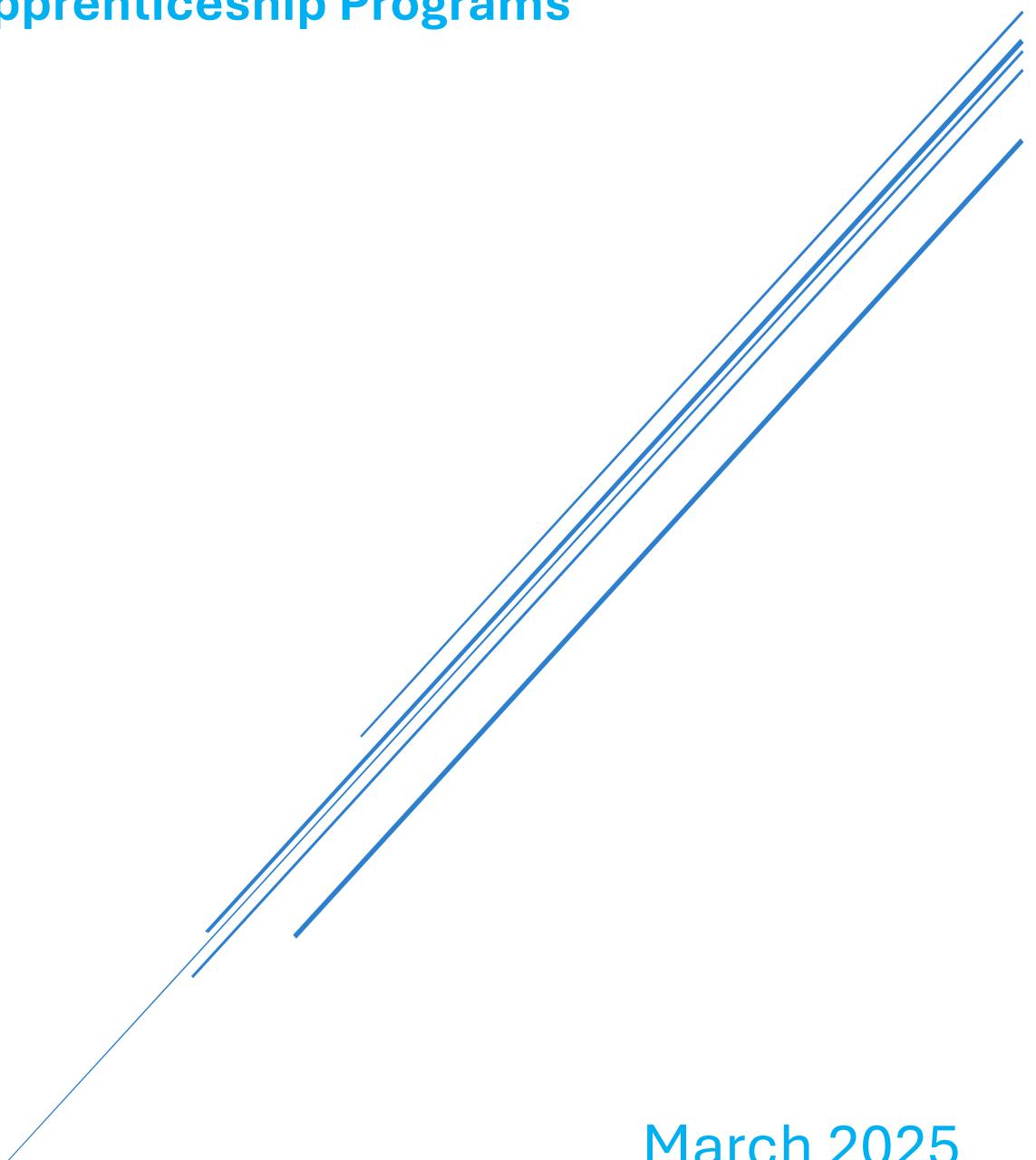


APPRENTICESHIP TRAINING INVESTMENT REPORT: STRATEGIC SECTOR ANALYSIS AND RECOMMENDATIONS

**"Sector Insights & Investment Strategies
for Apprenticeship Programs"**



March 2025
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EXECUTIVE SUMMARY

This report aims to provide strategic recommendations for apprenticeship investments by analysing the most suitable regions, age groups, and sectors. The study examines student distribution, gender and age-based wage disparities, occupational growth rates, and high-earning industries.

