Sydney: UNESCO City of Literature

22nd May, 2021   Ting-Ying Chang

I.   Introduction

Aim: To determine whether Sydney can sustain more bookshops than it currently has.
This project aims to determine whether Sydney can support and sustain more bookshops, using Melbourne as a model of a successful equilibrium of bookshops in a city.

Target Audience: Potential booksellers
The audience for this project are potential small business owners and professional booksellers (such as those in the Australian Booksellers Association) looking to expand their business.

Why should a potential bookseller open a bookshop in Sydney?
With the number of bookshops declining and the increasing reach of massive online conglomerates, it is even more important now to support small businesses wherever possible to avoid a future monopoly. Identifying where potential customers are and bringing the business to them can help the money stay local and boost the local economy. Moreover, bookshops are more than just shops that sell books, but community spaces for literary and artistic events.

Sydney, Australia's most populous city, has the potential to sustain more physical bookshops than it currently has. In fact, Sydney and Melbourne (Australia's second most populous city) have been informally locked in a friendly competition over which is the "better" city for what feels like forever. From the weather to housing prices to their local coffee scenes, the comparisons between the cities have been endless and subject to an individual's preferences.

Of particular interest to booklovers and booksellers is that Melbourne has been designated as an UNESCO City of Literature since 2008, cementing Melbourne's status as a vibrant hub of literary culture with local creative talents. This is furthermore backed up by Melbourne's abundant bookshops, in particular its independent shops as opposed to big chain stores.

Despite its higher population (and therefore higher number of potential readers), Sydney seems to lag behind Melbourne in this creative pursuit. Assuming the percentage of readers remain constant across a population, one possibility for this discrepancy is that even though Sydney simply lacks the physical bookshops for them to show monetary support in, i.e. Sydneysiders shop for their books online more often than instore.

The analysis from this project aims to help potential booksellers identify Sydney areas where a bookshop is lacking yet sustainable, which will hopefully be one step closer transforming Sydney into a veritable literary city in its own right.

II.   Data

There are many variables that can account for the number of bookshops in an area, such as education, gender, income, local transportation, surrounding amenities, population, etc. For the purposes of this project, we will only use Income as our main variable as it often correlates quite well to many of the aforementioned variables, e.g. literacy level can be linked to education level which in turn links to income level.

We used Foursquare data to identify existing bookshops within 7.5km of Melbourne and Sydney, as well as their locations in the form of postcodes (see following figure, Figure 1).

	Suburb	Postcode	Latitude	Longitude	Venue
0	Melbourne	3000	-37.817510	144.961700	All Star Comics
1	Melbourne	3000	-37.815406	144.963603	Minotaur
2	Melbourne	3000	-37.814725	144.968044	Reader's Feast Bookstore
3	Melbourne	3000	-37.811863	144.970760	Hill of Content
4	Melbourne	3000	-37.807760	144.958790	Books for Cooks
5	Melbourne	3000	-37.811852	144.971296	The Paperback Bookstore
6	Melbourne	3000	-37.815575	144.965744	Dymocks
7	Carlton	3053	-37.797971	144.967405	Readings
8	Melbourne	3000	-37.811444	144.971238	Classic Comics
9	South Melbourne	3205	-37.832318	144.958868	Coventry Bookstore
10	Collingwood	3066	-37.800400	144.984260	Happy Valley
11	Melbourne	3000	-37.816691	144.953592	The School of Life
12	Fitzroy	3065	-37.797915	144.978538	Brunswick Street Bookstore
13	Melbourne	3000	-37.816185	144.963890	Mag Nation
14	Melbourne	3000	-37.813007	144.968249	The Book Grocer
15	Carlton North	3054	-37.781487	144.977783	The Little Bookroom

FIGURE 1: FOURSQUARE DATA OF EXISTING BOOKSHOPS IN 7.5KM RADIUS OF MELB

We also obtained data on the income of these particular suburbs via the Australian Taxation Office in the form of a .csv file, see Figure 2.

