Leeds University Business School

UNIVERSITY OF LEEDS

Assessed Coursework Coversheet

For use with *individual* assessed work

Student ID Number:	2	0	1	8	0	0	7	5	5
Module Code:	LUBS5991M								
Module Title:	Creating Effective Data Visualisations								
Module Leader:	Aritad choicharoon								
Declared Word Count:	2954								

Please Note:

Your declared word count must be accurate, and should not mislead. Making a fraudulent statement concerning the work submitted for assessment could be considered academic malpractice and investigated as such. If the amount of work submitted is higher than that specified by the word limit or that declared on your word count, this may be reflected in the mark awarded and noted through individual feedback given to you.

 It is not acceptable to present matters of substance, which should be included in the main body of the text, in the appendices ("appendix abuse"). It is not acceptable to attempt to hide words in graphs and diagrams; only text which is strictly necessary should be included in graphs and diagrams.

Introduction

Universal Export is a garment manufacturing company, headquartered in Southampton, United Kingdom which specialises in producing a range of plain, unbranded apparel items, including t-shirts, hoodies, jackets, and more. These plain garments are purchased by retailers, wholesalers, and other clients, who customise them with their designs before selling them at a marked-up price. This report aims to assist the senior management in making more informed data-driven decisions and to provide the stakeholders with insights into the company's overall operational performance in 2023.

Data description

The dataset provided for Universal Export contains information about their operations domain in 2023. It includes details focusing on transactions, customers, logistic suppliers, and sales teams. The data has been divided into 4 CSV files and 1 JSON file of which the details are as follows:

- Transactions – info about the individual garment orders
- Customers – info about the clients and their details
- Products – info about the variety of garment products produced by the company
- Logistics – info about the logistics partners
- Salesperson – info about the sales team

Data preprocessing

1. **Extraction**

   First, the files were loaded into the power BI environment by selecting the appropriate option. Then, to perform data transformation, the power query editor was utilised.

2. **Transformation**

   For consistency, the 'COST' column in the Products table and the 'salespeople_unique_identification' column in the Customers table are renamed. The address columns in the Customers and Logistics tables are normalised by separating city and country. All the columns representing currency are formatted to currency type.

   In the Customers table, customers with IDs 45-48 had their city and country exchanged, which was fixed by utilising conditional columns. For legend sorting functionality, 2 new columns were created: 'BUSINESS CATEGORY ORDER' & 'CUSTOMER TYPE ORDER'. A new conditional column is created to distinguish between old and new customers.

   In Products table, the null values in the 'PRICE PER UNIT' and 'COST columns are calculated by using the 'PRODUCT PRICE', 'PRODUCT COST' & 'QUANTITY' columns in the Transactions table. The missing values in the 'PRODUCT COLOUR' column for product IDs 71-74 are estimated using the product name and then replaced by a conditional column. For legend sorting functionality, a new column is created: 'PRODUCT CATEGORY ORDER'.

   In the Logistics table, the missing values in the 'CONTACT EMAIL' and 'CONTACT NUMBER' columns are replaced by 'NA' and 'null'. A new conditional boolean column is created based on whether the logistic type is air or not. Measures for the

profits of all logistic types & count of clients using air-type logistics are created using the DAX query.

In the Transactions table, 2 new custom columns are created to hold the profit and profit margin. Profit is calculated by deducting product cost from product price and then profit margin is calculated by dividing profit by product price. A new column is added to hold the transaction week, which is calculated by using the transaction date to identify the week in which the transaction took place.

3. Management

In the model view, a *many-to-one* unidirectional relationship was created between the Customers and Salespeople tables.
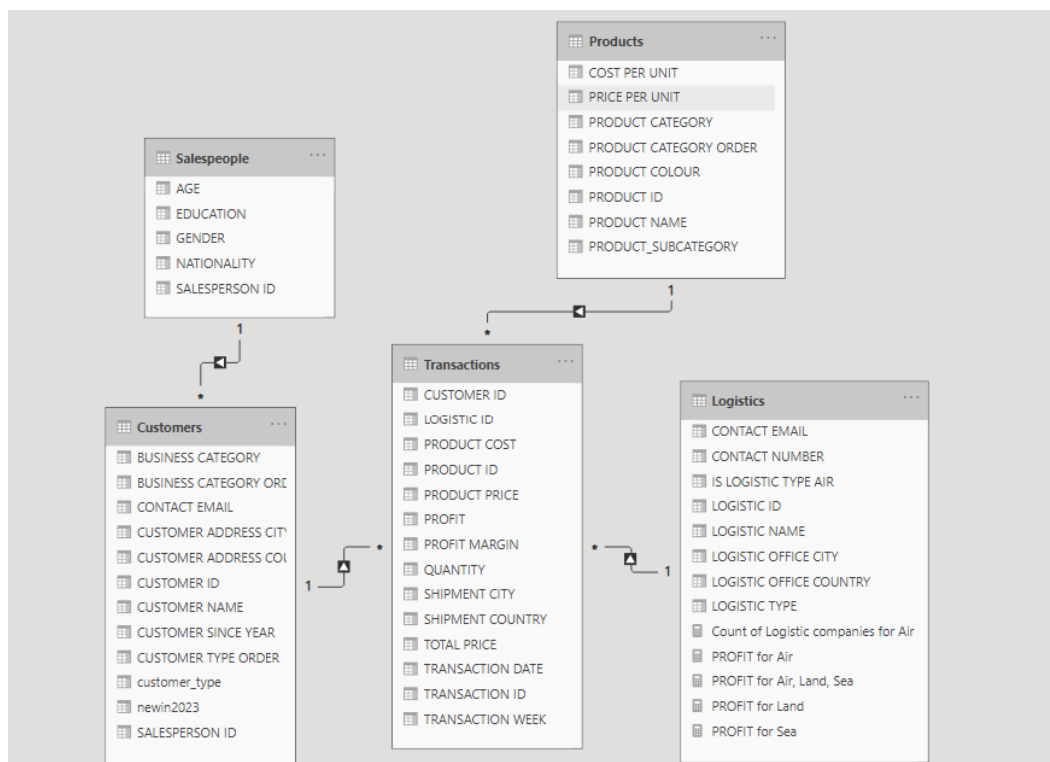

Figure 1

Overview of Universal Export Business Operations in 2023

This report conducts an analysis of Universal Export's revenue and sales for the year 2023. The aim is to provide stakeholders with an annual assessment of the company's 2023 performance which is vital for transparency, accountability, and communication. It allows them to assess the company's financial performance, growth prospects, risk management strategies, and adherence to corporate governance principles.