Key Findings:

- **Student Distribution:** The highest concentration of apprenticeship students falls within the 16-18 and 23-26 age groups. These groups consist of high school graduates seeking direct entry into the workforce and individuals considering career transitions.
- **Regional Distribution:** The North region has the highest student density, presenting a significant opportunity for apprenticeship investments. The South region follows closely behind in student numbers, making it another strong candidate for targeted training programs. Meanwhile, the East region, with its lower student numbers, may benefit from remote or hybrid training models.

- **Gender Pay Gap:** Male workers earn higher average wages than female workers, and this gap widens with age, reaching 29% by the age of 30.
- **Occupational Growth Rates:** Sales, customer service, administrative, and technical occupations have experienced strong growth in recent years. Notably, the sales and customer service sector showed significant recovery in the 2020-2021 period.
- **High-Paying Sectors:** IT, engineering, finance, and transportation stand out as the most profitable investment areas for apprenticeship training programs.

Strategic Investment Recommendations:

- Focus on the North region by establishing apprenticeship programs, while also considering the South as a strong secondary region due to its high student density. For low-density areas like the East, explore remote or hybrid learning solutions.
- Develop fast-track vocational training programs for the 16-18 age group, helping them transition directly into the workforce.
- Create industry-specific apprenticeship programs (e.g., engineering, finance, technology) for the 23-26 age group, supporting career changers and skill enhancement.
- Implement initiatives to enhance female participation in high-paying occupations and promote equal opportunities.

- Expand apprenticeship programs in growing sectors and align training models with industry needs.
- Leverage transportation and location analysis to establish apprenticeship training centres in strategic, easily accessible locations.

This analysis will help investor's structure apprenticeship programs in high demand sectors to maximize efficiency and impact.

INTRODUCTION

This report aims to analyse the most suitable regions, age groups, and sectors for apprenticeship training investments. Apprenticeship programs provide individuals with both vocational skills and hands-on work experience, making them more competitive in the labour market. The study examines student distribution, gender-based salary differences, growing industries, and the highest-paying professions to identify strategic opportunities for apprenticeship programs.

METHODOLOGY

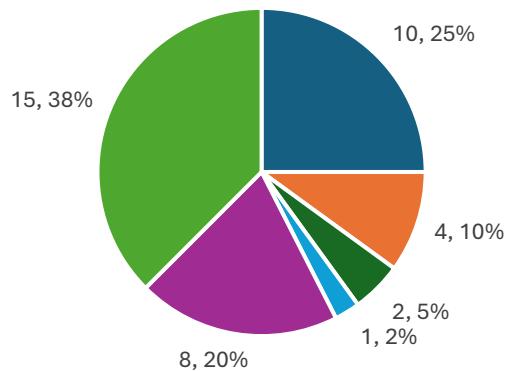
This report is based on publicly available datasets, government reports, and market analyses from reliable sources. Additionally, qualitative and contextual data were gathered through direct input from the client and official statistics provided by the Office for National Statistics (ONS). All data has been handled with strict adherence to data privacy and confidentiality standards.

- **Statistical Analysis:** Calculation of mean, median, and standard deviation values for student and salary data.
- **Data Visualization:** Graphs and tables were used to illustrate key findings.
- **Comparative Analysis:** Regional differences in salaries, travel time, and student density were examined to highlight disparities and opportunities. The methodology ensures that the findings are data-driven and provide a solid foundation for investment recommendations.

1. STUDENT DISTRIBUTION BY REGION

Region	Student Count
South	10
Southwest	4
East	2
East Midlands	1
Midlands	8
North	15

% Student Count



■ South ■ South West ■ East ■ East Midlands ■ Midlands ■ North

Analysis & Insight: Student Distribution by Region

Analysis & Insight: Student Distribution by Region

According to our student distribution analysis:

- . **The North region (38%)** has the highest student concentration, presenting a strong opportunity for apprenticeship investments.
- . **The South region (25%)** follows as the second highest in student density, making it another strategic area for investment.
- . **The Midlands region (20%)** shows a moderate student presence, suggesting potential for targeted programs.