	Postcode	Number of individuals lodging an income tax return	Count taxable income or loss	Average taxable income or loss	Median taxable income or loss	Proportion with salary or wages	Count salary or wages	Average salary or wages	Median salary or wages	Proportion with net rent	...	Count total business expenses	Average total business expenses	Median total business expenses	Propo witl
0	800	5168	5168	74990	56363	0.92	4777	76428	59845	0.14	...	238	55931	10500	0.87
1	810	21449	21449	66197	55311	0.87	18675	67931	59999	0.20	...	1692	58678	12751	0.82
2	812	11170	11170	64626	56496	0.88	9797	67487	60989	0.20	...	740	56098	16228	0.83
3	820	13186	13186	80947	63161	0.89	11690	77029	65904	0.23	...	871	60852	13101	0.85
4	822	6279	6279	48181	36292	0.91	5707	46538	35992	0.10	...	255	55751	16282	0.68

5 rows × 34 columns

FIGURE 2: ATO DATA OF TAX RETURN BY SUBURB

III.   Methodology

From the data above, we cross-reference the locations of these bookshops by their postcodes with postcode data from taxation data from the Australian Taxation Office. We extract the total income of those locations by multiplying the number of lodged tax returns and the average income.

	Postcode	# bookstores	Number of individuals lodging an income tax return	Total Suburb Income
0	3000	25	24559	1171980039
1	3065	2	7070	515183830
2	3121	2	22349	1743847772
3	3181	2	14875	1127108500
4	3144	2	8066	757308674

FIGURE 3: TALLY DATAFRAME FOR MELBOURNE BOOKSTORES BY SUBURB

By this method, we can find the total number of bookshops within 7.5km of the city centre as well as the total amount of income from those particular areas. Then applying the same analyses on Sydney bookshops and locations, we use the data from the Melbourne analyses to identify how many more bookshops can be opened and sustained in existing suburbs within 7.5km of Sydney based on the total income from those suburbs.

	Suburb	Postcode	Latitude	Longitude	Venue	Available Income
0	Melbourne	3000	-37.817510	144.961700	All Star Comics	46879201.56
1	Melbourne	3000	-37.815406	144.963603	Minotaur	46879201.56
2	Melbourne	3000	-37.814725	144.968044	Reader's Feast Bookstore	46879201.56
3	Melbourne	3000	-37.811863	144.970760	Hill of Content	46879201.56
4	Melbourne	3000	-37.807760	144.958790	Books for Cooks	46879201.56

FIGURE 4: MERGED DATAFRAME FOR MELBOURNE

We then use linear regression using Melbourne data to predict potential book trends for Sydney.

IV. Results

There are 42 bookstores altogether within 7.5km of Melbourne, Victoria. The suburbs that the bookstores are in have a combined income of AUD12,518,946,363 from 178,399 individuals with taxable income (that is, an average income of AUD70,173).

Yet, within 7.5km of Sydney, NSW, there are only 39 bookstores despite their suburbs having a combined income of AUD21,090,627,734 from 248,699 individuals with lodged incomes (with an average income of AUD84,803).

We assumed a linear correlation of y=mx+b with the dependent variable y being the number of bookstores and the independent variable x as either the combined income or total individuals. We also assumed that 0 incomes/individual yield 0 bookstores, giving us that b=0.

Thus, by combined income alone, Sydney should be able to sustain 70 bookstores (rounded down from 70.76). By individuals alone (seeing that the average income in Sydney is higher than that of Melbournes), Sydney should be able to sustain 58 bookstores (rounded down from 58.55).

