

Milestone – Project 1

Course: Econ1203

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Introduction

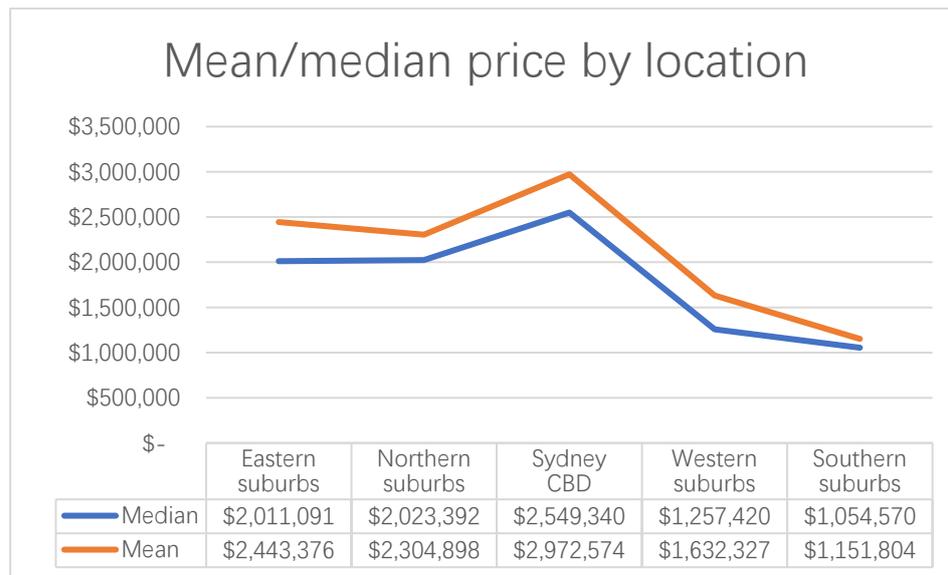
This report aims to describe what the Sydney property market looks like. By using some confidential data from several real estate agents, several figures are listed follow:

Part 1: analysis of the mean/median prices by location, property type and internal size.

The purpose to use mean/median price as measurement is to use the average price of the properties to reduce the error.

Figure 1.1

Mean/median price by location



The above table compares the mean and median price by five different locations. As the figure shows, it is clearly that the mean price and the median price have the same trends which at Sydney CBD is trifle more expensive than others which have a mean price of \$2,972,574. Furthermore, the mean prices are greater than the median price which means that it is positive skewed data. In addition, the mean/median property prices at eastern and northern suburbs are higher than western and southern ones. These show that in the Sydney property market, the prices of the properties in the Sydney CBD are highest then decrease as the distance from the CBD increase while the prices of properties at southern suburbs are cheapest.