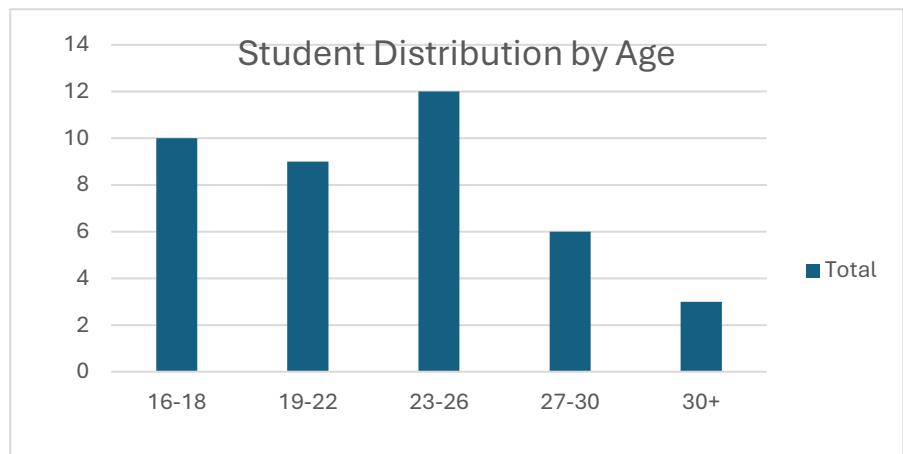
.The Southwest region (10%) has a lower student concentration but still presents opportunities for specialized apprenticeship training.

.The East region (2%) has the lowest student density, indicating that remote or hybrid apprenticeship training models could be more effective in this area.

This suggests that **investing in apprenticeship programs in the North and South regions may yield the highest efficiency**, while hybrid training models could enhance accessibility in lower-density areas like the East.

2. STUDENT DISTRIBUTION BY AGE

Age Group	Count of Age
16-18	10
19-22	9
23-26	12
27-30	6
30+	3
Grand Total	40



Analysis & Insight: Student Distribution by Age

16-18 Age Group (Post-High School Students)

. Individuals in this age group may prefer to enter the workforce directly or pursue vocational training instead of going to university.

. Apprenticeship programs provide them with an opportunity to gain practical skills and early work experience.

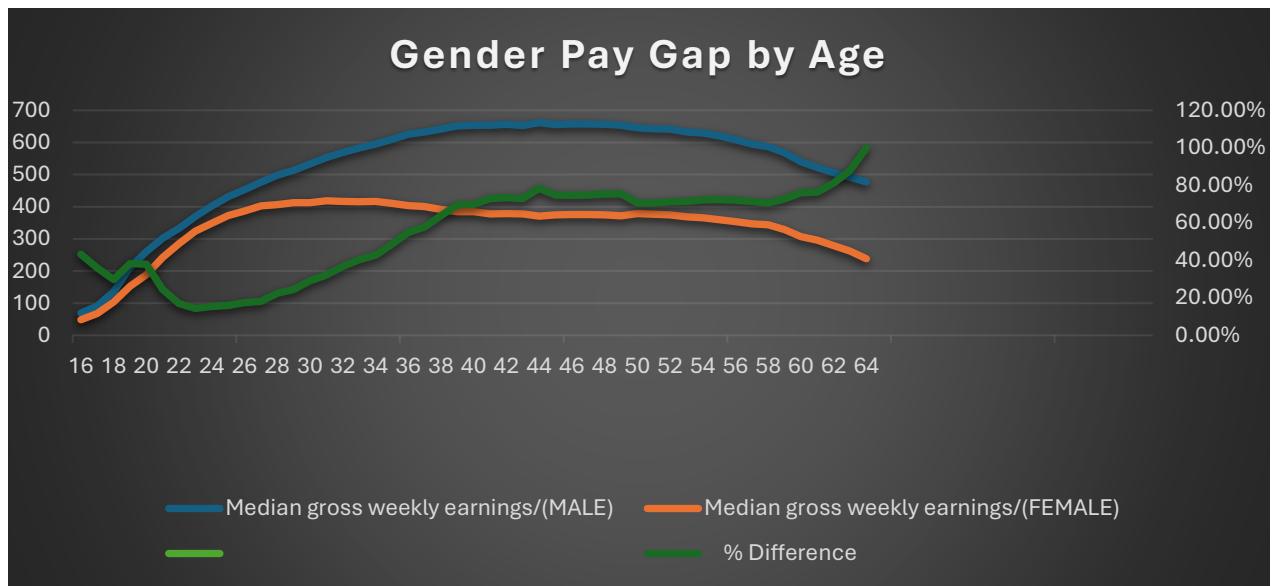
23-26 Age Group (Post-University or Career Changers)

. This group may consist of individuals who have graduated from university but seek to gain practical skills alongside their academic education.