V.   Discussion

Cities are outliers. Even though both cities have a higher density of bookstores at its centre (see figure below), the total lodged incomes of the city suburbs are not the highest. This makes sense since these central suburbs are often business districts, where few people live in but a lot work in. These central business districts also benefit from a higher concentration of commercial areas (with their guaranteed higher volume of foot traffic), and a higher concentration of available public transport. Thus even though people do not live in the area, the consistent daily commuters to the city bring a constant stream of potential customers.
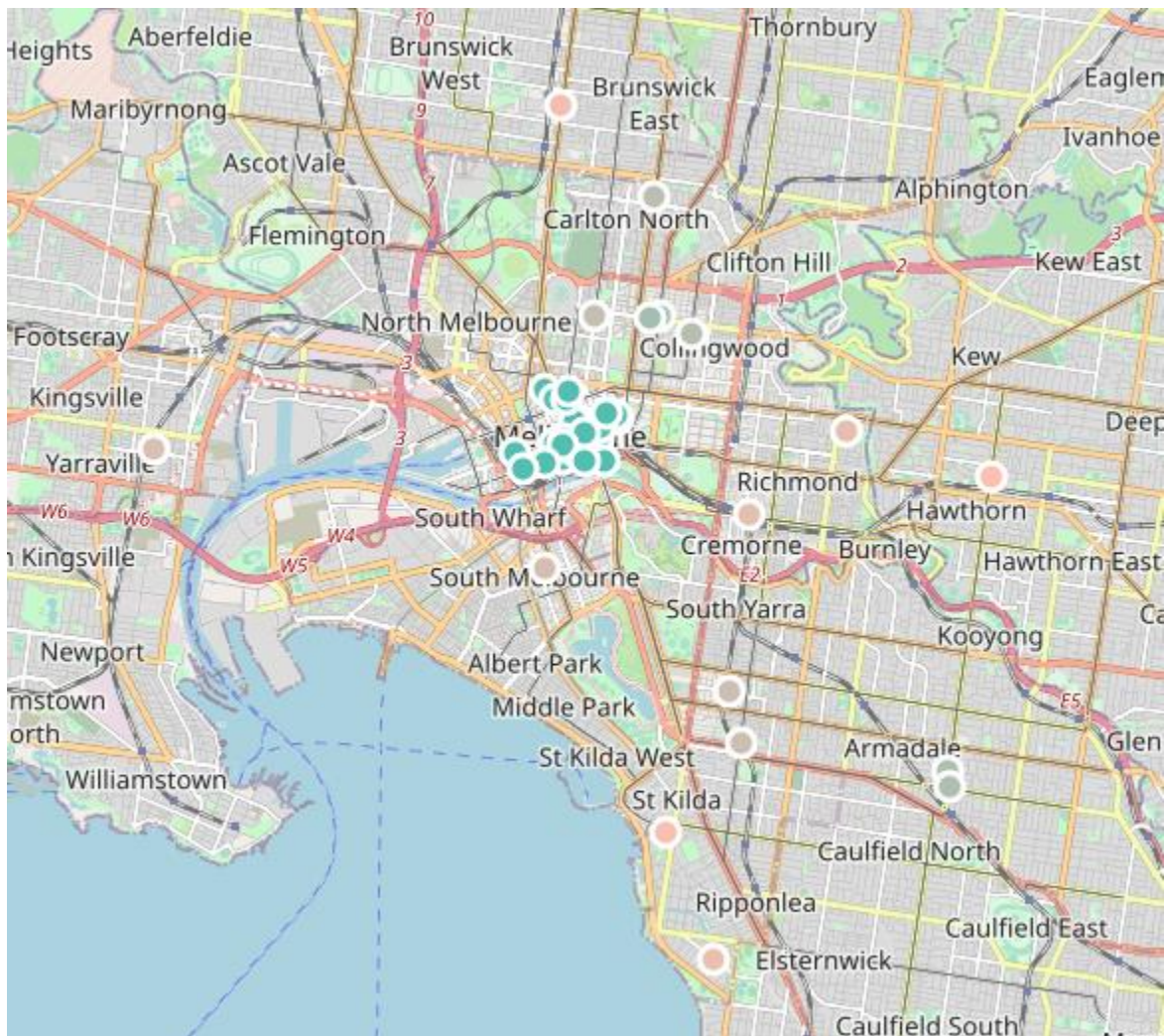

FIGURE 5: MELBOURNE BOOKSHOP MAP GROUPED BY SIMILAR AVAILABLE INCOMES

Public transport systems are integral to the survival of bookstores outside of city centres. Melbourne has a well-known system of public transport (in particular its trams network) that offers a lot of different

connections and covers a wide range of suburbs. Looking at the above map of bookstores in Melbourne, we can observe that many of the bookstores outside of the city centre lies on or close to a route with public transport.

Types of bookstores. In this analysis, any shop that sold books were included as a bookstore, regardless of the types of books the sold. Looking at the list of bookshops within 7.5 km of Melbourne and Sydney, we infer the following: (a) Melbourne has lots of Book Grocers (a discount bookstore) and local independent bookshops in the heart of the city (such as Readings and Hill of Content), and (b) Sydney has lots of newsagencies (i.e. stores that also sell books as a supplementary product but mostly sell other not book-related items) and big bookstore chains in the heart of the city (such as Kinokuniya and Dymocks).

