LEGO and the Market for Children’s Building Blocks

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• Background

There exists in some human beings an insatiable draw towards the unique and the unusual, as much a statement of individuality as the clothes a person wears. This attraction sometimes leads towards the hobby of collecting a set of objects. Each person has their own niche of memorabilia, often a set that reminds them of childhood fantasies or other happy times. Because these consumers have specialized needs, wanting with varying fierceness to obtain specific, rare items to complete their sets, the collectibles market makes for intriguing study, especially that dominated by LEGO—the market for a collectible children’s toy distinguished by its interlocking bricks.

The LEGO Company has made itself a giant in the market for children’s toys during its existence and has used that leverage to propel itself successfully into the collectibles market. The firm began as a manufacturer of wooden toys in Denmark seventy years ago. Sales allowed the Danish company to survive, but not to thrive until it introduced in 1949 miniature plastic blocks with divots and bumps that were aligned such that they could fit into one another, and were designed for building structures. With these plastic blocks the company was able to market to all first-world countries, from North America to Western Europe, Australia, and Japan. Visualizing something and then constructing it, its creators believed, was and is an educational experience that encourages “lifelong creativity, imagination and learning,” according to their press release. Perhaps the very reason that many people now collect LEGO's is that they were indeed captivated as children with the infinite capacity of the blocks.

LEGO expanded its product line in the late 1980’s by introducing what it considered to be its “second era” of toys—an era devoted to movement. During this time mechanical parts and battery packs were created and integrated among the bricks. By doing this, LEGO creators brought models to life and propelled them through use of rubber band belts, gears and eventually
pistons that expanded on the flexible motion elements (figurines) introduced in 1974. This second phase of motion helped capture the minds of today’s early twenty-year olds, and at its release proved to be an instant success. From those foundations of brick-fastening and later motion evolved a third era of children’s play into which LEGO delved: role-play. At this time, sets were ushered in that integrated individual models together under a common characteristic, such as town or medieval-theme kits, and each product played off of the another to create a plastic microcosm of a “real” world. Gradually these sets drifted from the everyday towards the imaginary, as the company released models that involved outer space and colonization of other worlds. Just as these sets swept the authors pleasantly away, so they did to millions of other children across the United States and first world.

There is also a tendency of collectors to have unusual utility and demand for certain theme items. LEGO has capitalized upon this by introducing theme sets; the first was a “city” motif released in 1955. When a set is physically incomplete, its collector is left mentally incomplete and extremely desirous to finish it. German philosopher Walter Benjamin nicely summarized the behavior of collectors, saying “every passion borders on the chaotic, but the collector’s passion borders on the chaos of memories.” Such memories are worth extraordinary amounts of money to certain people, and to unlock them by paying the extra for a collectible item is well worth the price.

• Market Structure

The market for construction blocks is a form of oligopoly. LEGO is the seventh-largest toy manufacturer in the world and seriously competes only with companies manufacturing somewhat near substitutes for their plastic building blocks, making the number of firms in the market relatively small. With its size and in comparison to other firms—the world’s seventh
largest toy manufacturer—LEGO is able to act as a price leader, able to set and influence its competitor’s prices. The examined market does not include toys like Connectix that use main blocks other than rectangular prisms. Some other competitors have created blocks able to interlock with LEGO, including Tyco building blocks (1990), MegaBloks (1985-present), Best-Lock Construction toys (2002), and Playmates’ Intelli-block (2002).

LEGO and its nearest substitute MegaBloks in the interlocking brick market have slight differentiation between products, distinguishing the market as an oligopoly. Interlocking brick products have differentiated themselves by making distinct “theme” sets and figurines, contrasting colored pieces that do not match with other brands, and distinct building instructions. Each company has used their own palette of colors, making sure that their pieces would aesthetically match only sets from their own line (something that even an eight-year old can discern). Additionally, the firms’ product assembly instructions would differ: on some, the new pieces in each step are colored against the rest of the pieces; on others the directions are all in color; on a third, the new pieces are highlighted with bolder color.

