

What's LEGO Costing You?

A review and analysis of the LEGO Summer 2016 Catalogue



Produced for amusement purposes by

TRUE NORTH BRICKS

<http://truenorthbricks.wordpress.com>

<https://twitter.com/TrueNorthBricks>

<https://www.facebook.com/truenorthbricks/>

True North Bricks and this document are in no way, shape, or form associated with the LEGO Group.

Introduction

Eagerly awaited by many a LEGO fan, the LEGO catalogue arrives several times a year in mailboxes the world over. It showcases many current sets, while also introducing readers to new sets arriving on store shelves. It contains useful information including pricing, piece counts, and minifigures included in each set. This information can be used to analyze general trends in LEGO.

The purpose of this work was to determine a starting point in terms of pricing for purchasing LEGO bricks. When searching for supplementary bricks to fuel custom builds, the smart shopper requires information about the actual current price of LEGO. This allows informed decisions when purchasing LEGO second hand. There are so many sources for acquiring LEGO, it is important to have a reference point to ensure that pricing is fair.

Using the Lego Summer 2016 Catalogue as a reference, this work has determined the average price per brick of LEGO in general, as well as by theme. The data collected has also allowed information to be analyzed concerning the average cost of sets (in general as well as by theme), and the average number of minifigures per set.

It is important to note that this document was not produced in association with the LEGO Group, and the author shares no affiliation with them. This is a work of curiosity produced for amusement purposes only. It will hopefully help consumers by providing a starting point to assist in making purchase decisions.

Methods

Review and analysis of the LEGO Summer 2016 Summer Catalogue was carried out using simple, high school level mathematics. It was not produced by experienced statisticians using any form of higher level statistics.

The breakdown of sets was produced by counting the total number of sets advertised in the catalogue, and then counting the total number of sets per theme in the catalogue. A simple average was calculated for each theme. The total number of sets does not include the advertised baseplates and brick separator shown on page 35, nor the free fountain seen on the cover, page 2, and page 17. The fountain was excluded because it is not available for individual purchase and is part of a promotion only.

The average price per brick was calculated by totaling the number of bricks advertised in the entire catalogue, as well as the total cost of all of the sets combined. The total cost was divided by the total number of pieces. For this calculation, Mindstorms was excluded. Mindstorms was deemed to not be a typical LEGO set purchased by the average consumer. Much of the cost involved with Mindstorms is the programmable brick and software, which are not considered to be standard LEGO in this study.

In much the same way, the average cost of sets by theme was calculated by totaling the number of pieces per theme and the total cost of all sets in a theme. The total cost was divided by the total number of pieces to determine the average cost per brick. As there was only one Mindstorms and one Technic set advertised, these themes were excluded from theme calculations. They were included in the overall average cost of a set.

The average number of minifigures per set was calculated by first totaling the number of sets advertised in the catalogue that had minifigures. In this case, “minifigure” refers to the standard LEGO figurines, and excludes figures from the Minecraft, Angry Birds, Friends, and Elves themes. It also excludes big-figs, animals, droids, and ghosts. Technic, Mindstorms, Architecture, and Creator sets with no minifigures were also excluded from the calculations. For the overall average number of minifigures per set, the total number of advertised minifigures in the catalogue was divided by the total number of sets in the catalogue. Similarly, the average number of minifigures per theme was calculated by totaling the minifigures advertised in the theme, and dividing it by the total number of sets containing minifigures in the theme. The only theme for which the total number of sets and the total number of sets containing minifigures was not identical was the Creator line. Certain Creator sets are designed to not be minifigure compatible, so these sets were treated as a different theme for the purposes of this analysis. These sets, along with the Technic, Mindstorms, and Architecture sets are understood by buyers to not contain minifigures. Since they are not purchased for minifigures, they are deemed un-necessary for the calculation of an average.