. It may also include those looking to change careers or acquire new professional skills.

3.GENDER PAY GAP BY AGE

Age	Median gross weekly earnings (MALE)	Median gross weekly earnings(FEMALE)	Difference
16	69.41	48.48	43.17%
17	91.92	67.64	35.90%
18	135.39	104.34	29.76%
19	210.98	152.53	38.32%
20	260.02	188.6	37.87%
21	301.62	242.44	24.41%
22	333.29	284.85	17.01%
23	369.93	323.48	14.36%
24	402.8	349.17	15.36%
25	431.55	372.3	15.91%
26	453.56	386.31	17.41%
27	476.1	402.8	18.20%
28	498.13	406.94	22.41%
29	513.23	412.39	24.45%
30	532.87	412.92	29.05%
31	552.97	418.63	32.09%
32	569.47	416.38	36.77%
33	582.76	415.41	40.29%
34	595.07	417.02	42.70%
35	610.3	410.64	48.62%



Values	Median gross weekly earnings (Male)	Median gross weekly earnings (Female)
Mean	536.2993	344.006
Standard Error	20.85723	11.64735
Median	590.8216	374.878
Mode	#N/A	#N/A
Standard Deviation	144.5031	80.69518
Deviation	20881.15	6511.712
Sample Variance	1.848597	3.428703
Kurtosis	-1.54039	-1.89988
Skewness	569.8085	350.988
Range	91.91568	67.64015
Minimum	661.7242	418.6281
Maximum	25742.36	16512.29
Sum	48	48
Count		

Analysis & Insight: Gender Pay Gap by Age

1. Wage Gap Increasing with Age:

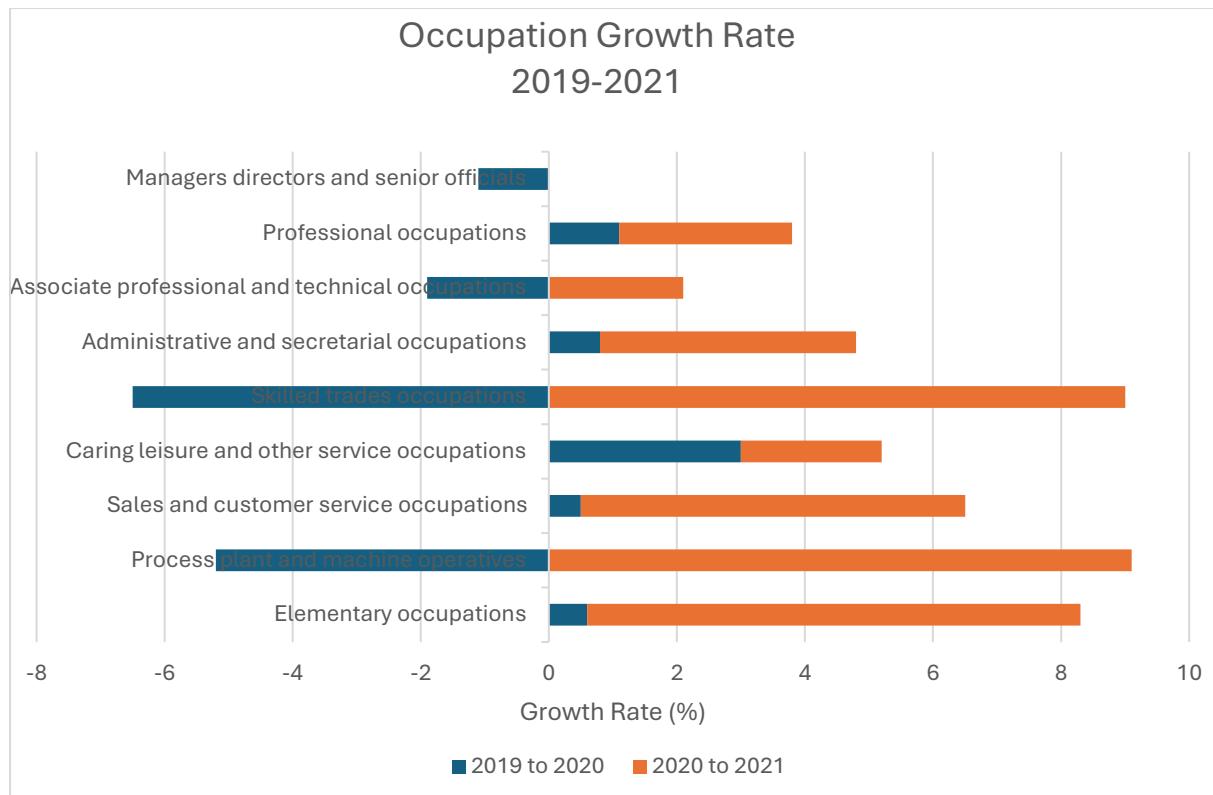
In the 16-30 age range, men earn higher weekly average wages than women. This wage gap increases with age, reaching **29% by the age of 30.**

