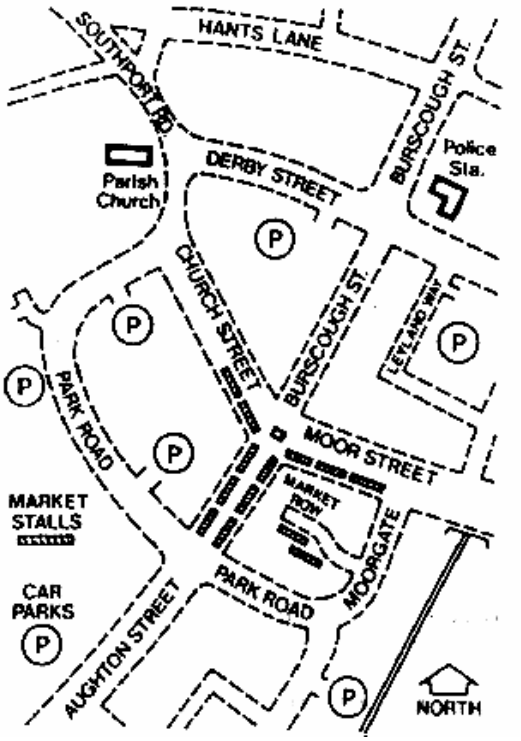
G.C.S.E: Retail land use study of Ormskirk:

Location of Ormskirk:



___Ormskirk is located in the northwest of England in Lancashire. Ormskirk is northeast of Liverpool. It is southeast of Southport. Ormskirk is around 20km away from Liverpool. Preston is Northeast to Ormskirk and is around 22km away from Ormskirk.

Background to the study:

Hypothesis one:

There is a tendency for medium order goods to cluster: This is because medium order goods (such as shoes and clothes) usually cluster so that customers can check shop prices without walking too far and the shops can compete for prices.

Hypothesis two:

Pedestrian density will increase with increasing distance from the market cross: This is because the further from the center the less people will go to these shops. The bigger and most used shops will be towards the center. Therefore people will shop closer to the market cross rather than on the outskirts

Hypothesis three:

Shopper perception of the location varies with the frequency of their shopping trips. This is because the more often shoppers visit the town, the better their perception of the layout of shops, but those that visit only once or twice a month will not know it very well.

Retail land use:

Method: In Ormskirk I collected and recorded the land use on the maps of central Ormskirk. On the map we located the different shops and filled in numbers corresponding to shops on the map, E.g. 1=shoe shop, 40= bicycle shop/repairs.

On another identical map of Ormskirk I colored in shops, which were, low order goods, medium order goods, high order goods, services and vacant shops. If there were some shops which we couldn't categorize with a number of 1-40 we added it on, E.g. Florist=41

Vacant shops were marked with a "v"

Pedestrian density:

I collected and recorded the pedestrian count by standing in Burscough Street and counting the number of people going from my left hand side to my right hand side. I recorded these results at the following times.

1) 10.15am
2) 11:15am
3) 12:15am
4) 13:15am

We counted for up to 15 minutes and recorded these numbers as a tally in my coursework book.

Perception study:

For the perception study I asked 10 people where they thought certain shops were located in relation to how often they visited Ormskirk, and roughly how far each shop was from the market cross. I collected this data by approaching people walking along the road and asked them firstly how often they visited Ormskirk. And then I went on to ask where they thought a selection of shops were on a map that I handed to them.

I wrote this information down on a sheet and have looked at any anomalies and any common occurrences, E.g. If someone visited everyday they generally knew were every shop was located whereas someone that only visited rarely, didn't have any idea where shops were located.

Evaluation of methods:

In my first hypothesis I collected a lot of data and I have organized this onto a map to show clusters of medium order goods.

The only problem I encountered when looking at the types of shops was putting them into groups and also if the shop covered more than one category, e.g. a small sweet shop that also cut keys.

The way I collected the data from the shops was to walk to the end of the road and walk back again this time recording the shops I saw. The advantage of doing this was that it was very systematic and I didn't miss any out, the only disadvantage of this was that some shops were longer than others, so it was difficult to write down exactly were each shop was.

To make this better I would give a wider range of numbers to classify shops and also have a map with the shops on and then classify them to make it more reliable.

In my second hypothesis, I collected a lot of data, as each time I stood on Burscough Street I counted an average of 95 people passing by. I stood for a total of one hour, there were 15 minute sessions in which we collected this data, we did this a total of 4 times.