Revenue analysis

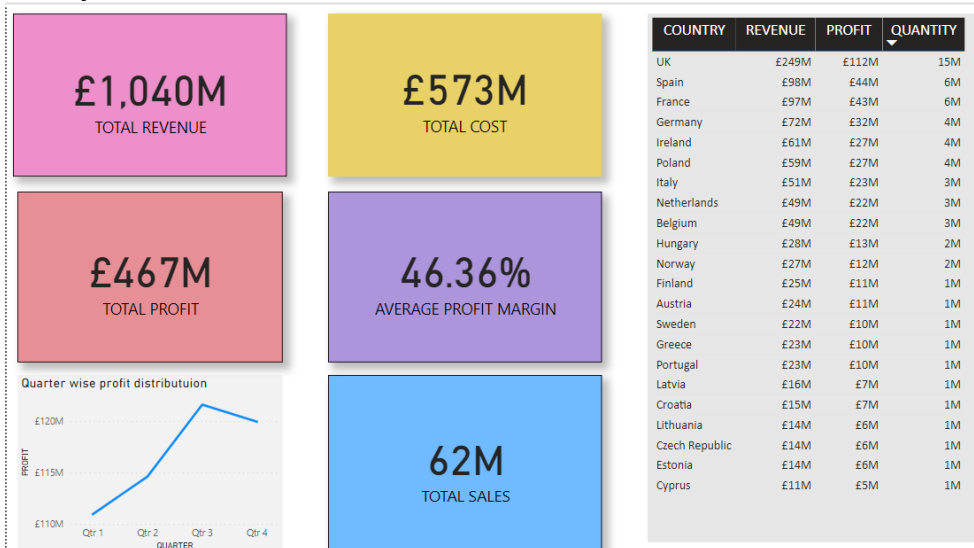| COUNTRY	REVENUE	PROFIT	QUANTITY
UK	£249M	£112M	15M
Spain	£98M	£44M	6M
France	£97M	£43M	6M
Germany	£72M	£32M	4M
Ireland	£61M	£27M	4M
Poland	£59M	£27M	4M
Italy	£51M	£23M	3M
Netherlands	£49M	£22M	3M
Belgium	£49M	£22M	3M
Hungary	£28M	£13M	2M
Norway	£27M	£12M	2M
Finland	£25M	£11M	1M
Austria	£24M	£11M	1M
Sweden	£22M	£10M	1M
Greece	£23M	£10M	1M
Portugal	£23M	£10M	1M
Latvia	£16M	£7M	1M
Croatia	£15M	£7M	1M
Lithuania	£14M	£6M	1M
Czech Republic	£14M	£6M	1M
Estonia	£14M	£6M	1M
Cyprus	£11M	£5M	1M

Figure 1.1

During the year 2023, the company generated a total revenue of £1040 million, with a 46.36% profit margin. The company achieved a gross profit of £467 million, indicating that the company was able to sell its products at an effective price point which covered the cost of goods sold.

The quarter-wise profit distribution shows that the company's profit varied throughout 2023. The company generated £111 million in Q1 and then held strong till Q3, after which the profit dipped a little bit. Q3 had the highest profit, and Q1 had the lowest profit. The company might have invested more in marketing during Q3 after identifying the trend of previous quarters, which led to increased profits.

The majority of the revenue was generated from the UK, Spain, and France sales. The company spent a total of £528.81 million, which included production, R&D, distribution, and marketing costs. Moreover, the company's average profit margin was 46.36%, indicating that the company's revenue was sufficient to cover its full cost. Overall, the company's success was due to its adept cost control, robust sales growth, and capacity to offer its goods at a price that would enable it to recover its costs.
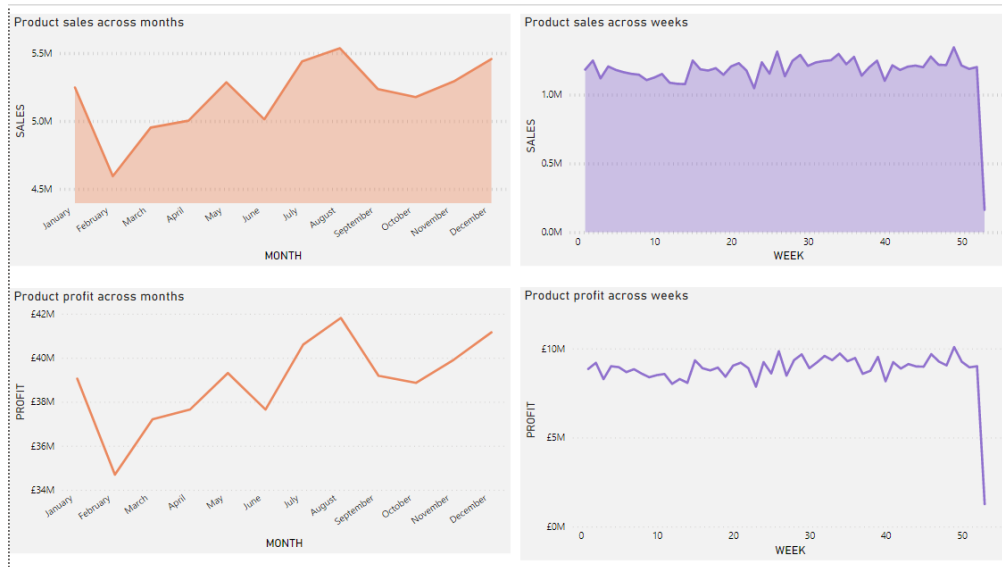
Figure 1.2

The monthly sales pattern follows a seasonal trend. Sales are relatively lower in the first half of the year (February to June) compared to the second half (July to December). In August, sales peaked at £5.53M generating a profit of £41.81M, while February had the lowest sales of £4.59M, resulting in a profit of £34.69M. The volume gradually decreases to November before rising again in December. This could be due to high sales of retailers because of increased demand for winter apparel or customers buying clothes as gifts for Christmas. February saw the lowest sales in the entire year.