2. Standard Deviation and Career Opportunities: Men's wages vary over a wider range, whereas women's salaries remain within a **narrower** band. This indicates that men have a higher likelihood of accessing high-paying positions

3. Difference in Wage Growth Rate: Men's salaries increase steadily with age, while **women's wage growth slows down after 25**. This suggests that women may require additional **support** for career progression.

4. OCCUPATIONS GROWTH RATE (2019-2021)

Occupations	2019 to 2020	2020 to 2021
Elementary occupations	0.6	7.7
Process plant and machine operatives	-5.2	9.1
Sales and customer service occupations	0.5	6
Caring leisure and other service occupations	3	2.2
Skilled trades occupations	-6.5	9
Administrative and secretarial occupations	0.8	4
Associate professional and technical occupations	-1.9	2.1
Professional occupations	1.1	2.7
Managers directors and senior officials	0	0



Analysis & Insight: Occupations Growth Rate (2019-2021)

1. Fastest growing sectors in 2020-2021:

- . Elementary occupations (+7.7%)
- . Sales and customer service occupations (+9.1%)
- . Administrative and secretarial occupations (+4%)
- . Associate professional and technical occupations (+4%)

2. Industries with decline:

- . Sales and customer service occupations saw a -5.2% drop in 2019-2020 but rebounded with +9.1% growth in 2020-2021.
- . Administrative and secretarial occupations declined -6.5% in 2019-2020 but later grew by 4%.

3.Stable industries:

. Managers, directors, and senior officials showed no growth in 2020-2021.

5.MEDIAN ANNUAL PAY FOR APPRENTICESHIP-SUITABLE OCCUPATIONS

Description	Code	Median
Business and financial project management professionals	2424	51009
Business, research and administrative professionals n.e.c.	2429	50787
Electrical engineers	2123	50354
Rail transport operatives	8234	49893
IT business analysts, architects and systems designers	2135	49510
Electronics engineers	2124	49367
Production managers and directors in manufacturing	1121	48260
Sales accounts and business development managers	3545	46203
Production managers and directors in construction	1122	45977
Engineering professionals n.e.c.	2129	43165
Management consultants and business analysts	2423	42690
Civil engineers	2121	42530
Mechanical engineers	2122	41167
Financial and accounting technicians	3537	41144
Design and development engineers	2126	40827
Production and process engineers	2127	40790
Quality control and planning engineers	2461	38999
Construction project managers and related professionals	2436	38952
Managers and directors in transport and distribution	1161	38783
Construction and building trades supervisors	5330	37582
Engineering technicians	3113	36537
Business and related research professionals	2426	36219
Finance and investment analysts and advisers	3534	36159
Rail construction and maintenance operatives	8143	35744
Health care practice managers	1241	35659
Electrical and electronics technicians	3112	35101
Telecommunications engineers	5242	34669
Rail travel assistants	6215	34572
Business sales executives	3542	33961
Air-conditioning and refrigeration engineers	5225	32702
Electricians and electrical fitters	5241	32540
Metal working production and maintenance fitters	5223	32110