The only problem I encountered was whether to count certain people, e.g. babies in prams or people that have walked past before.

I solved this problem by only counting adults. The advantage of this method is that I could get an extensive result from standing in that position for a total of one hour. The disadvantage was that I only collected in one place and I may have also miscounted the people walking from my left to right. This was solved by standing a group of 30 pupils around Ormskirk, so that we could get an extensive range of results. The other disadvantage was that I only collected on one day so I could not get an accurate range of results. The way to solve this would be to go every day for a week and get a full set of results.

If I repeated this data collection again tomorrow I would stand in more than one place, go for a couple of days and also make sure there are no anomalies in my results because of miscounting.

To improve the reliability of this method I would go for more than one day and get two people to stand in one place to increase the accuracy.

Hypothesis three: In my third hypothesis I only collected ten sets of results, so I did not collect enough data to get a good set of results.

This was also solved by getting the class of 30 pupils to get 10 results each and these totaled 300 results.

I had a couple of problems with this data collection because firstly I would only approach people that looked approachable, so before I had even started I had discriminated against certain people. Secondly when we did approach people some of them were in a hurry and did not stop to answer. If they did stop, they would sometimes not take the survey too seriously or be in a hurry so their answers would be incorrect because they rushed.

If I repeated this data collection tomorrow I would ask more people about the survey so I could get a more accurate results table. I would also ask people who are not I hurry and I would not avoid asking certain types of people.

To increase the reliability of the survey I would ask more people about how often they shop and I would make the questions easier to understand so there would be no misunderstanding.

Hypothesis one:

There is a tendency for shops selling medium order goods to cluster.

Classify retail outlet

Selling goods: Come out with a product/tangible.
Selling services: Services help you/doesn't provide a product.

High order goods:

- Expensive
- Not bought very often
- Goods that you would travel to buy them. E.g. computers, game consoles, beds/furniture.

Low order goods

These are goods that are

- Cheaper
- Bought very frequently
- You would not travel to buy them

E.g. milk, paper, shampoo, drinks food.

Medium order goods

- Goods that are purchased every 2-4 weeks
- Compare prices and quality- shop around.
- More expensive than low order goods

E.g. shoes, clothes, large shop for food, petrol.

High order	Medium order	Low order	Services
Jewelers	Accessories	Bakers	Key cutting
Holiday booking	Clothes	Cake shop	Photo shop
Dixon's	Lingerie	Chocolates	Opticians
Phone shop	Tool shop	Super drug	Pet shop
Motor world	Chinese takeaway	Health shop	Bank
Travel agents	Book and art shop	Newsagent	Chemist
Electrical	Crafts shop	Fruit shop	Hairdressers
Music Store	Cosmetics	Fish and chips	Book makers
Body care	Card shop	Café	Pub
Weddings	WH Smith		Dry cleaning
	Florist		Post office
	Woolworth's		Job shop
	Pillow shop		Solicitors
	Child wear		Subway
	Sports		Casino
			Suntan studio

Evaluation of classification system

Classification-

The good aspect of using this classification system is that it's easy to use and it's simple to look at.