In the case of weekly sales patterns, the values are more evenly distributed with average sales of £1.17M. Week 49 recorded the highest sales at £1.34M and £10.08M profit, while week 53 recorded the lowest sales at £1.62M and £1.26M profit. Sales dropped by 86.44% after week 52. This could be because the company may have intentionally reduced inventory levels to minimize carrying costs or prepare for year-end audits. It may also be due to delays in order processing and shipment due to Christmas & New Year.

Products analysis
During the year 2023, Universal Export sold 62M articles with 109 different products across 6 categories which are T-Shirt, Hoodies, Polo Shirt, Sweatshirt, Jacket, and Cardigan in 14 different colours.
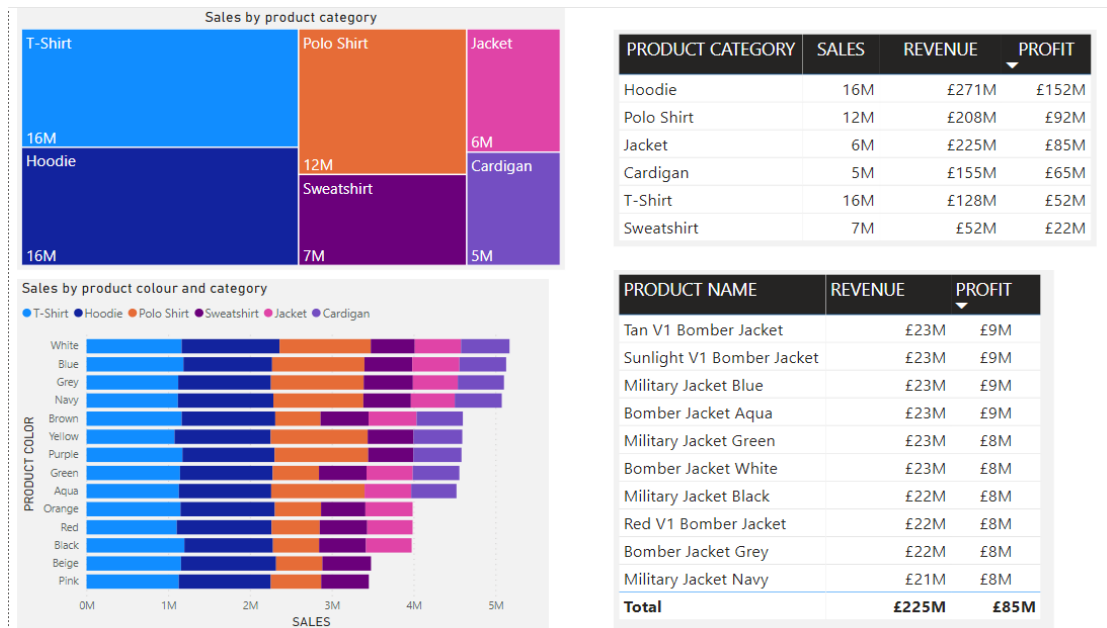
Figure 1.3

Hoodies and t-shirts were the main contributors to revenue, each having sales of 16M, followed by Polo shirts having sales of 12M respectively. Cardigan recorded the lowest sales of 5M.

White was the dominant colour across all colours sold, followed by blue, grey and navy. T-shirt and hoodie sales were the dominant categories among all categories. Jacket, cardigan and sweatshirt were not available in all colours.

Hoodies led the revenue generation, totalling £271M with a profit of £152M, followed by Jackets at £225M with a profit of £85M. Polo shirts ranked third, with £208M in revenue and a profit of £92M. Sweatshirts recorded the lowest figures in both revenue and profit, with revenue at £52M and profit at £22M.

The necessity for hoodies and Jackets increased in the winter season, particularly in cold regions, as they were ideal for cold weather conditions.

The top 10 best-selling products of 2023 in terms of profitability were jackets. The Tan V1 Bomber Jacket was notably at the top generating a total revenue of £23 million and a profit of £9 million. Although Hoodies and t-shirts were the categories that sold in large quantities and brought in the most revenue, jackets were the customer favourite.
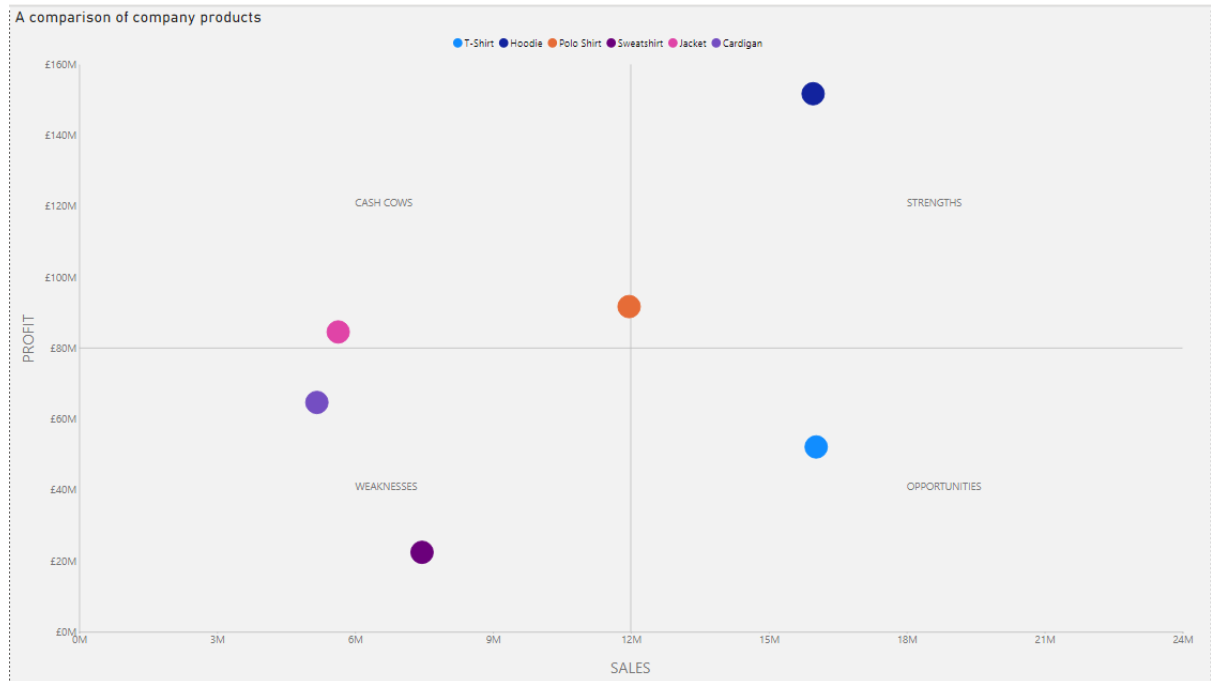
Figure 1.4