Marine and waterways transport operatives	8232	32063
Plumbers and heating and ventilating engineers	5314	31695
Road construction operatives	8142	31622
IT operations technicians	3131	30885
Draughtspersons	3122	30496
Planning, process and production technicians	3116	30233
Business and related associate professionals n.e.c.	3539	29711
IT user support technicians	3132	29583
Description	Code	Median
Architectural and town planning technicians	3121	29165
IT engineers	5245	28898
Building and civil engineering technicians	3114	28860
Personal assistants and other secretaries	4215	28838
Metal machining setters and setter-operators	5221	28599
Vehicle technicians, mechanics and electricians	5231	28337
Carpenters and joiners	5315	27961
Science, engineering and production technicians n.e.c	3119	27646
Communication operators	7214	27608
Vehicle paint technicians	5234	27239
Quality assurance technicians	3115	27115
Construction and building trades n.e.c.	5319	27054
Undertakers, mortuary and crematorium assistants	6148	26625
Transport and distribution clerks and assistants	4134	26166
Finance officers	4124	25522
Construction operatives n.e.c.	8149	25477
Pharmaceutical technicians	3217	25385
Photographers, audio-visual and broadcasting equipment operators	3417	24887
Air transport operatives	8233	24470
Pre-press technicians	5421	24427
Elementary construction occupations	9120	24285
Medical and dental technicians	3218	24214
Stock control clerks and assistants	4133	23503
Printing machine assistants	8127	23300
Records clerks and assistants	4131	23257
Pensions and insurance clerks and assistants	4132	22516
Laboratory technicians	3111	22152
Nursing auxiliaries and assistants	6141	22093
Library clerks and assistants	4135	21324
Sports and leisure assistants	6211	21000
Air travel assistants	6214	20873
Sales and retail assistants	7111	19358
Retail cashiers and check-out operators	7112	18686
Sewing machinists	8137	18500
Pharmacy and other dispensing assistants	7114	18353
Nursery nurses and assistants	6121	17922

Teaching assistants	6125	17789
Educational support assistants	6126	16721
Kitchen and catering assistants	9272	16254

Analysis & Insight: Median Annual Pay for Apprenticeship-Suitable Occupations

1. General Assessment:

This table lists the **highest-paying professions** that can be accessed through apprenticeship programs. The median annual salaries range between **£40,000 - £51,000**. Although apprenticeships are often associated with entry-level jobs, this list shows that **apprenticeships can also provide access to high-income careers**.

2. Key Industry Sectors:

The listed professions are predominantly in **engineering, IT, finance, and construction** sectors.

. Engineering Sector (Electrical, Mechanical, Civil, Electronics, Engineering Professionals)

Gaining **technical skills** in electrical, mechanical, and civil engineering is feasible through apprenticeships.

Due to the **high demand for skilled labour**, apprenticeship programs in this sector could attract strong interest.

. IT and Technology Sector (IT Business Analysts, Architects, Systems Designers)

Careers such as IT analysts, system designers, and software specialists **offer a fast-track entry into the technology sector** through apprenticeships.

The **rapid expansion of the industry** ensures strong job security for apprentices.

. **Finance and Business Management Sector** (Business & Financial Project Managers, Sales Managers)

Business and finance management roles can provide **long-term career growth and high salary potential** for individuals starting through apprenticeship programs.