Figure 1.2

Mean/median price by property type

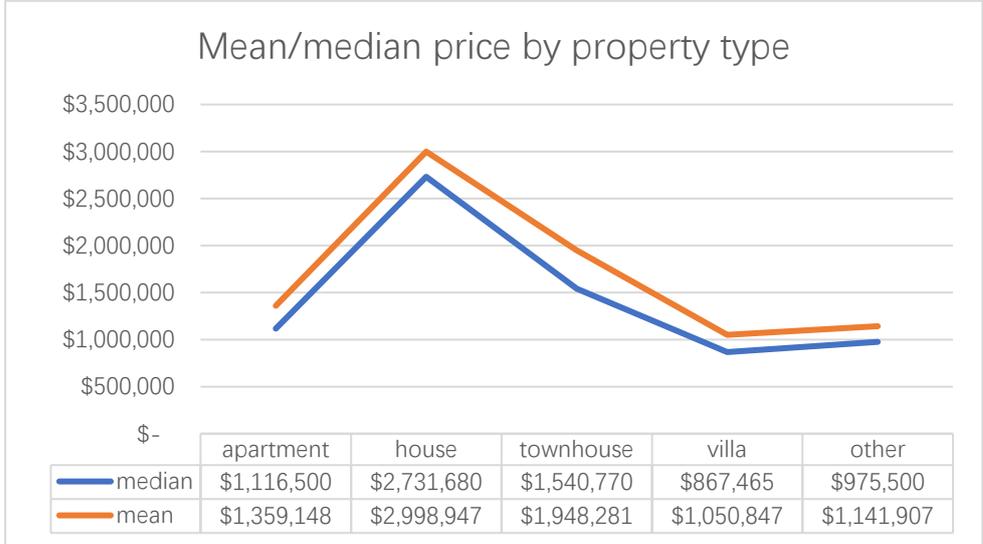
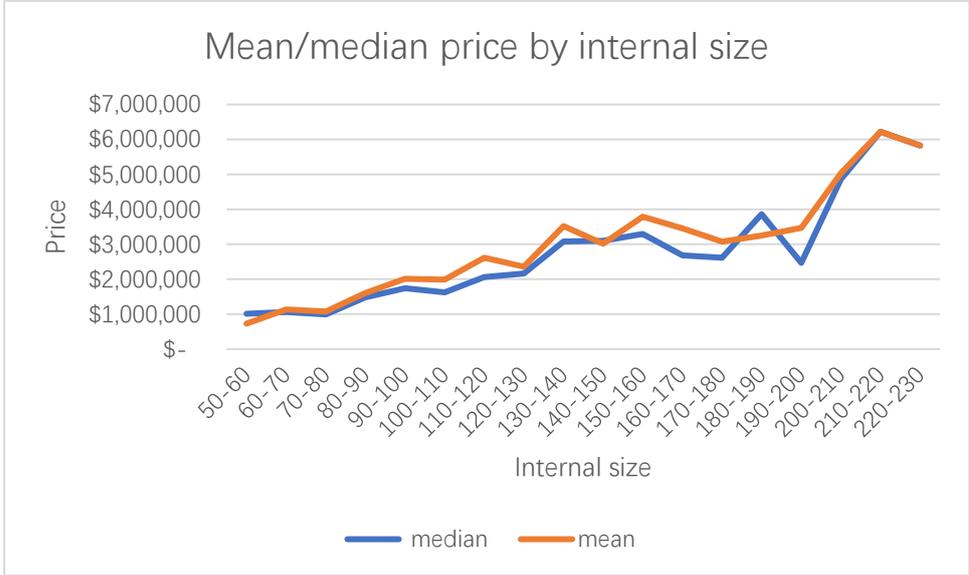


Figure 1.2 shows the median/mean price by property type. As can be seen, the mean/median price of house is much higher than other properties which is approximately 1.5 times higher than others. On the contrary, the mean/median amount of villa is smallest which has a mean price of \$1,050,847. These data representing houses are the most expensive Sydney property type.

Figure 1.3

Mean/median price by internal size

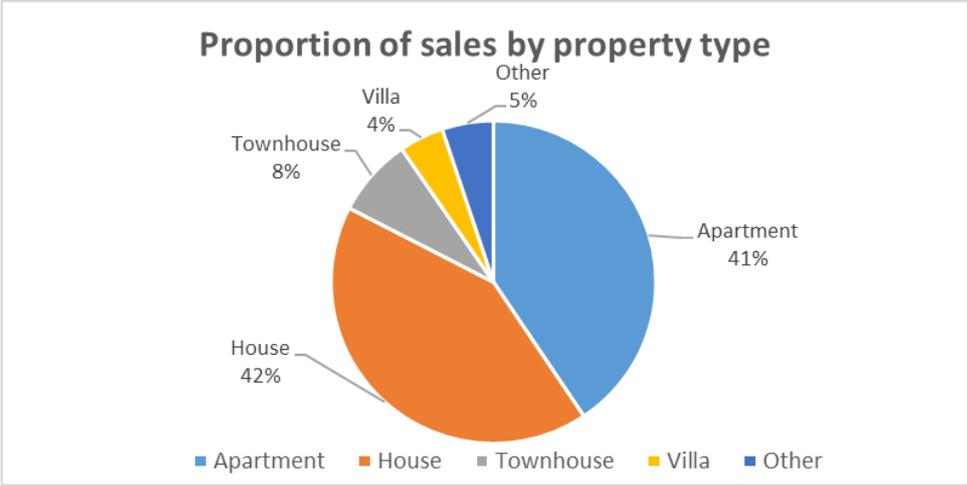


As the figure 1.3 shows, the mean and median price grows with the expansion of internal size and they are basically the same. However, between 150-160 square meter and 170-180 square meter, the mean/median price decrease slightly by about \$1 million, while the median price at 180-190 is obviously greater than the mean price. In general, the bigger the internal size a property have, the higher the price in Sydney property market.