Results

Table 1: Raw data gathered from the LEGO summer 2016 catalogue

| Theme | Total # of sets advertised* | Total # of pieces advertised | Total cost of all sets together** | Total # of minifigures |
|---------------------|-----------------------------|------------------------------|-----------------------------------|------------------------|
| Angry Birds | 6 | 2,384 | \$315.94 | |
| Architecture | 3 | 1,099 | \$154.97 | |
| City | 4 | 1,272 | \$212.96 | 16 |
| Classic | 2 | 1,583 | \$119.98 | |
| Creator | 15*** | 26,401 | \$2,519.85 | 50 |
| DC Super Heroes | 5 | 3,287 | \$443.95 | 20 |
| Elves | 6 | 1,997 | \$227.94 | |
| Friends | 6 | 2,091 | \$260.94 | |
| IDEAS | 5 | 7,018 | \$689.95 | 24 |
| Marvel Super Heroes | 7 | 2,056 | \$278.93 | 22 |
| Mindstorms | 1 | 601 | \$399.99 | |
| Minecraft | 5 | 3,391 | \$489.95 | |
| Nexo Knights | 5 | 2,828 | \$324.95 | 13 |
| Ninjago | 5 | 2,079 | \$264.96 | 18 |
| Star Wars | 10 | 10,593 | \$1,444.90 | |
| Technic | 1 | 2,704 | \$349.99 | |
| Total | 86 | 71,384 | \$8,500.14 | 206 |
| Without Mindstorms | 85 | 70,384 | \$8,100.15 | 206 |

*49 of these sets contain standard minifigures

**Prices are in Canadian dollars

***9 Creator sets include minifigures

Analysis

There are a total of 86 sets advertised in the LEGO Summer 2016 catalogue. Figure 1 below shows the breakdown of sets advertised in the catalogue by theme. The Creator theme is represented by 15 sets, which represents 17% of all sets in the catalogue. Star Wars came in second place with 10 sets advertised, representing 12% of all sets in the catalogue.

It is important to note that this information does not represent an overall breakdown of all LEGO sets. This analysis concerns only the sets advertised in the LEGO catalogue, and not all LEGO sets currently available on the market. It also cannot be used to represent importance or interest assigned to any given theme. For example, there was a larger number of Marvel Super Hero sets advertised in the catalogue than DC Super Heroes sets. However, each theme occupied the same amount of space in the catalogue itself.

Figure 1: Percentage of sets by theme in the summer 2016 catalogue

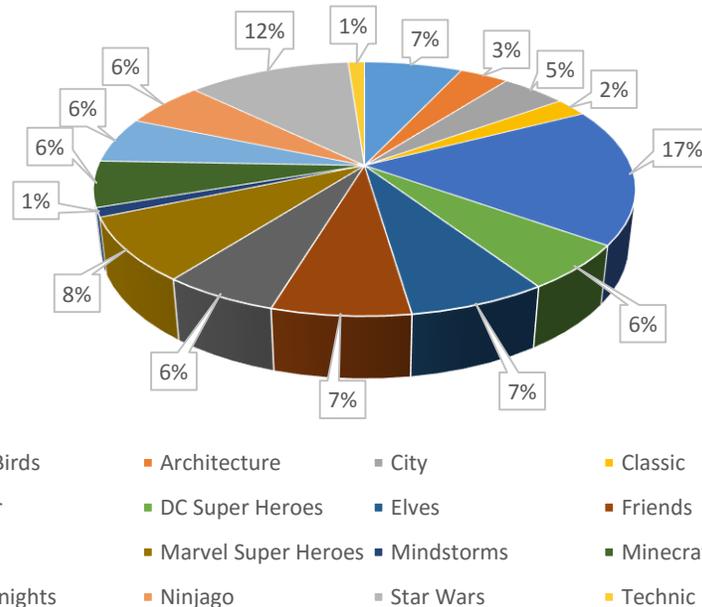


Figure 2 illustrates the average cost associated with each brick by theme in Canadian dollars. The last column represents the average cost per brick across all themes and sets advertised in the catalogue. As mentioned earlier, the overall average in the last column excludes Mindstorms. Mindstorms, has a much higher than average cost per brick (\$0.67/brick) due to the expense associated with the software and programmable brick, which are not standard parts seen in any other set.

