

Open access press vs traditional university presses on Amazon

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Abstract

This study is a comparison AU Press with three other traditional (non-open access) Canadian university presses. The analysis is based on actual physical book sales on Amazon.com and Amazon.ca. Statistical methods include the sampling of the sales ranking of randomly selected books from each press. Results suggest that there is no significant difference in the ranking of printed books sold by AU Press in comparison with traditional university presses. However, AU Press, can demonstrate a significantly larger readership for its books as evidenced by thousands of downloads of the open electronic versions.

Keywords

open educational resources, open access, press, Amazon, ranking

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AU Press is Canada's first open access university press. This study is a comparison of AU Press with four other traditional Canadian university presses, which do not support open access at this time. The analysis is based on actual physical book sales on the largest online book retailer: Amazon.com and the Canadian version: Amazon.ca. Statistical methods are used to determine whether or not the traditional presses show higher sales. This includes the sampling of the sales ranking of ten randomly selected recently released books from each press. Results show that there is no significant difference in the number of printed books sold suggesting that releasing academic books on open access does not lessen physical book sales online in comparison with traditional university presses using Amazon as a measure. However, AU Press, because it is open access and publicly available at no cost, can boast of having a significantly larger readership for its books. The traditional university presses, because of their cost, print-only format, and other proprietary limitations are not readily available and therefore not accessible to potential readers.

Amazon Sales Ranking

The Amazon sales ranking number is provided as a service for authors and publishers, but can also be one useful gauge of the number of printed books purchased. The ranking provides a relative measure that is useful for assessing a book's sales performance on Amazon. The lower ranking number of a particular book can be interpreted as signifying higher sales. Two rankings were studied, based on both Amazon.com and Amazon.ca sales, which are updated each hour to reflect recent and historical sales of every book sold on the respective web sites. Significantly, this rating does not apply to Kindle books that have been increasing rapidly in sales volume (Rosenthal, 2010). For competitive reasons, Amazon does not release actual sales information to the public, so very few, if any people outside of Amazon know the actual sales numbers (Amazon, 2010).

However, Rampant Tech Press (n.d.) and Sampson (2010) have independently ventured to extrapolate the sales to a ranking order and have come up with similar information displayed on Figure 1.

Rosenthal (2010) provides similar estimates, noting that the lower ranking books (those with a higher ranking number, >#100,000) move comparatively little in their ranking as opposed to rather erratic movements in the best sellers (<#10,000). He notes that weak sellers decay relatively slowly. He observes that a title must sell at least one copy a year to remain above a rank of two million. As most academic books never reach these high rankings; they are with few exceptions to be considered "weak sellers" (>#100,000)

Sampson (2010) notes that the Amazon rankings provide only marginal sales data that are rough estimates at best. On the other hand he claims that the relative sales ranking can be useful for comparisons among books. Books with rankings between #10,000 and #100,000 are recalculated once a day; historic sales information plays a key role in these calculations. However, with books ranking higher than #100,000, which are also recalculated every day, history takes a back seat.

Methodology

Stratified sampling is a common probability method that is considered to be better than random sampling because the stratification reduces sampling error. The relevant stratum in this case was a subgroup of books published between 2008 and 2010. This was necessary because the targeted

population consisted of AU Press books. As AU Press is new, it only had published books in those years. Random sampling was then used to select a reasonable number of samples (n=12) from each publisher. This provided the researchers with confidence that the stratum represented each population well and accurately represented the overall publications in the years under investigation. Limiting the other presses to a subgroup made up of the most recent books published ensured a fair comparison with the new AU Press.

The sampled publications were then investigated to determine their ranking order on both Amazon.com and Amazon.ca. It was considered appropriate to investigate both “stores” as it was expected that Canadian scholarly publications would be relatively better sellers in Canada than internationally. The survey was also conducted on two dates separated by three months and the results have been averaged. Both Rosenthal (2010) and Sampson (2010) recommend this to get a more trustworthy ranking numbers as the numbers can be skewed drastically if measured on any one occasion.

The investigation

AU Press was compared with three of the major university presses in Canada, namely the University of Toronto Press (UTP), the University of Calgary Press (UCP), and the University of Alberta Press (UAP). The Amazon.com and Amazon.ca ranking results for these four university presses are available in Figures 2 and 3.

The investigation aimed to determine whether or not there was a ranking difference between the average ranking of the books in the open press and any or all of ranking averages of the traditional presses. AU Press which is the open university press was compared to the following traditional presses: University of Toronto Press, University of Calgary Press and University of Alberta Press in terms of sales ranking of these presses from Amazon (Amazon.ca & Amazon.com). First AU Press was compared to each of the traditional presses, and secondly it was compared to the three as a group using their ranking data from Amazon.

The Null Hypothesis was posited, stating that there would be no difference between the open press and the traditional presses using the mean sales rank (open press) = mean sales rank (traditional press) was tested at the 5% level of significance against The Alternative Hypothesis:

- that there is a difference, that is, the mean sales rank (open press) is not equal to the mean sales rank (traditional press).

The results are summarized in Figures 4 and 5. The t-statistics were computed and compared to the critical t-statistics of a two-tailed test. In all these cases, the null hypothesis could not be rejected at the 5% level of significance. The conclusion is that there seems to be no difference between the open press and the traditional press. The tests were however not statistically significant ($p>0.05$), indicating that the results might have happened by chance.