Part 2: analysis of proportion of sales by property type, number of bedrooms, total household income and Location.

Figure 2.1

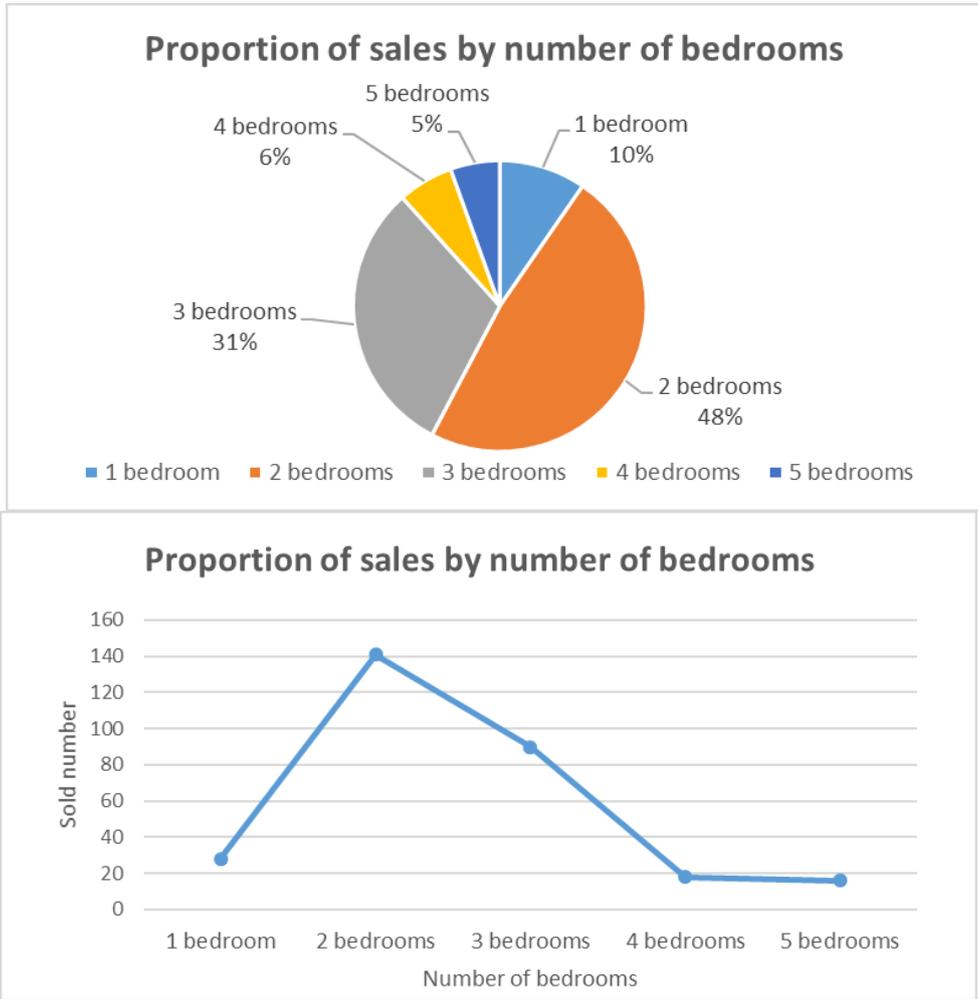
Proportion of sales by property type



The pie chart here shows the proportion of sales by property type. According to the graph, we can see that house is the most popular property type in the market. House and apartment account for above 80% of total property sales in this sample of 293 observations.