Licensed sets appear to have higher costs per brick, with the exception of the Architecture and City themes. City has the highest average cost per brick of any theme at \$0.17/brick. When considering the catalogue as a whole, regardless of theme, the average cost per brick is \$0.11. If Mindstorms was included in the calculations, the average cost per brick goes up to \$0.12.

Themes containing large sets, like the Creator modular buildings, tend to have a lower price per brick. The Classic line, which consists of bins of random parts, has the lowest average price per brick at

\$0.08. So, for building up a collection of bricks for MOC projects, Classic bins give you the best value. But, these bins tend to contain very standard bricks. Larger sets will give you good value and more specialty pieces.

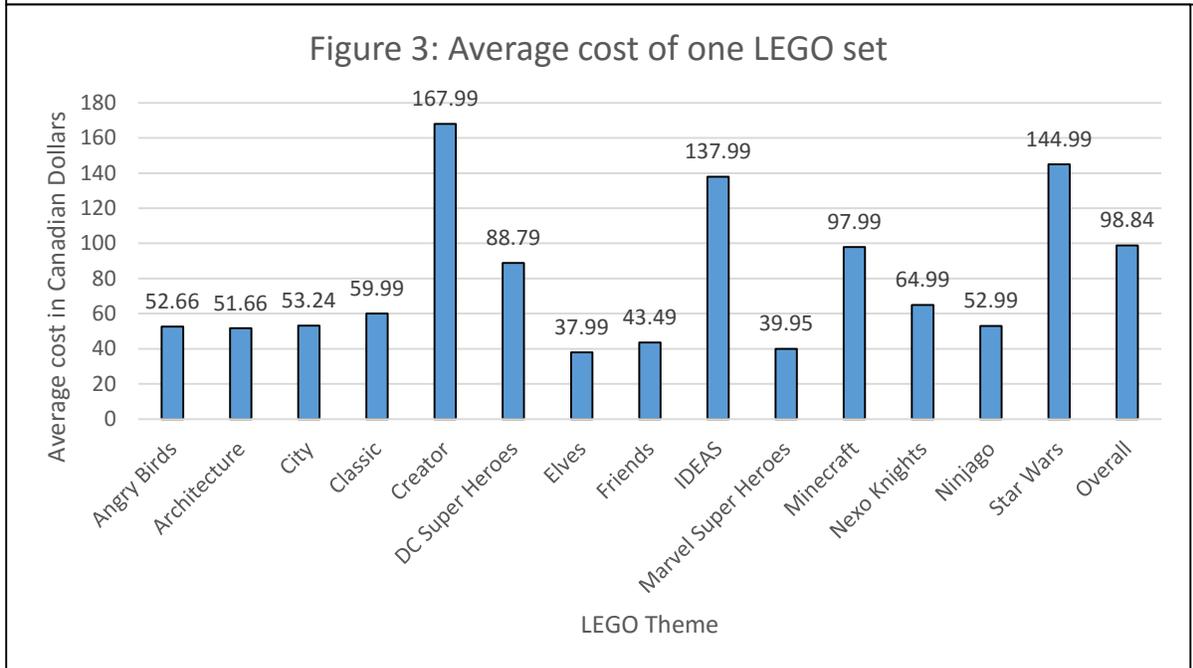
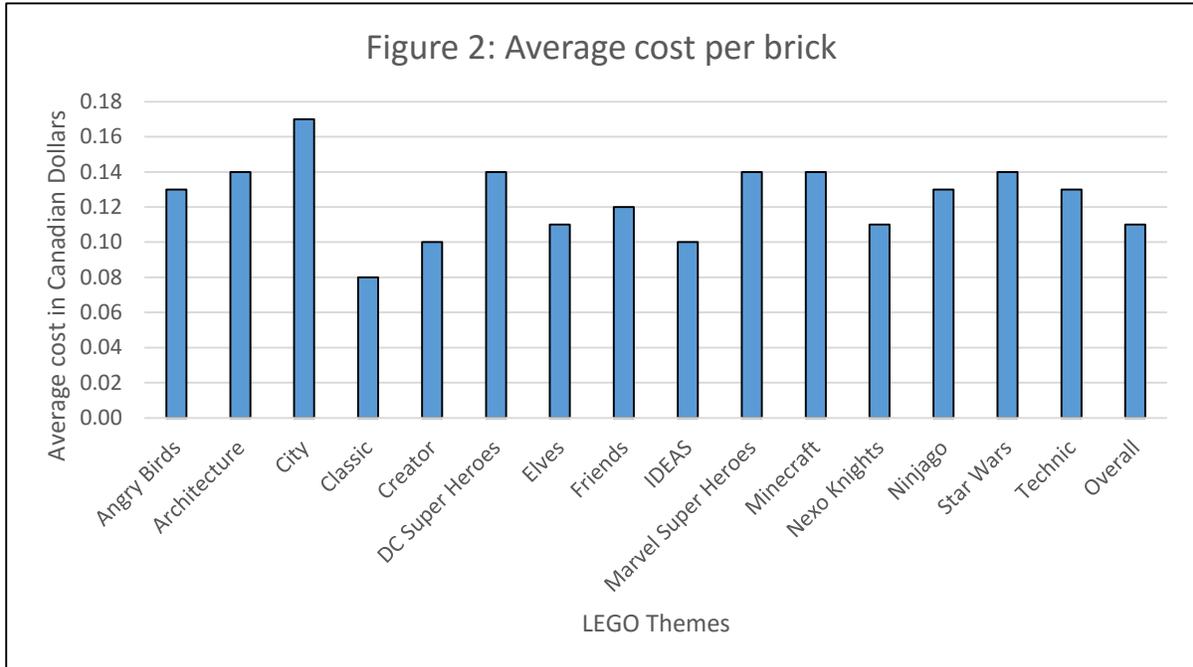
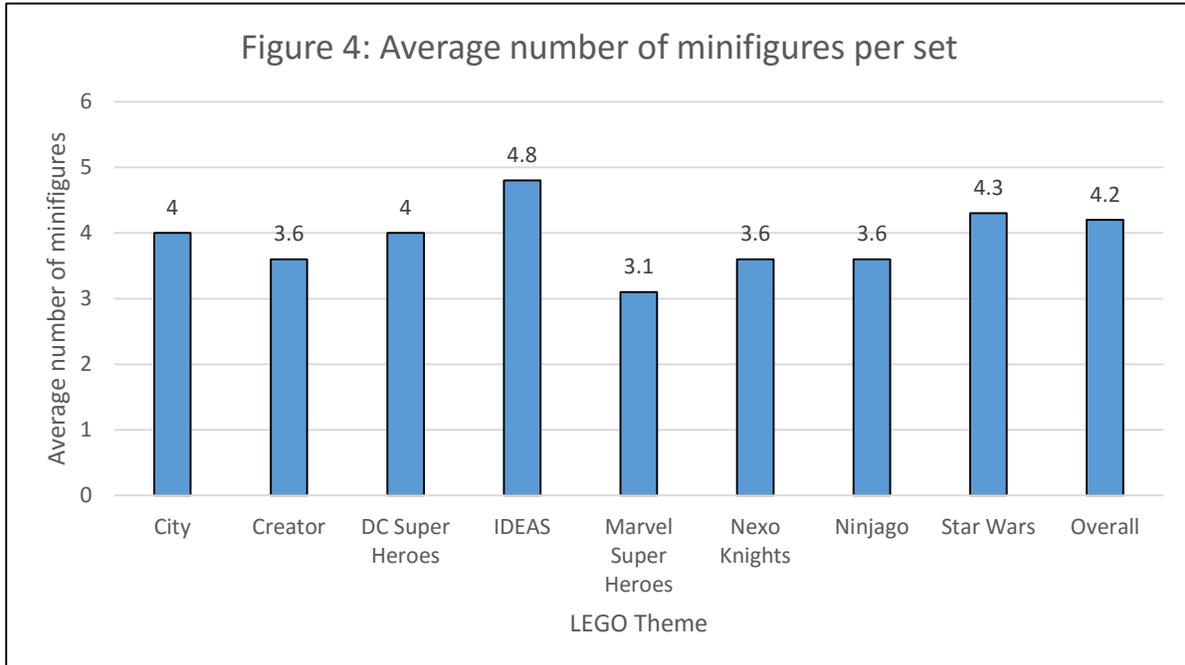