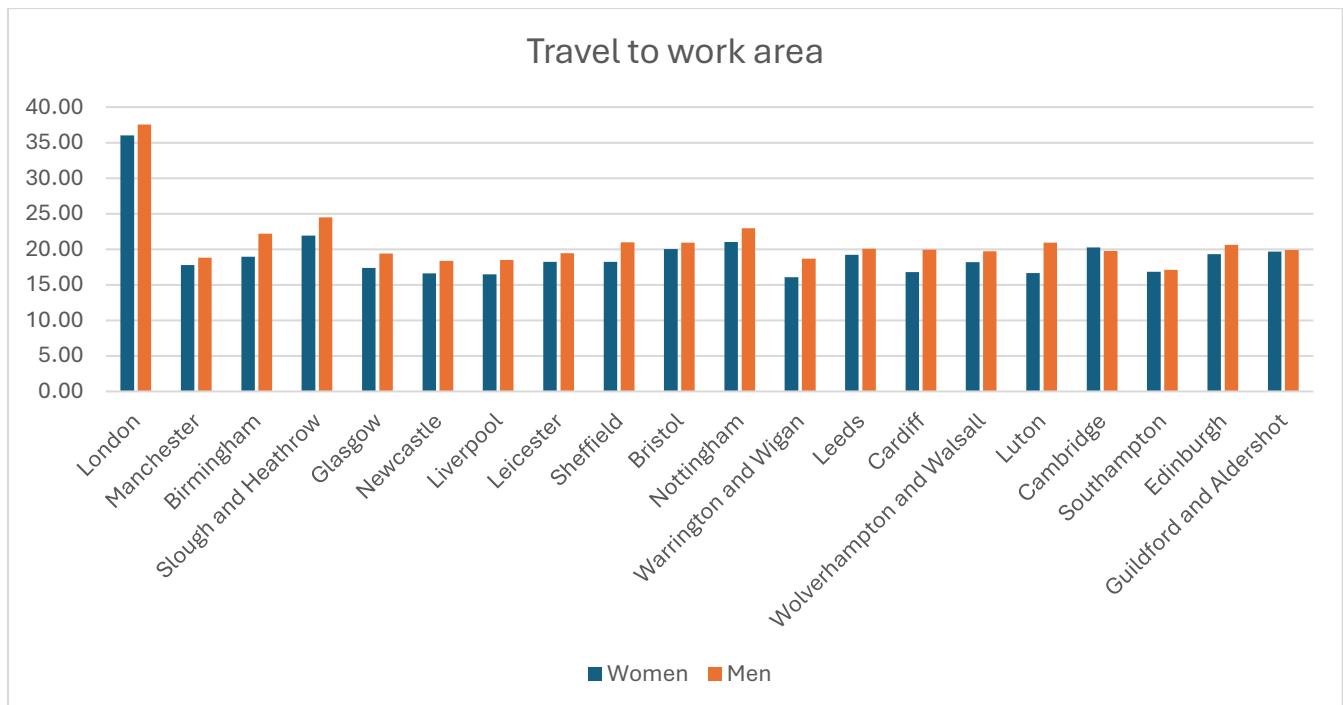
For employers, apprenticeship schemes in these fields can serve as a **cost-effective recruitment strategy**.

. **Construction and Transport Sector** (Production Managers, Rail Transport Operatives)

Positions requiring hands-on experience, such as in transport and construction, are **ideal for apprenticeship programs**.

Jobs such as rail transport operatives and production managers **continue to see increasing demand**.

6. TRAVEL TIME BY REGION AND GENDER



Travel to work area	Women	Men
London	36.03	37.56
Manchester	17.80	18.80
Birmingham	18.95	22.18
Slough and Heathrow	21.94	24.47
Glasgow	17.38	19.41
Newcastle	16.63	18.36
Liverpool	16.47	18.48
Leicester	18.22	19.43
Sheffield	18.23	20.96
Bristol	20.03	20.91
Nottingham	21.00	22.98
Warrington and Wigan	16.07	18.67
Leeds	19.23	20.08
Cardiff	16.81	19.93
Wolverhampton and Walsall	18.20	19.73
Luton	16.65	20.94
Cambridge	20.26	19.75
Southampton	16.83	17.09
Edinburgh	19.32	20.63
Guildford and Aldershot	19.68	19.88

Analysis and Insights: Travel Time by Region and Gender

Key Findings:

- . The average travel time for men (20.14 minutes) is slightly longer than for women (19.28 minutes).
- . Women's travel times show a wider distribution, meaning some travel very short distances while others commute much longer.
- . Travel times are significantly higher in large cities, particularly in London.

Conclusions and Recommendations:

- ❖ **Regional Differences:** In major cities (especially London), apprenticeship trainees experience longer travel times. Therefore, accessibility should be a key factor when selecting training centre locations.
- ❖ **Gender-Based Differences:** The greater variation in women's travel times suggests that they may face different challenges in accessing work. Flexible work options or remote training solutions could help improve women's participation in apprenticeships.

NEXT STEP & STRATEGIC IMPLEMENTATION

This section outlines the key actions to maximize the efficiency of apprenticeship investments based on the findings of this report.

Strategic Investment Recommendations

Regional Prioritization

The client is currently operating in the North but is considering expansion into the South. According to our analysis, the North has the highest concentration of apprenticeship candidates, making it a top-priority region. However, the South also presents a strong investment opportunity as the second most densely populated region. Apprenticeship demand in this area can be met through hybrid or in-person training models.