Figure 2.2

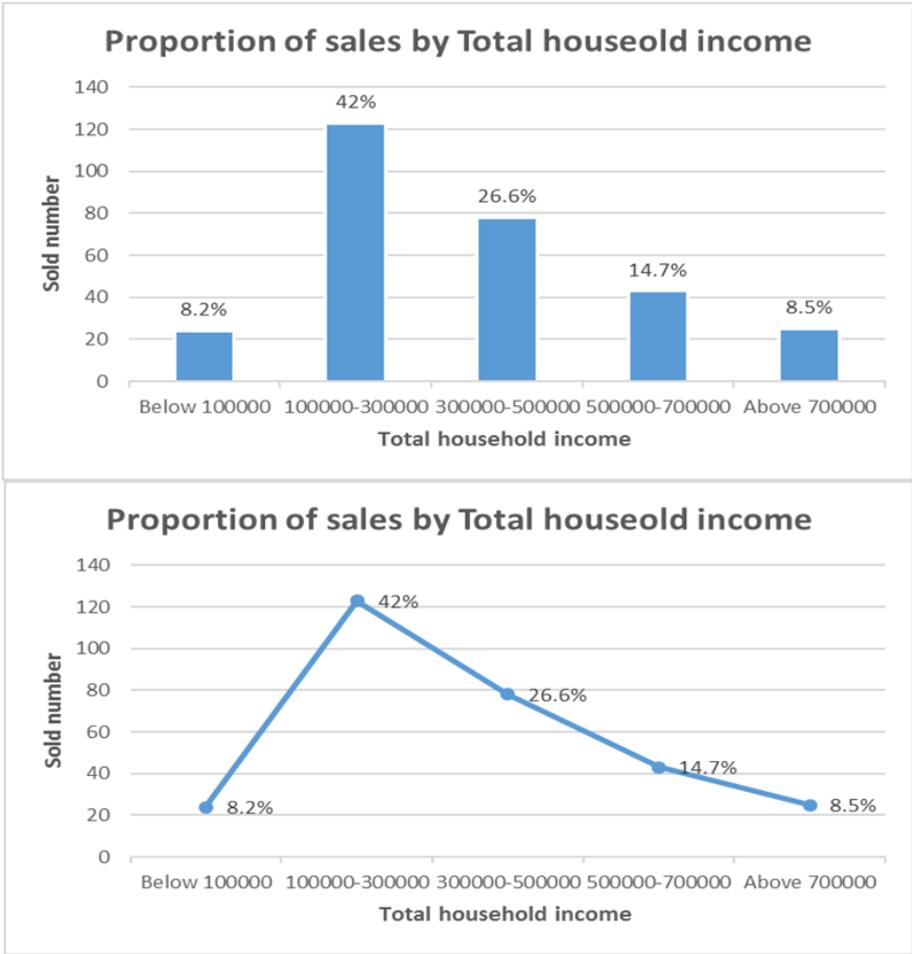
Proportion of sales by number of bedrooms



The pie chart above illustrates the proportion of sales by number of bedrooms. Properties with 2 bedrooms contribute to almost a half of the total properties sold. This is followed by 3 bedrooms and 1 bedroom. As the data being transferred into a line graph, we can find out that there is no relationship between the two variables. The graph is asymmetric and unimodal, with the single peak at 2 bedrooms.

Figure 2.3

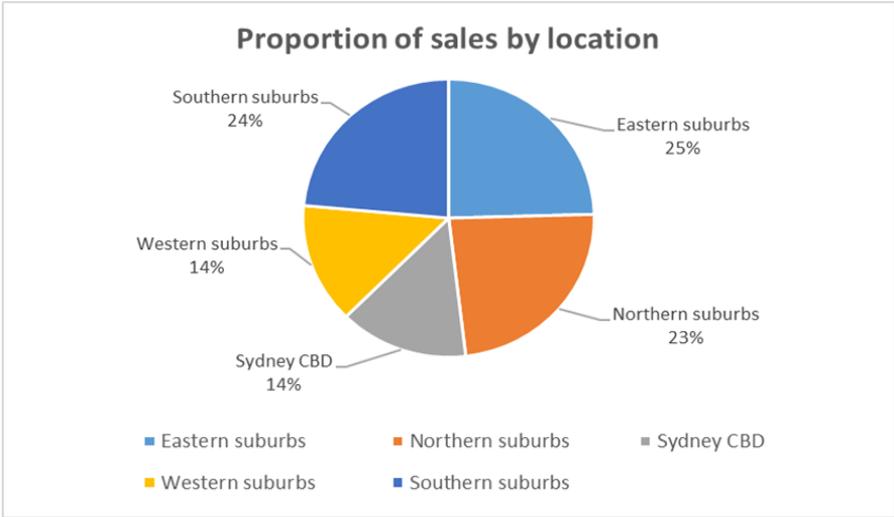
Proportion of sales by total household income



According to the column graph above, households with income between 100,000 and 300,000 are the main buyers in Sydney's property market. The relationship between the two variables can be observed using the second graph. The graph is positive skewness and unimodal. In addition, there is a negative linear relationship between total household income and property sold. However, there is a outlier in the graph which is households with income below 100,000.