City layouts and the effects of rent. Even though this analysis did not consider it, the rent of commercial areas in different suburbs should be taken into account in future analysis. This can account for why even though Sydney has a similar number of bookstores as Melbourne, yet visually on the maps, its bookstores are more spread out. That is, the Sydney bookstores are not situated as densely in its central business district as those of Melbourne's are, and this can be due to potentially higher rent in Sydney and perhaps its more sprawling layout as opposed to Melbourne's grid-system. The profit margins of bookstores are famously razor-thin and rely on a lot of floorstock. Thus in order to survive, bookstores need to be big (enough). However, the delicate balance between the size of a bookshop and the rent-per-square-footage may be thrown off by exorbitant city rents.
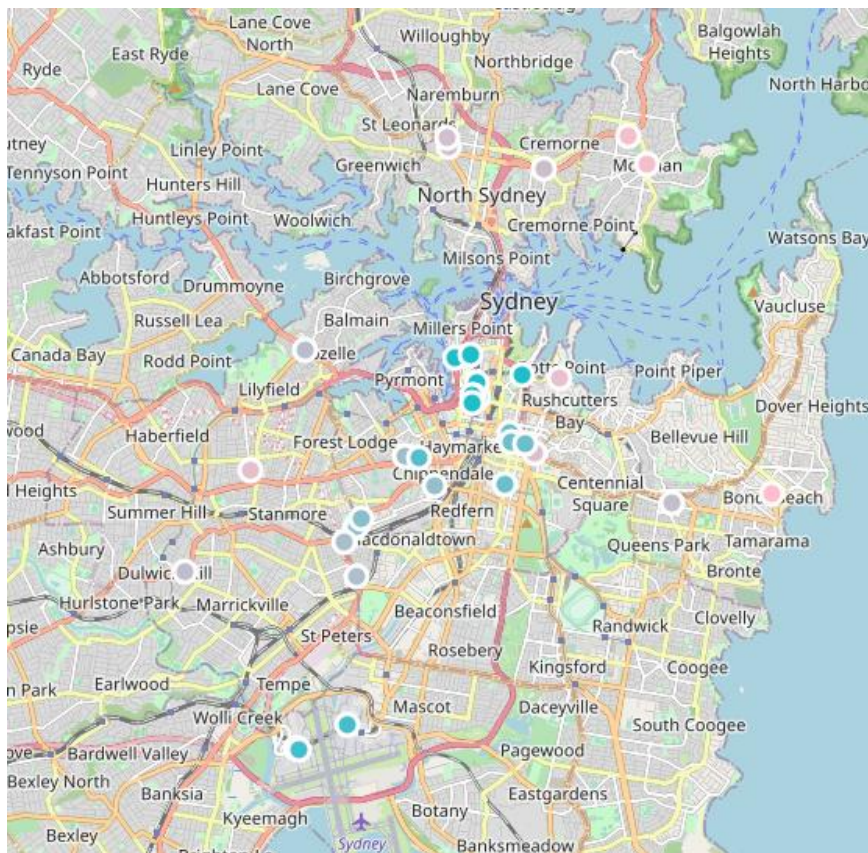

FIGURE 6: SYDNEY BOOKSHOPS MAP GROUPED BY SIMILAR AVAILABLE INCOMES

VI.   Conclusion

From our regression analysis using Melbourne as a standard, we can conclude that Sydney has the population as well as the income to support at least 20 to 30 more bookstores within a 7.5km radius of its city centre.

This analysis can be improved by considering more factors, such as those listed in the discussion. Moreover, as well as being a retail institution, bookstores are also a cultural institution. This makes its sustainability and survivability harder to predict as it relies on people's personal habits.

Ever since the advent of big online book retailers - whose pushed-down prices have forced the closure of hundreds of bookstores worldwide -, it has been touted that the death of bookshops are upon us. However, two decades on, bookshops are still alive. And its only hope of surviving into the future is for more people to be willing to take a chance on them, either as customers or shop-owners.