From the above figure, it is evident that in 2023, hoodies were the company's strength while cardigans and sweatshirts were identified as the weaknesses. Jackets and polo shirts served as the cash cows, while t-shirts were identified as an opportunity.
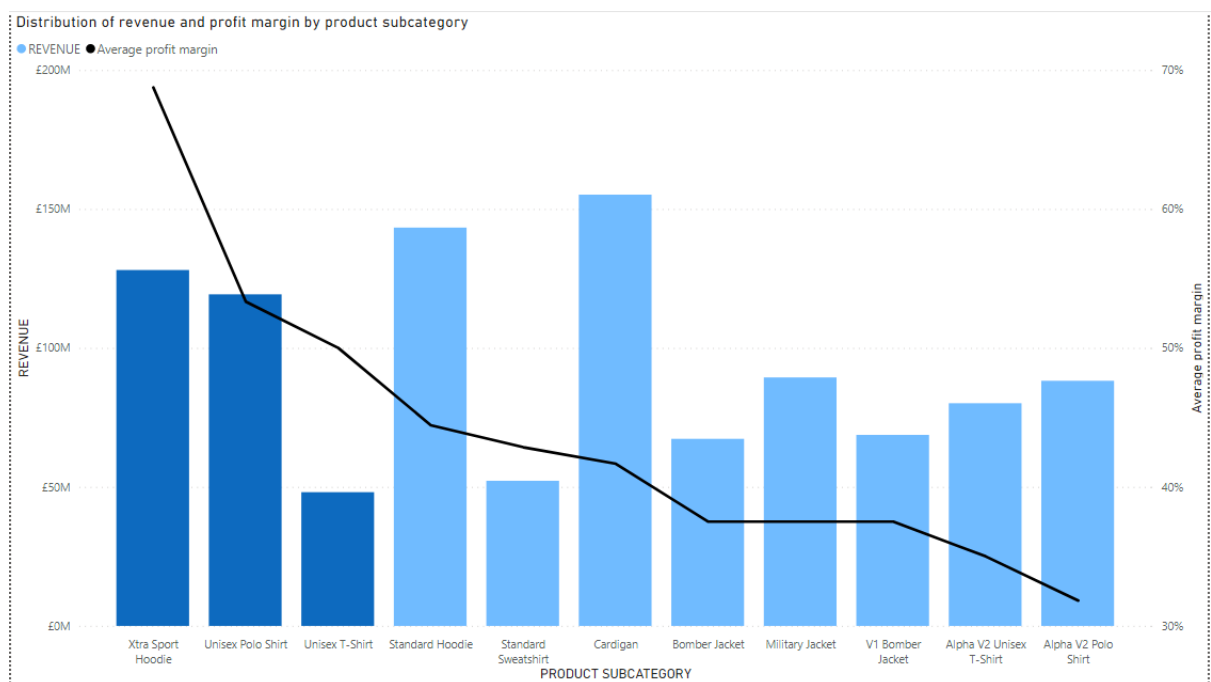

Figure 1.5

Xtra sport hoodie, unisex polo shirt and unisex t-shirt were the top 3 with the largest profit margins and Alpha v2 pro shirt generated the lowest margin. It's noteworthy to mention that for each subcategory, all colours had the same profit margin. The high revenue with a low average profit margin for Cardigans indicates that although the product generated significant revenue, it had lower profitability ratio than other subcategories.

On the other hand, unisex t-shirts had the lowest revenue of £48 million and a high profit margin, which may prove to be more beneficial for the business over the long term because it earns a larger profit from its revenue.
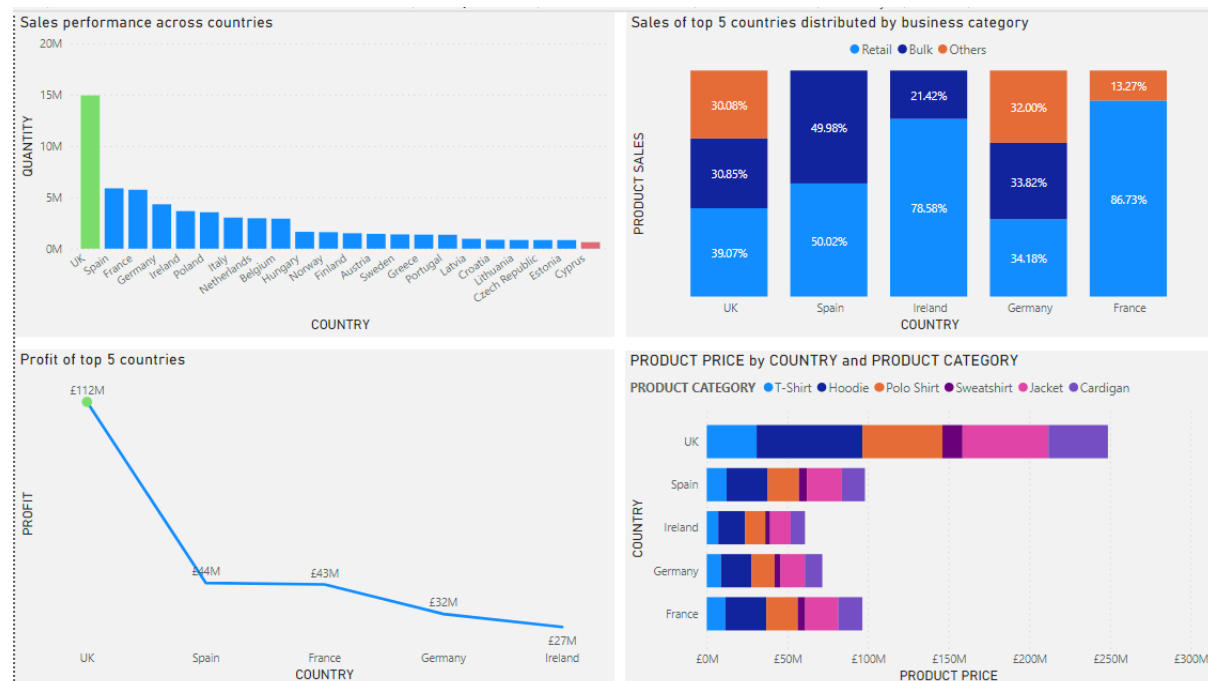
Market analysis