Sectoral Focus – Digital, Finance, Customer Service, and Management

High-paying and high-growth sectors include Information Technology (IT), finance, customer service, and management.

Aligned with the client's desire to focus on the digital sector, relevant occupations within these areas have been highlighted in the data table.

Apprenticeship programs in these sectors can help meet industry-specific labour demands and guide young individuals into financially rewarding career paths.

16–18 Age Group – Rapid Entry into the Workforce

This group consists of individuals who prefer to enter the

workforce directly after secondary education, rather than pursuing academic routes.

Recommendations:

Develop short-term, intensive apprenticeship programs tailored for this group.

Focus on practical learning and essential vocational skills.

Integrate internship and mentoring opportunities in collaboration with employers.

Offer career guidance to support smooth adaptation into the workplace.

Investment Advantage:

Young individuals who receive training early are more likely to become loyal, skilled employees in the long term.

⌚ 23–26 Age Group – Career Changers / Recent Graduates

This group includes university graduates who face challenges transitioning into the workforce or seek practical skills after academic education. It also includes individuals aiming for a career change.

Recommendations:

Design industry-specific, advanced-level apprenticeship programs (particularly in IT, engineering, and finance).

Structure programs around both technical skills and workplace integration.

Offer job-guaranteed schemes to reduce post-graduation unemployment.

Investment Advantage:

This group tends to be more goal-oriented and can become productive in a shorter time frame.



Gender Equality and Female-Focused Support Strategies

According to the data, men have greater access to higher-paying positions, while women tend to remain in narrower salary brackets — particularly around age 30.

Recommendations:

Design apprenticeship programs specifically targeted at women (especially in high-paying sectors such as IT, engineering, and finance).

Provide mentorship from female role models, coaching support, and career development scholarships.

Encourage participation through flexible training hours and hybrid models.

Promote gender-inclusive messaging in program outreach to challenge stereotypes.

Investment Advantage:

Improving women's access to apprenticeships supports diversity and inclusion efforts while maximizing social impact.



Education Infrastructure and Accessibility Strategies

In large cities, long commuting times can significantly hinder access to education.

Recommendations:

. Position training centres near public transport hubs and in central locations.

.For commute times exceeding 30 minutes, implement remote or hybrid training options.

. Offer online platforms and video-based learning materials for students in remote areas.

. Provide workplace-based learning opportunities through corporate partnerships.

Investment Advantage:

Accessible and well-located training boosts application rates, increases attendance, and improves overall learner satisfaction.

CONCLUSION

This report provided a comprehensive analysis of the most suitable age groups, regions, and sectors for targeted apprenticeship investment. The data highlights that individuals aged 16–18 and 23–26 are the most actively engaged in apprenticeship programs, representing two key demographic groups with high training potential. From a regional perspective, the North stands out as the most promising area in terms of student density. However, the South also emerges as a strong candidate for investment, ranking second in student concentration and offering fertile ground for expansion—particularly for organisations like the client that are seeking to grow operations beyond the North. In contrast, low-density regions such as the East may benefit from hybrid or remote learning models to improve accessibility and reach. In addition, gender-based pay gaps and age-related salary patterns were examined to inform the design of more inclusive apprenticeship programs. The analysis also evaluated occupational growth

trends, identifying IT, finance, customer services, and management as high-potential sectors aligned with the client's strategic interest in the digital economy. In conclusion, well-designed apprenticeship programs—tailored to regional demand, sectoral opportunities, and demographic insights—can significantly contribute to both individual career development and broader labour market resilience. Investing in high-growth, high-paying sectors, especially in strategically selected regions like the South, will allow the client to address current skill gaps while also promoting inclusive and future ready workforce development.

CONCLUSION

This report provided an in-depth analysis of the most suitable age groups, regions, and sectors for apprenticeship investment. The data reveals those individuals aged 16–18 and 23–26 are the most engaged in apprenticeship programs. Regional analysis highlights the North as the area with the highest potential, while hybrid or remote learning models are recommended for low-density areas such as the East.

Furthermore, gender-based pay differences and occupational growth trends were explored to identify the most promising areas for apprenticeship development.

In conclusion, well-structured apprenticeship programs can play a key role in enhancing individual career opportunities while also addressing sector-specific workforce shortages.