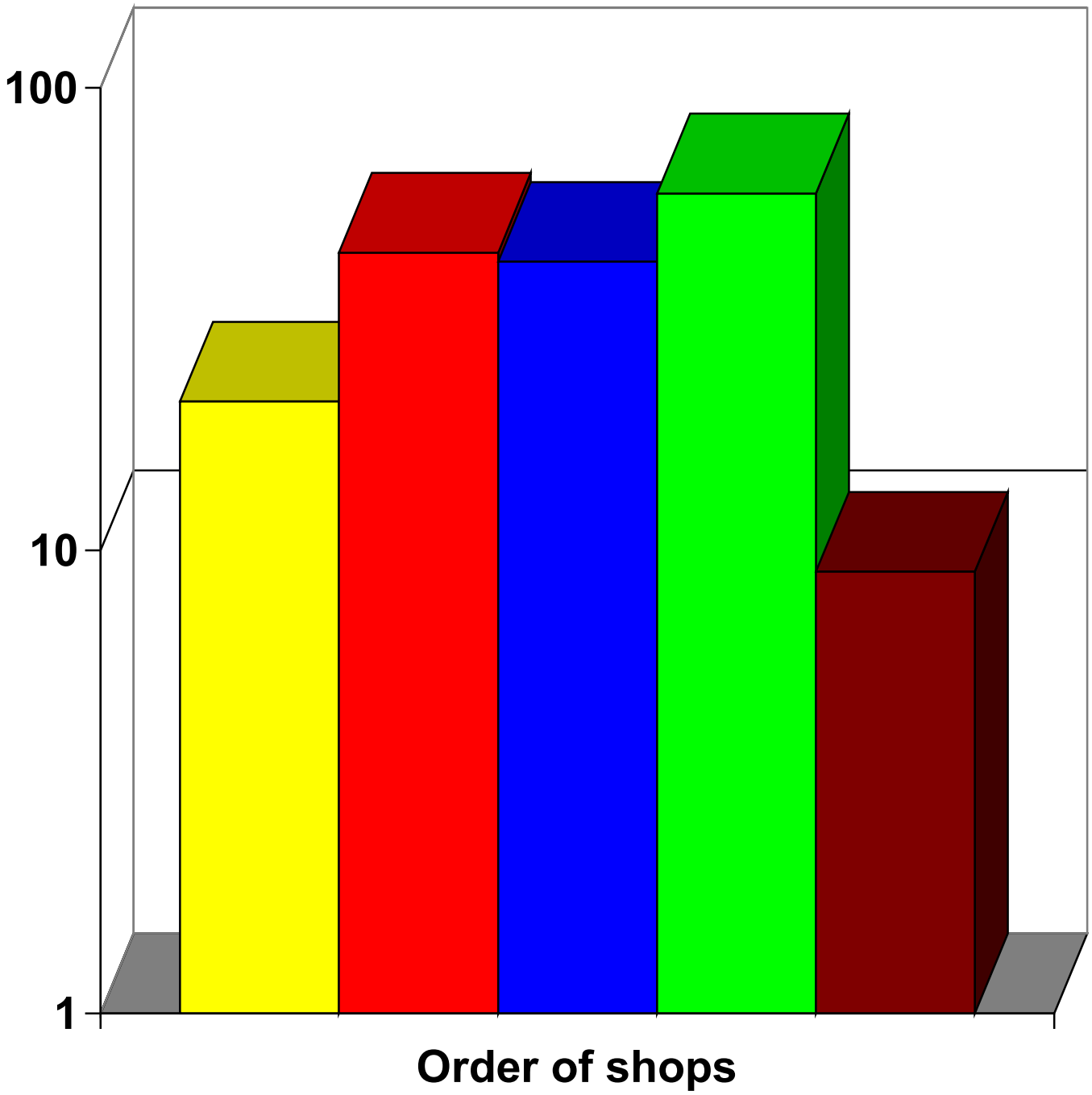
The bad aspect of using this classification system is that some shops are hard to classify such as;

Hardware shops/Repair shops- repairs are services and hardware can be bought/Bicycle shop/Key cutters- as they sell items as well as bringing you a service.

We classified these results into four main categories, high order, in which we put shops that were very expensive and not regularly visited. Medium order goods, in which we put in shops that had mid range prices and also that in which people only visited once every three months. Low order goods that sell cheaper goods, and in which people visit daily or once weekly. Lastly services, which are the most useful of all the shops as shown by the amount of "Service" shops in a town.

Services offer a service to the public, so prices range, to solicitors who charge a lot to give you their service to dry cleaners who are cheaper than that of solicitors prices.

Bar chart showing the amount of shops in each area of goods



Yellow = High order
Red = medium order
Blue =Low order
Green = service
Brown = Vacant

The bar graph showing the amount of shops in each area of goods

Analysis of graph:

We can clearly see that services have the highest number of shops, then medium order goods, then low order, then high order and vacant shops were in the minority.

This bar graph shows that most shops in Ormskirk are services and that only 9 shops were vacant.