Figure 1.6

The UK stood out as the largest market, accounting for £15 million in sales, £249 million in revenue and generating £112 million in profit. Spain and France followed as the second and third largest markets, with revenues of £98 million and £97 million respectively and generating profits of £44 and £43 million. However, Cyprus had the smallest market, generating only £11 million in revenue and £0.6 million in sales. This may be caused by several reasons, including a less established market, a smaller clientele, and heavy competition from local sellers. Despite this, with a profit margin of 45.58%, the company maintained its presence in Cyprus, and it may very well one day capitalise on opportunities in the market there, given the right conditions.

Spain and Germany shared the same sales volume distribution among the business categories. Ireland was the country with recorded sales in only retail and wholesale businesses, while France was the one having no sales for the wholesale category.

The company could take advantage of the point that the primary source of UK, Ireland and France sales, was retail which means that they may have a strong consumer market and a diverse retail sector covering various types of stores, such as department stores, speciality shops, supermarkets, and e-commerce platforms.
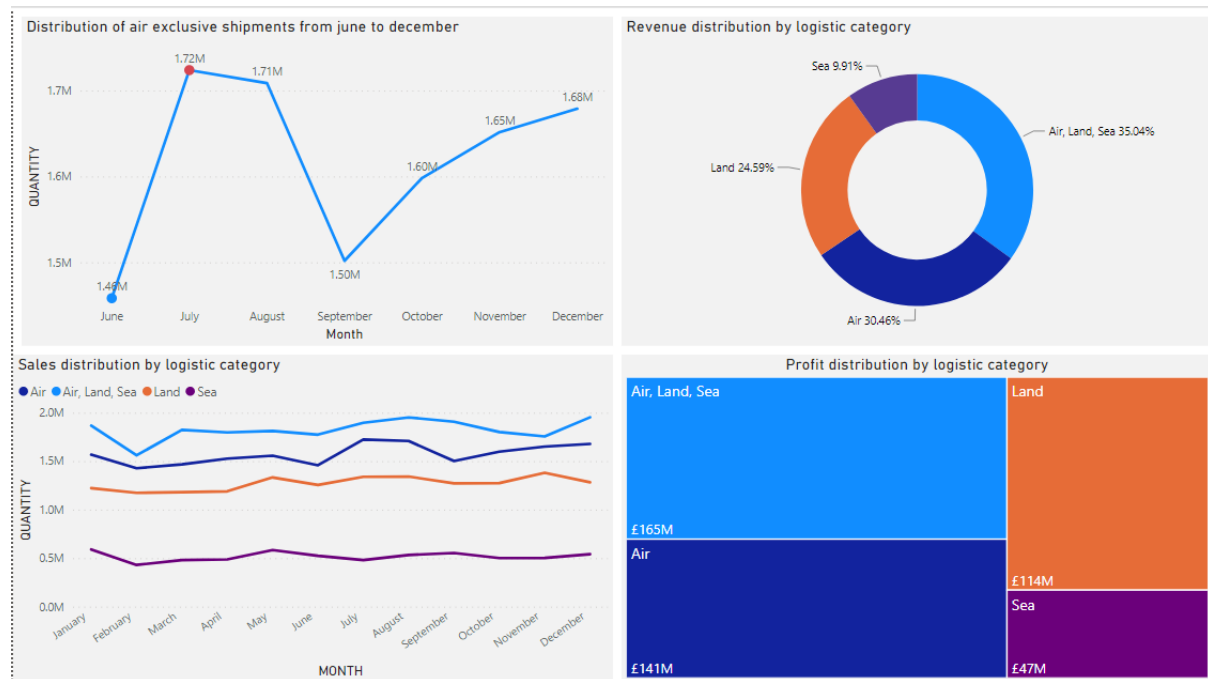
Logistic partner analysis

Figure 1.7

Most of the revenue, approximately 35.04% of total income, was recorded by the mixed shipment category, followed by air with 30.46%, land with 24.59%, and sea shipment with 9.91%. Sales of exclusive air shipments peaked in July after which a significant drop was observed till September. It was a result of the company's decision to limit the use of exclusive air shipping as part of its sustainable commitment as of the first of July 2023. But the sales again rose from September till the end of the year. This may be because the company may have expanded its market reach to regions with higher demand or where other modes of transportation are less efficient, requiring air shipments, or to manage inventory levels and avoid stockouts during the Christmas period and New Year, as the customers require fast delivery.

Mixed category shipments generated maximum sales among all categories across all months, resulting in a profit of £165M, followed by the exclusive air category with £141M profit, with the Sea category at the last standing at £47M.