Figure 2.4

Proportion of sales by location



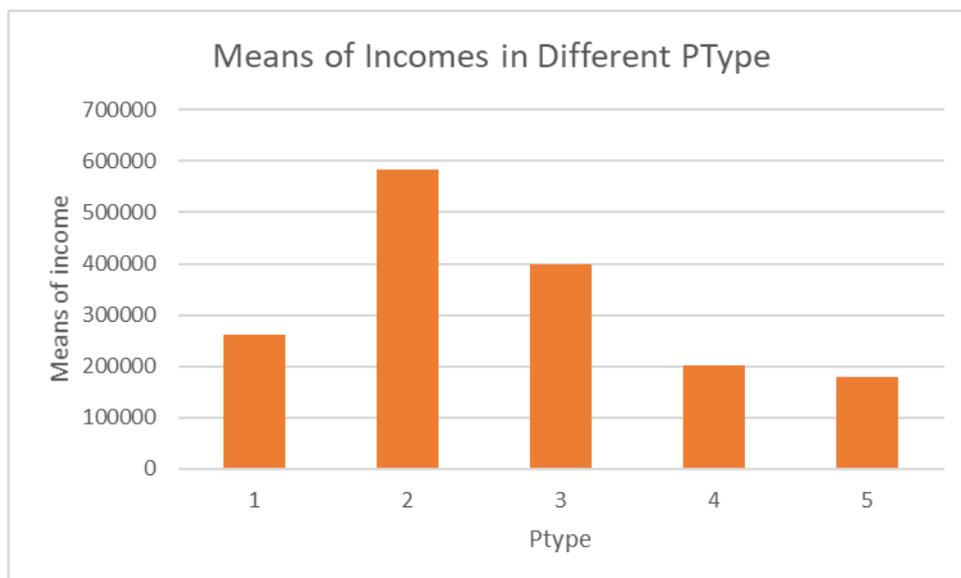
It can be seen that the proportion of property sold are relatively evenly distributed in various locations in Sydney. However, western suburbs and CBD have lower proportion of sales compared to the other three suburbs.

Part 3: analysis of buyer profile for each property type by income, owner occupied and overseas.

Figure 3.1

Buyer's property type by income

PType	Means of incomes	Standard deviation
1	262188.7	15367.34
2	584400	30843.48
3	399095.2	71529.31
4	200692.3	41162.02
5	179066.7	25948.94
Total	451931.62	21621.21



The table and graph above illustrate the buyer's means of income for different property type. From the graph, we can see that the buyers of House (Ptype 2) has the highest mean of income compare with others.

Figure 3.2 (a)

