion in these male-dominated industries.

5.2 Integration with Existing Literature

The findings of this study support previous research, which argued that gender wage disparities are complex and context-specific in relation to women's entrepreneurship. This challenges the simplistic “push factor” theory, where higher wage gaps are expected to drive women out of traditional employment into self-employment. Therefore, the results suggest that the influence of wage disparity is highly dependent on the industry environment. For example, Gaweł and Mroczek-Dąbrowska (2022) suggest that in fields with high exclusion of women, pay differences may act less as a push to act and more as a barrier. When combined with limited access to capital, networks, and institutional support, wage gaps in such settings may signal a hostile environment, thereby discouraging entrepreneurial aspirations. These perspectives are concerned with findings in male-dominant occupations, like construction, where considerable pay disparity among male workers results in lower levels of female entrepreneurship.

On the other hand, Kritikos et al. (2024) found that female-owned firms are mostly service-oriented firms, and these companies favour equal pay practices within the organisation. This suggests that entrepreneurship can be a way for women to create workplaces that reflect their values and, hence, may contribute to reducing gender inequality on the firm level. These positive interactions in fields such as finance and administrative services may reflect the same dynamic, where women are using entrepreneurship to fight against inequality from outside traditional corporate hierarchies. Additionally, Castellaneta et al. (2020) mentioned that when entry barriers are lower, and women have specific experience and skills related to the industry, then women are more likely to transition to entrepreneurship. This supports the idea that it is not just about wage inequality, but about the overall structure of opportunity in an industry, such as flexibility, previous experience, or professional connections.

Overall, the insights provided in these studies confirm that the impact of wage inequality on entrepreneurs is not linear and not common to all experiences. Rather, industry characteristics, such as gender balance, opportunities for upward mobility, the regulatory regime of the industry, and cultural practices, are playing an important role in determining how women respond to workplace inequality.

5.3 Implications and Significance

The results of this study lead to both theoretical and practical considerations of how gender wage inequality intersects with women’s entrepreneurship across sectors in the UK. This is particularly significant because the relationship between gender pay inequality and women’s entrepreneurship is not consistent across the sectors, which highlights the necessity for sector-sensitive approaches to addressing the gender pay gap and encouraging women to enter self-employment.

From a policy perspective, this study indicates that male-dominated industries, like construction, feature a large gender pay gap and relatively few female entrepreneurs. Interventions in these sectors should go beyond enacting policies related to the notion of equality and instead should disrupt existing dedicated structural and cultural barriers within these sectors. This may include specific funding channels directed at women, industry-specific mentoring programs, networks that have historically excluded females, and funding programs which work to change the way women perceive the feasibility of entrepreneurship and finding a pathway to self-employment.

The findings also show a more nuanced relationship in sectors with smaller gender pay gaps and greater female participation in the labour force (e.g., administrative services or finance). The results indicate a moderate positive association between gender pay inequalities and self-employment, which suggests women reconceptualise entrepreneurship as a way to overcome other industries to redress persistent gender inequalities

when it comes to promotion or pay. Policy responses to women entrepreneurship in these fields could include supporting mid-career transitions into entrepreneurship, providing flexible financing products which consider women's professional employment circumstances, and ensuring entrepreneurship support incorporates both business development skills as well as structural obstacles.

Another significant consideration, included in previous research, as indicated by Kritikos et al. (2024), is how women's entrepreneurship manifests the potential to influence broader gender equity in the labour force. For example, previous research indicates that female-led firms typically have smaller internal gender pay gaps and equal opportunity workplace practices. Thus, advancing women's entrepreneurship is not only beneficial on an individual level, but when enacted collectively, has the potential for long-term meaningful change by altering organisational norms around pay, leadership, and inclusion. When women's entrepreneurship is supported in a more equitable ecosystem, it could have a multiplier effect for improving conditions for their employees.

5.4 Limitations

Despite its meaningful contributions, this study also has several limitations. First, this analysis relied on a cross-sectional dataset, which limits the ability to make causal claims with these data. The statistical associations between gender pay gaps and women's entrepreneurial activity reflect simply an association between two variables at a particular time point, rather than illustrating direct or temporal causation. In order to examine whether gender pay gaps affect women's entrepreneurial behaviour over time, a panel data or longitudinal approach is necessary.

Second, it uses data from a single year, 2023, which could limit the extent to which the findings can be generalised. The gender pay gap and the dynamics of entrepreneurship can be sensitive to changing macroeconomic conditions, emerging policies, and labour market disturbances. Accordingly, findings from a single post-Brexit period and a single year post-pandemic may ignore long-term trends or cycles that affect women's behaviour in the labour market.

Third, it is undertaken at a regional-industry level of analysis, based on aggregated Local Authority District (LAD) data. Aggregated data sources can mask key within-group heterogeneity (for example, individual characteristics), specifically regarding women's motivations to enter entrepreneurship, which are likely to vary by age, education, employability, and domestic responsibilities, even within the same sector. Hence, the findings should be interpreted as indicative of the gendered relationships within a sectoral and regional analysis rather than the factors that impact an individual's choice.

Finally, this study does not include motivation or attitudinal variables, such as perceptions of discrimination at work, aspirations for a career, or preferences for flexibility. Previous research (see Llados-Masllorens & Ruiz-Dotras, 2022) has shown that these are important considerations in women's decision to engage in self-employment. These factors could be better captured within a qualitative or mixed-methods design, which was beyond the scope of this study that was framed within a quantitative analysis.

6. CONCLUSION

This study examined the relationship between gender parity in pay and women's self-employment across industries in the UK. The results indicate that gender pay inequalities are not homogeneous across industries; rather, they are contingent on the specific characteristics of the industry, such as the gendered nature of work, institutional contexts, and occupational norms.

Gender pay inequality can be a "push" factor towards entrepreneurial ventures, but the nature of the relationship is contingent on the industry context. In industries with a significant male majority and less flexibility, such as construction, a sizeable wage gap exists and is correlated with low female entrepreneurship, and this is augmented by structural elements of the industry. However, in industries with a moderate level of gender composition, such as administrative services, gender pay inequality is positively correlated with self-employment, indicating women may become entrepreneurs as a way out of inequitable environments. In gendered female industries, such as education and health and social care, where there are stronger institutional protections for pay equity, there is no association between pay gaps and self-employment.

These findings contribute to a growing body of literature (e.g., Blau & Kahn, 2017; Kritikos et al., 2024), which acknowledges the importance of industries and their specific conditions when investigating barriers to women's entrepreneurship. From a policy perspective, if practitioners are seeking to adopt an inclusive approach to women's entrepreneurship, more directed, sector-specific initiatives will be necessary to consider and address barriers to engagement.

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