In December, there was an increase in the sales volume of mixed-category shipments, while the land shipments declined. Meanwhile, the sales volume of air and sea shipments remained the same on average.

Conclusion

Universal Export fared well for 2023, according to the cost, sales, and revenue analysis of the company. The business's success has been attributed to its capacity to sustain a healthy gross profit margin, successfully control costs, and promote sales growth. To lessen its reliance on hoodies, the business may expand its product line and engage in inbound marketing. Overall, Universal Export is in a strong position to maintain its success and expansion in the years to come.

Salesperson Performance Overview 2023

The annual performance report on salespeople is important for the company because it provides valuable insights into the effectiveness and efficiency of the sales team. The performance of Universal Export's sales employees for the year 2023 is examined in this report. The aim is to provide the management team with information so that the head and deputy head of the sales team can be determined through promotion.

The target area for sales was mainly the European market. The clothes were purchased by wholesalers, retailers, and other businesses. 3 modes of shipment were used namely air, land, sea, and mixed category.
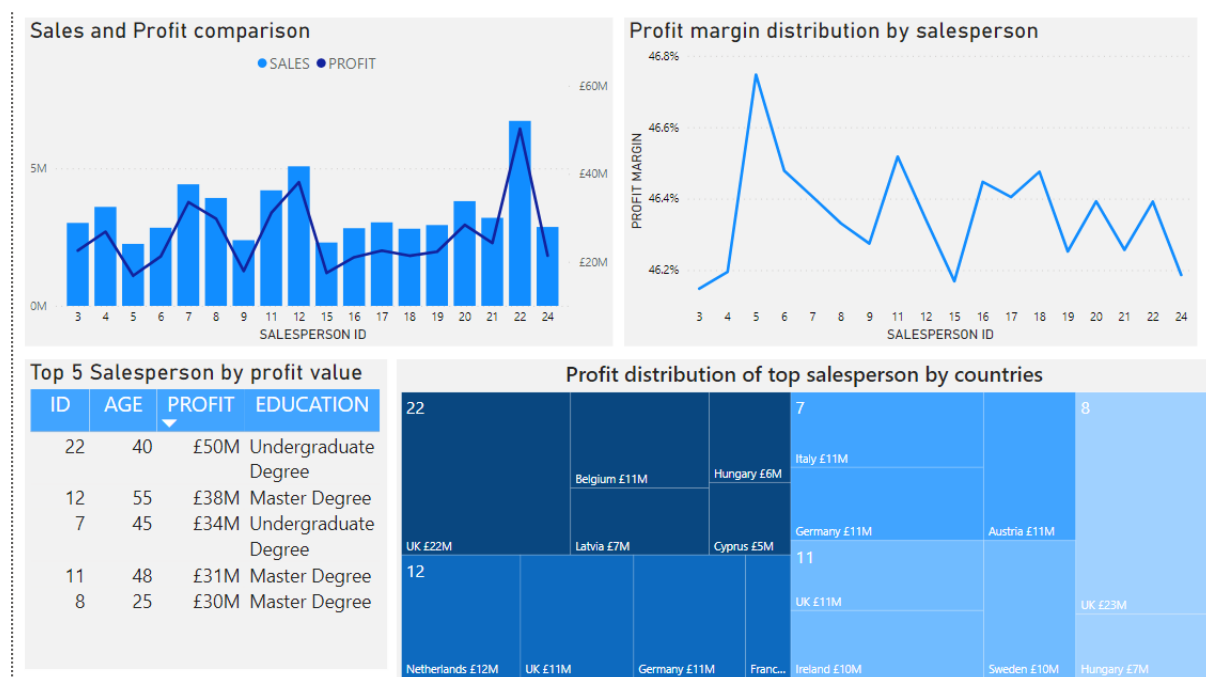
Sales and profit performance

Figure 2.1

The sales staff at Universal Export put in an impressive effort in 2023. The sales team consisted of 11 female and 7 male employees, and the ages ranged from 22-55 years. A total revenue of £1040 million was generated, which came from a combination of retail, wholesale, and other business sources.

Employee IDs 22, 12, 7, 11 and 8 were the top 5 salespersons at Universal Export in 2023 in terms of profit value and sales. The highest sales were recorded by employee ID 22, who reached 5 markets, followed by employee ID 12, who reached 4 markets. Employee IDs 7 and 11 reached 3 markets each. UK was the main market for all of them, except employee ID 7. These employees often exceeded their sales goals and significantly contributed to the company's overall sales expansion. It is noteworthy to mention that even though Employee ID 5 did not make it to the top 5, he still had the highest profit margin of 46.75% in the whole team.

Employee ID 22 outperformed other employees by generating sales of £112 million and a profit margin of 46.5%. He was the best worker and significantly contributed to the

company's increased sales. He may be an expert and have a thorough understanding of the company's products and target market, by which he created successful sales methods that enabled him to regularly surpass his goals.

While having less experience, Employee ID 8 generated £30 million profit. Often, young salespeople outperform their more seasoned competitors despite having little to no experience because they constantly seek out the best technique to close a deal and are prone to making mistakes due to which they develop the habit of regularly updating their skill sets.