proportion of owner occupied

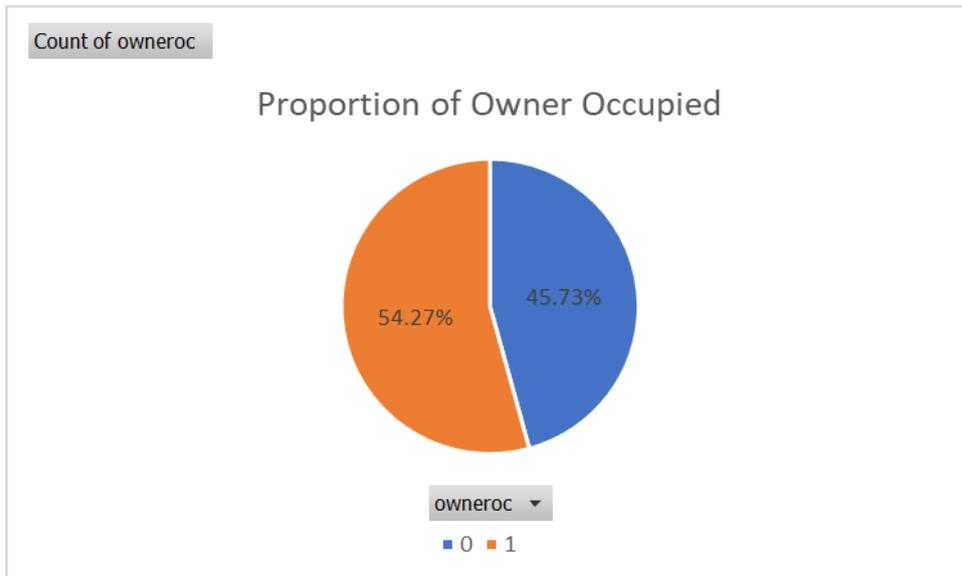


Figure 3.2 (b)

proportion of buyer overseas

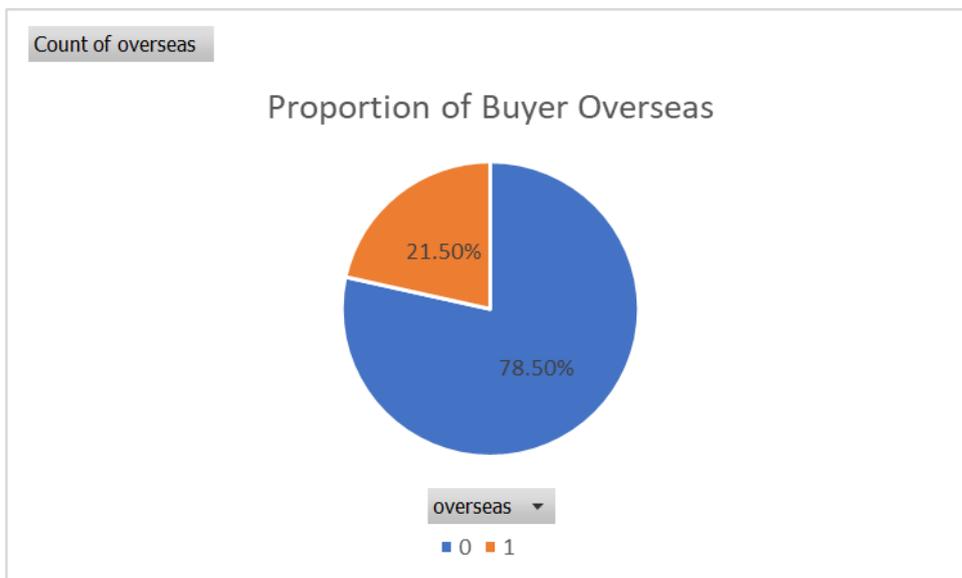
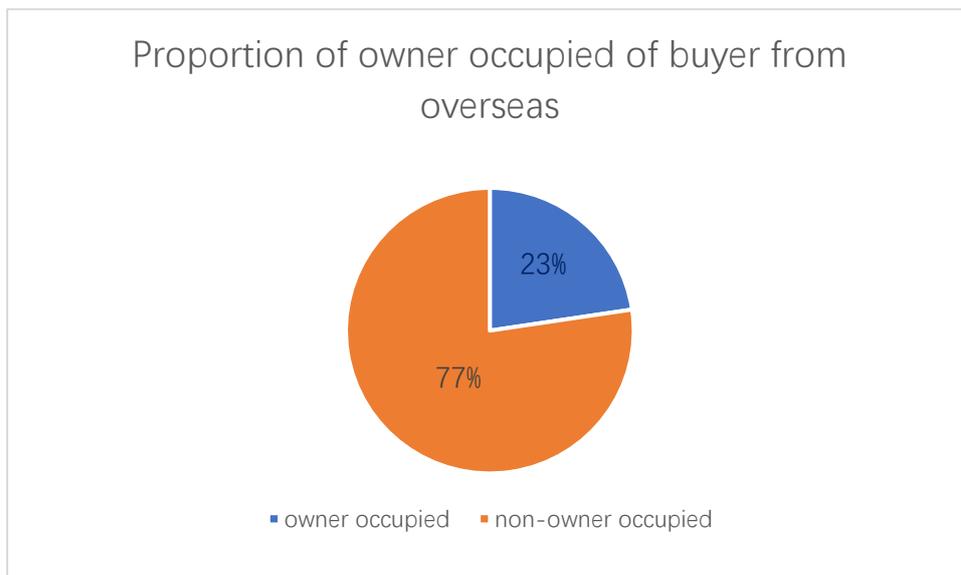