My Rn Value

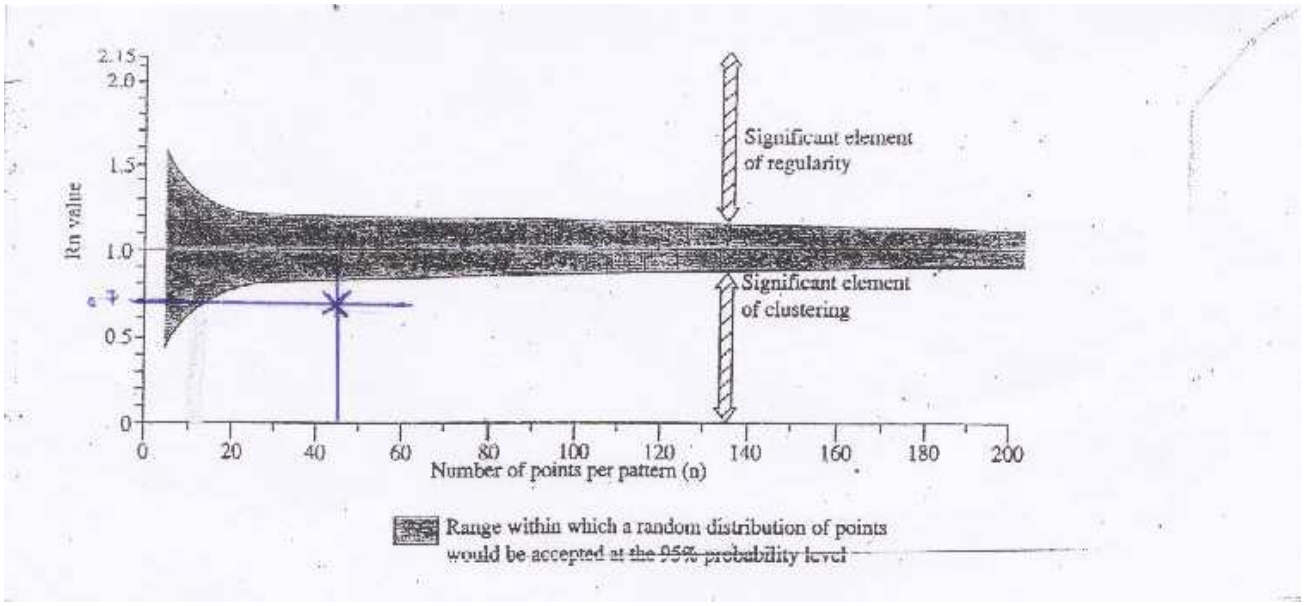
My Rn value was 0.70067142, which I have rounded down to 0.70. Using the diagram and connecting the Rn point to (n). On the sheet below this indicates that there is a tendency to cluster with medium order good shops.

This distribution of medium order goods was probably due to competition, most shops will group together if they are selling the same sort of items.

Shop owners who are setting up shops would usually want to set up close to the town center as it is were all the shops meet together. This would cause clustering around the town center.

Customers will want to compare prices of similar items so if shops are clustered together, this will make it a lot more easier to do, E.g. clothes and shoe shops tend to cluster.

Using my tracing paper and my numbered map I can see that medium order goods tend to cluster in random areas of Ormskirk. Many of the shops that tend to cluster are clothes shops, shoe shops and bookshops. These are the most common shops in this area, so I can conclude that medium order goods cluster but randomly.



Nearest neighbor analysis

This will allow me to describe the distribution of medium order goods/shops.

Number	Nearest neighbor	Distance to nearest neighbor
1	2	1.1
2	3	0.8
3	4	0.8
4	6	1.8
5	7	2.5
6	4	1.8
7	8	1
8	9	1
9	10	1
10	12	1
11	13	2.5
12	10	0.6
13	14	3
14	15	2.5
15	14	2.5
16	17	2.1
17	18	1.8
18	19	1.8
19	20	2.3
20	21	3
21	22	1.5
22	21	1.2
23	24	1.2
24	23	2.3
25	24	2
26	25	1
27	28	0.5
28	27	2.3
29	30	0.5
30	29	3
31	33	0.6
32	33	1
33	31	1.2
34	35	1
35	34	1.2
36	37	1
37	36	0.5
38	37	0.7
39	37	0.7
40	39	2
41	39	2

42	40	1
43	42	0.5
44	42	1.5
45	46	1.8
46	45	1.8
47	45	0.5
48	49	0.5
49	50	0.8
50	51	1.4
51	50	1.1

Rn=2d √ n/a

Rn = 2

= 2 x 1.43 √51/840

0.70

72.7

1.4254901

1.43 2.d.p

Evaluation of hypothesis one:

Looking back at my data I can see that my data has been reliable enough to make accurate predictions and those predictions were correct.

My collection and classification system is good, but to improve it I could classify the shops in terms of goods so a pet shop could be classed as medium order.

When I was plotting the data the map was moving about so it was often hard to keep track of where everything was.

My tracing paper shows resemblance to my nearest neighbor analysis, however my nearest neighbor is far more accurate.