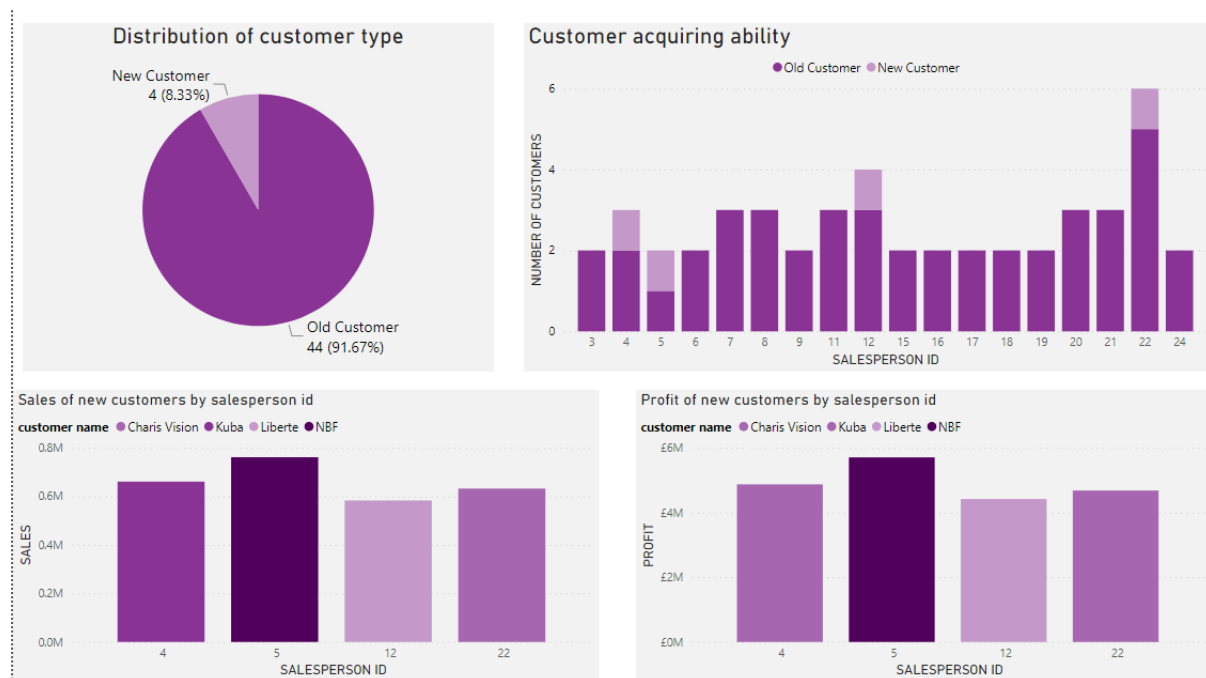## Customer acquisition ability in 2023

Figure 2.2

Although Universal Export deals in European countries, its employees belong to various continents, including Europe, Asia, Africa, and South America.

Employee IDs 4, 5, 12, and 22 brought in 4 new customers in 2023 from France, Poland, and Cyprus, while retaining 91.6% of the company's current customers. The top-performing staff used techniques that worked to draw in and keep customers, and others could follow their lead. Among the new customers brought, NBF generated the most profit of £5.7M and sales of £0.7M, followed by Kuba and Charis Vision. However, the difference is not that significant.

Acquiring new customers is essential for any business that wants to grow and diversify its market. This shouldn't, however, come at the expense of losing existing customers.

Employees kept up solid ties with long-term clients to keep them. This is accomplished by following up frequently, offering superior customer service, and being attentive to their needs and worries.

To attract and retain clients, employees might have used a variety of sales strategies which included offering discounts or promotions, highlighting time-sensitive offers to create urgency, and upselling or cross-selling goods and services. Employees successfully utilised

these strategies to increase business revenue and sales while delivering values to customers.

It is important to monitor the conversion rate of new customers to assess the success of an employee's acquisition ability. It is referred to as the percentage of new consumers that complete a transaction. In our case, the conversion rate is 100%.

All 4 mentioned employees were able to acquire new clients and retain the old ones, and employees who have this talent are quite vital to a business since they help to increase sales and foster client loyalty simultaneously.

Products performance

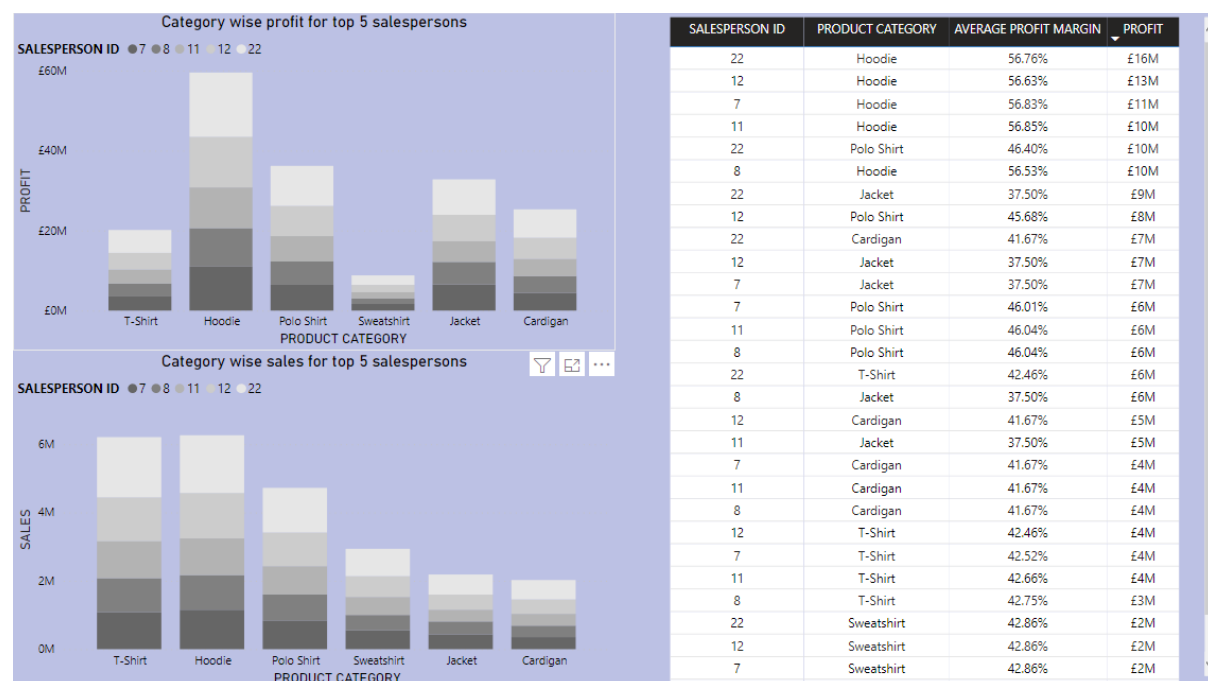| SALESPERSON ID	PRODUCT CATEGORY	AVERAGE PROFIT MARGIN	PROFIT
22	Hoodie	56.76%	£16M
12	Hoodie	56.63%	£13M
7	Hoodie	56.83%	£11M
11	Hoodie	56.85%	£10M
22	Polo Shirt	46.40%	£10M
8	Hoodie	56.53%	£10M
22	Jacket	37.50%	£9M
12	Polo Shirt	45.68%	£8M
22	Cardigan	41.67%	£7M
12	Jacket	37.50%	£7M
7	Jacket	37.50%	£7M
7	Polo Shirt	46.01%	£6M
11	Polo Shirt	46.04%	£6M
8	Polo Shirt	46.04%	£6M
22	T-Shirt	42.46%	£6M
8	Jacket	37.50%	£6M
12	Cardigan	41.67%	£5M
11	Jacket	37.50%	£5M
7	Cardigan	41.67%	£4M
11	Cardigan	41.67%	£4M
8	Cardigan	41.67%	£4M
12	T-Shirt	42.46%	£4M
7	T-Shirt	42.52%	£4M
11	T-Shirt	42.66%	£4M
8	T-Shirt	42.75%	£3M
22	Sweatshirt	42.86%	£2M
12	Sweatshirt	42.86%	£2M
7	Sweatshirt	42.86%	£2M