Figure 3.2 (c)

proportion of buyer's owner occupied and overseas

	Owner occupied	Non-owner occupied	total
Overseas	36 (12.29%)	123 (41.98%)	159 (54.27%)
Non-overseas	27 (9.21%)	107 (36.52%)	134 (45.73%)
total	63 (21.50%)	230 (78.50%)	293 (100%)



The pie charts and tables indicate the proportion of buyer's owner occupied and overseas. There is about 80% of buyer who living in Australia, and only about 20% overseas. The proportion of buyer's owner occupied or not distributes about 45% of occupied and 55% of non-occupied. However, the owner occupation rate of buyer overseas, the percentage of non-occupied increase by 22% from 55% to 77% compare with the whole sample. And the occupied rate decreases from 45% to 23% compare with whole sample.

$$P(\text{owner-occupied} \mid \text{overseas}) = 22.65\%$$

$$P(\text{owner-occupied}) = 21.50\%$$

$$P(\text{owner-occupied} \mid \text{overseas}) \neq P(\text{owner-occupied})$$

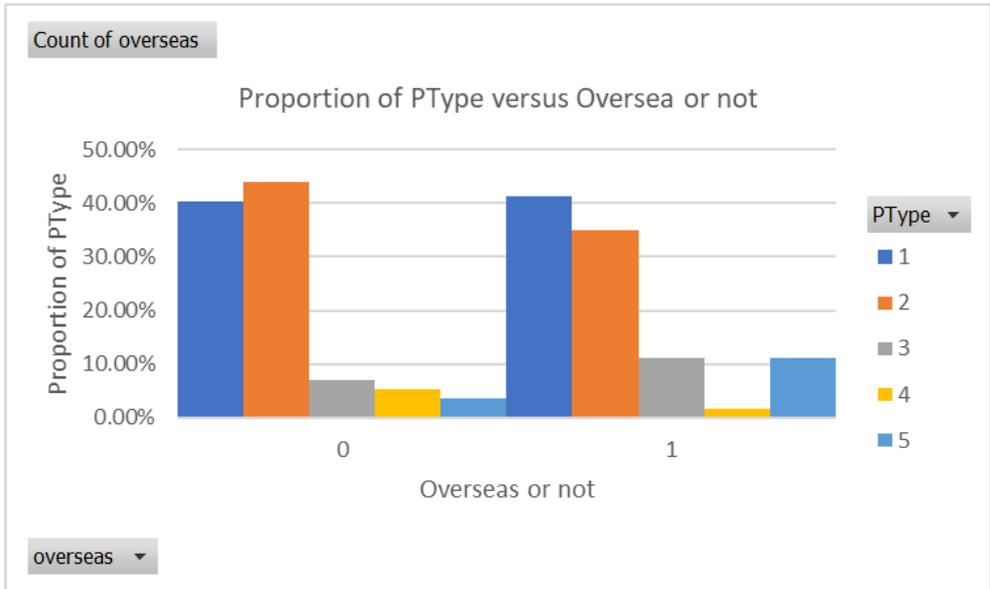
Therefore, they are dependent to each other.

From this sample we can see that most of buyers from overseas are unlikely to live in the property.

Figure 3.3

Buyer's property type related to overseas

	Ptype					
Oversea of not	1	2	3	4	5	Total
0	40.43%	43.91%	6.96%	5.22%	3.48%	100.00%
1	41.27%	34.92%	11.11%	1.59%	11.11%	100.00%



From above graph, we illustrate that Australian buyers from this sample are more likely to buy an apartment or house. Overseas from this sample also tend to buy an apartment, but the proportion of buying a house is reduce by about 10%, and the proportion of buy other property is increase significantly by about 8%.

Conclusion

In conclusion, we can illustrate that the in Sydney property market the prices of the properties closer to the Sydney centre is probably higher than other location. The price also relative to the internal size and the property type which the larger size and house are more expensive. Although the houses are expensive, it is one of the most popular types sold. More buyers would likely to avoid buying property in Sydney CBD and western suburbs.