On the other hand, the open access books published by AU Press have been downloaded, on average, thousands of times by scholars and other users all over the world and particularly by those in developing countries. In the six months prior to this survey first being conducted, the average total downloads per full book was over 800 and more than 2000 if chapter downloads are included. The median download rate for full books was more than 250 and the total downloads median with

chapters was nearly 1000. Some of the more popular scholarly books had more than 2000 full book downloads and over 6 000 chapter and book downloads. See Figure 6.

AU Press books and chapters have been downloaded by scholars and other users all over the world. In more than sixty different countries. As expected the largest number of downloaders (more than 50%) are from Canada and the United States, but more than 33% of the other downloaders were from developing countries Others were from the emerging countries of Eastern Europe. Several books have also won distinguished international academic awards and have been reviewed and cited in leading scholarly journals.

This paper demonstrates that at least in the measure of physical book sales, there is no evidence that creating OERs for scholarly books decreases print book sales. There is no significant difference between the sale of printed books by traditional university presses when compared with an open access press, namely AU Press using the Amazon measures. There is however the added advantage of substantially increasing readership, especially in developing countries of scholarly books that are made available on line as OERs.

Figures

Rank #	Rampant Press Copies Sold/day	Sampson copies per week
> #1	3000	> 1,000 copies per week
> #10	650	200 – 1,000 copies per week
> #100	100	100 – 200 copies per week
> #1000	13	10 – 100 copies per week
> #10,000	2.2 (11 copies every 5 days)	1 – 10 copies per week
> #100,000	0.2 (1 copy every 5 days)	< 200 sold
> #1,000,000	0.006 (3 copies every 500 days)	< 40 books sold
> #2,000,000	0.0001 (1 copy every 1000 days)	1 book ordered

Figure 1 - Rank Number relation to sales (Rampant Tech Press, n. d.; Sampson, 2010)

Athabasca University Press	University of Toronto Press	University of Calgary Press	University of Alberta Press	Controlled Group Press
57,105	227,397	422,660	154,521	268,193
198,141	119,746	111,002	355,812	195,520
239,621	46,419	396,751	424,099	289,090
98,969	56,934	561,944	246,631	288,503
101,707	201,532	683,365	169,208	351,368
225,921	227,397	1,195,769	65,710	496,292
145,839	249,305	237,886	60,384	182,525
488,360	477,072	421,807	83,253	327,377
80,031	283,831	270,707	91,869	215,469
408,713	419,100	388,270	267,048	358,139
122,315	332,398	787,757	197,166	439,107

Figure 2 - Rankings from Amazon.ca January 2010

Athabasca University Press	University of Toronto Press	University of Calgary Press	University of Alberta Press	Controlled Group Press
1,260,279	2,393,121	3,124,635	1,290,317	2,269,358
705,438	3,337,710	160,272	3,428,847	2,308,943
1,062,251	1,190,429	1,048,357	4,068,647	2,102,478
1,765,283	735,372	1,797,624	776,928	1,103,308
2,940,755	2,992,991	647,557	1,365,207	1,668,585
4,472,042	2,393,121	3,076,338	999,705	2,156,388
1,086,172	1,483,875	724,521	334,671	847,689
1,712,101	2,376,571	4,938,289	2,865,188	3,393,349
2,637,674	2,248,576	4,312,491	4,205,723	3,588,930
2,087,648	618,051	3,634,196	8,581,611	4,277,953
1,068,800	1,654,718	2,006,625	3,419,384	2,360,242

Figure 3 - Rankings from Amazon.com January 2010

Description	AUCA	GROUPS.CA
Mean	196974.7	296647
Variance	1.93E+10	1.1E+10
Observations	11	12
Hypothesized Mean Difference	0	
df	19	
t Stat	-1.93098	
P(T<=t) one-tail	0.034272	
t Critical one-tail	1.729133	
P(T<=t) two-tail	0.068545	
t Critical two-tail	2.093024	
<p>Since the t-calculated (-1.93098) lies within the acceptance interval (± 2.093024) for a two-tailed test, we are unable to reject the null hypothesis that there is no difference between AU Press at amazon.ca and The Three Groups' Press at amazon.ca. The test is however not statistically significant ($p > 0.05$)</p>		

Figure 4 - Athabasca University at amazon.ca & The Group of Universities at amazon.ca

Description	<i>AUCOM</i>	<i>GROUPS.COM</i>
Mean	1890767.55	2370656.61
Variance	1.2222E+12	1.0718E+12
Observations	11	11
Hypothesized Mean Difference	0	
df	20	
t Stat	-1.0508471	
P(T<=t) one-tail	0.15293058	
t Critical one-tail	1.72471822	
P(T<=t) two-tail	0.30586116	
t Critical two-tail	2.08596344	
<p>Since the t-calculated (-1.0508471) lies within the acceptance interval (± 2.08596344) for a two-tailed test, we are unable to reject the null hypothesis that there is no difference between AU Press at amazon.com and The Three Groups' Press at amazon.com. The test is however not statistically significant ($p > 0.05$)</p>		

Figure 5 - Athabasca University at amazon.com & The 3 Groups at amazon.com

BOOKS	Aug'09	Sep'09	Oct'09	Nov'09	Dec'09	Jan'10
A	98	105	166	193	117	119
B	73	55	75	51	86	76
C	93	90	141	114	75	94
D	34	19	60	46	32	32
E	832	1439	1326	1158	818	1335
F	67	23	78	44	12	17
G	68	43	135	205	100	140
H	897	1090	1960	1642	1447	1447
I	144	137	220	219	161	92
J	93	110	134	166	113	90
K	182	127	249	160	267	124
L	36	218	306	261	186	215
M	0	606	506	299	209	255

Figure 6 - Monthly Book Downloads at AU Press

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