Figure 2.3

The 3 main product categories sold by Universal Export in 2023 which had the highest profit margin were:
- Hoodie: 56.67%, 16M sales
- Polo Shirt: 46.13%, 12M sales
- Sweatshirt: 42.86%, 7.45M sales

The top 5 salespersons had similar profit margins across all the product categories. All of them recorded similar sales for t-shirts and hoodies but generated more profit from the latter. Sweatshirts had more sales than jackets and cardigans but recorded the lowest figures in profit, for all salespersons.

Hoodies outperformed every other category, except t-shirts in terms of sales volume. High-profit margin products bring in more money per unit sold and can boost a business's profitability. In profitability, the jacket replaced the sweatshirt for the third position, with £85M profit. The T-shirts also had a sale comparable to hoodies with a substantial profit margin of 42.51%. Even though the company sold fewer hoodies and polos than t-shirts, they still made a sizable contribution to the company's overall sales revenue.
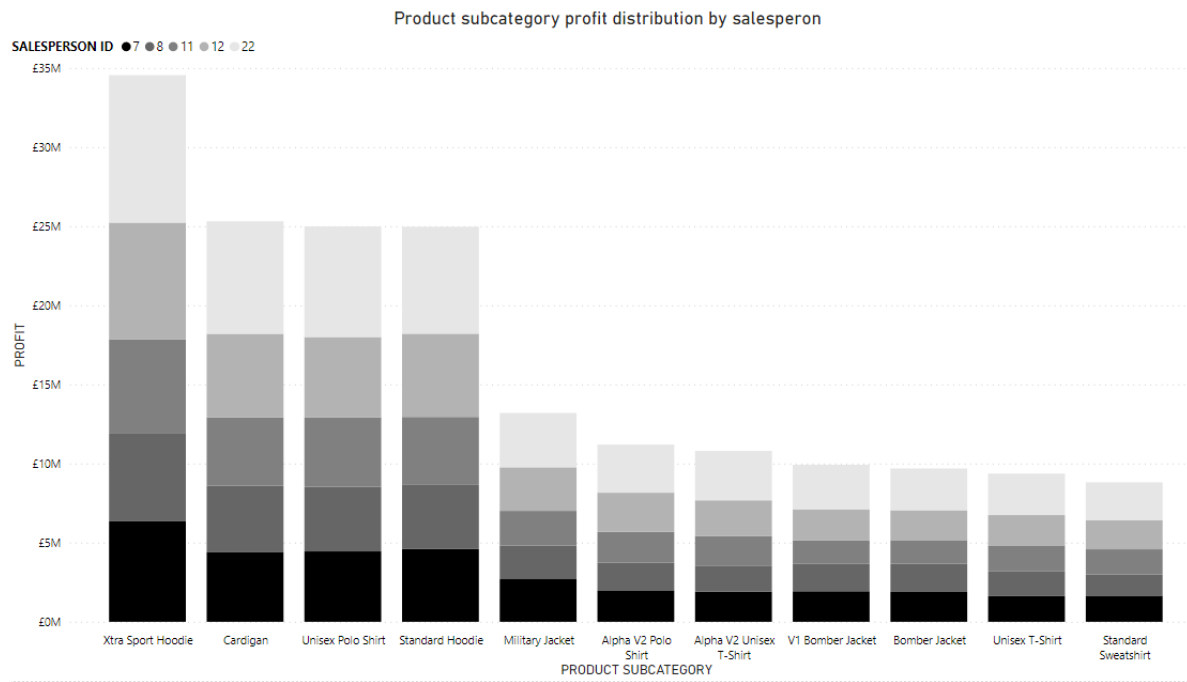
Figure 2.4

Employee id 22 recorded the highest profit figures in all subcategories, with maximum profit in xtra sport hoodies and lowest in standard sweatshirts. The other salespersons followed a similar pattern with employee id 8 having the lowest overall profit among the subcategories. These insights could help the company to identify the respective strengths of the salespersons, which would allow them to formulate an efficient sales strategy for targeting specific markets to maximize their return on investment.

Conclusion

In summary, employee id 22 was an excellent performer holding the top position in revenue, sales, and profit figures and had the maximum market reach. Employee ids 12 and 7 also had a commendable performance.

In case of new customers acquisition, employee ids 22, 12, 5, 4 acquired the same number of customers. Customer brought by employee id 5 recorded the highest sales and profit figures, followed by 4, and 22.

In terms of category-wise profit, employee id 22 held the top position followed by 12 and 11. Hoodies made the maximum profit while its sales were comparable to those of t-shirts. Cardigan was the least sold product, and the sweatshirt recorded the smallest profit overall. All categories shared almost equal average profit margins. Xtra sport hoodie was the customer favourite.

These insights can be used by the company to pinpoint the areas of improvement and create a strategy to increase employee productivity which could boost its overall performance and achieve even greater success in the future years.