Figure 3 represents the average cost per set by theme in Canadian dollars. Once again, the last column represents average cost of all sets advertised in the catalogue. Mindstorms and Technic were not included because each theme only had one set advertised, as such there was no average to calculate. Mindstorms EV3 (31313) was advertised at \$399.99, while the Technic Porsche 911 GT3 (42056) was \$349.99. These prices were included in the overall average cost per set shown in the last

column of figure 3. The Creator theme has the highest average cost per set (\$167.99), followed by Star Wars (\$144.99), and IDEAS (\$137.99). Each of these themes contains many large sets. The calculation for IDEAS also contain the Ghostbusters Firehouse (75827), which is technically not an IDEAS set, but was advertised in the same section along with the IDEAS Ghostbusters Ecto-1 (21108).

Once again, it is important to note the analysis of the average cost of a set in each theme is limited by the fact that only sets in the catalogue were considered. For example, if we take a look at DC Super Heroes versus Marvel Super Heroes again. You will note that the average cost of DC Super Heroes sets is higher than Marvel. But, a full page spread was given in the catalogue to the 1960s Batcave set (76052), which retails at \$329.99. The most expensive Marvel Super Heroes set advertised came in at \$99.99. Meanwhile, a quick online search shows that the S.H.I.E.L.D. Helicarrier (76042) is still available for purchase at \$399.99. If this set had been in the catalogue, it would have increased the average price of Marvel Super Heroes sets.

The final analysis conducted on the catalogue was a determination of the average number of minifigures present in each set as this is a major selling point for many fans. As mentioned earlier, these calculations only take into account the sets that actually contain standard minifigures. Out of 86 total sets in the catalogue, this meant that only 49 sets were considered in these calculations. While the catalogue does list Minecraft characters as minifigures, they were not included in this section because they do not have the normal minifigure head and do not mix well with other themes. Friends, Elves, droids, animals, big-figs, and animals were also not counted. LEGO IDEAS came out on top as having the largest number of minifigures per set. But, the Ghostbusters Firehouse was included in this calculation, and it is not an IDEAS set in reality.



Overall, it would appear as if the City theme delivers the worst value. While the average price per set was not that different from other themes, at \$0.17 per piece, it is the most expensive per brick. You are also not getting any more minifigures to justify the higher cost.

The best value per brick is delivered by purchasing a bin of Classic series bricks. The average cost of one set is also below the overall average. But, you don't get any minifigures, which is a major negative for many collectors.

Creator has a high average cost per set, but the trade-off is a relatively low cost per brick and a decent number of minifigures that is not far below the average. If minifigures are important in your purchase, this is probably the best value theme to invest in. This is mainly due to the large modular sets included in this theme. Remember, many Creator sets do not include minifigures at all, and those were not included in the minifigure calculations, but were in the average prices.

Conclusion

The major limitation of this analysis is that only sets in the Summer 2016 Catalogue were considered, when in reality there are many other sets available. So, results per theme should be taken with a grain of salt, particularly when comparing themes. Theoretically, if LEGO has tried to advertise a representative sample of all of the sets they have, then the overall averages should not be far off.

The main purpose of this project was to determine the average price per brick for new LEGO. This will give consumers a starting point when purchasing bricks at sources other than the LEGO Store, and also allow them to analyze the comparative value of any given set purchased through LEGO.

Future applications of this work can include analyzing year-to-year trends in LEGO sets. While this particular study represents only one snapshot in time, repeating this process over several years could reveal more detailed information about LEGO pricing and priorities over time. A similar study of catalogues from other countries could also reveal differences in international pricing of LEGO.

Another useful step forward would be to determine the average mass of LEGO bricks. This would allow the average price per brick to be related more easily to online auctions that deal mostly in selling LEGO by mass as opposed to piece count.

Mostly this was just something done for fun to pass the time and should not be taken as a definitive source for information.