Few barriers to entry exist however, than the cost of advertising and promoting a name to match LEGO. The company has had such a strong influence on the marketplace that people associate its interlocking bricks with the company name, much like Kleenex or Saran Wrap in their respective arenas. If nothing else, the ability to connect their bricks with LEGO bricks has helped a small number of competitors to latch on to the success of LEGO in the toy marketplace, if not in name recognition. Due to the small number of firms, influence of competitors’ actions upon each other, the slight differentiation of products, and the degree to which advertising is important in this market, the examined market is an oligopoly.
• Company Comparison

A key advantage of LEGO is its backwards-compatibility. Every block made in any of its factories since 1958 is compatible with every other block. Consumers are not merely purchasing a toy for one-time use; they are expanding their own capabilities in newfound directions. Compatibility is mirrored one of the company’s goals, that “each new product multiplies the play value” of the others. If a given customer has bought a LEGO product in the past and faces the decision to buy another one or a substitute, the LEGO set will increase the utility of the sets that she already owns. That is, customers with numerous LEGO sets will have higher marginal utilities for the new sets they buy. Toy manufacturers without that history have no feasible way to make up for it, putting them in the difficult situation of having to produce products of comparable quality to LEGOs for a lower price to stay competitive.

The main single trait that sustains MegaBloks and other companies as legitimate contenders to LEGO is that they are just as compatible with a LEGO set as with their own blocks: they crack LEGO’s consumer lock-in. This is an extreme equalizer in the retail market, as MegaBloks and others have an equal marginal utility increase as LEGO gets from the consumer’s own block inventory and is able to successfully freeload off of this beneficial externality. By literally hitching on to its competitors’ parts, the competition evens itself with LEGO in the most important category of compatibility.

One key success for LEGO in countering its competition’s compatibility is how it creates and successfully markets new ideas before its competition. LEGO was the first brick company to have come up with theme sets, scale model sets, and even new marketing campaigns meant to appeal to a wider audience. LEGO has introduced its own board games, T-shirts, computer games, and soon movie based upon one of their popular and original concepts while constantly churning out a new variety of theme sets. When the competition finally responds LEGO counters
by changing its themes—it invents model sets every year while retiring older ones. For example, LEGO once made scale model sets resembling sports cars, airplanes, and other vehicles that collectors prominently display in cases in a theme called Model Team in the early 1990s. However, they did this for only four years before discontinuing the series. Also credited to LEGO is the addition of technical motion elements to model sets in the 1980s. Dubbed “Technic,” the new pieces allowed LEGO builders to steer models, make them light up, or even power them to move on their own. By always being on the cutting edge of ideas, the Danish building block company has maintained widespread and popular recognition.

Jointly, the brand loyalty that LEGO has established is stunning. It runs an international club of LEGO fans numbering nearly two million members, the average visit to its web-site lasts forty-eight minutes and its total hit list since December 2001 is over thirteen million users. Over the last half century, it has sold the equivalent of fifty-two blocks per person on earth. The arrival of comparable construction toys in the market has done little to damage its sales, and indeed the company is growing with the goal of becoming the largest toy manufacturer in the world by the year 2005. According to its own information, it is currently in seventh place.

• Pricing and Product Comparison

While LEGO products can either be bought directly from the company or through third-party retail toy stores primarily in Western Europe, Japan and the United States, the market for price comparison examines five retail toy vendors in Tucson: Target, Toys ‘R Us, Kmart, Kay Bee Toys, and Wal-Mart. The store with the biggest selection of LEGO and other interlocking brick products was Toys ‘R Us, followed by Target (with 2/3 the selection of Toys ‘R Us), Wal-Mart (1/3rd), Kmart (1/6th), and Kay Bee (1/15th). These numbers were determined by the volume of sets offered in five distinct price-groups: under ten dollars, between ten and twenty, twenty
and thirty-five, thirty-five and fifty, and over 50. Notably, as the sets contained more pieces stores were less likely to stock them, as each store was distinctly more competitive in small-numbered piece sets. While all stores had a fair selection of sets in the under ten and ten to twenty dollar brackets, only Target and Toys ‘R Us were likely to have any sets above $50 in price.

Prices were staggered by the number of pieces in a set, as the higher the number of pieces there were, the higher the price, no matter what company. For example, the 90-piece LEGO Tusken Raider Encounter set sold at Target and Wal-Mart for $9.99 and $9.92 respectively, while the 358-piece Jango Fett’s Slave I LEGO set sold for $49.99 and $48.88 at the same two stores. Prices tended to be fairly uniform in each store, as the toy rivals often separated their prices by a few cents on average for smaller sets. In the case of a set called the Twin Pod Cloud Car (117 pieces), prices ranged from $9.92 to $11.99 at all five stores, with four of those prices being within 10 cents of one another. Only Kay Bee charged a higher rate of $11.99 instead of selling at the median rate of $9.96.

While the previous paragraphs noted how LEGO products are priced, are there similar products in which another interlockable brick company currently competes with LEGO? Yes, through the LEGO Bionicle theme and its MegaBloks counterparts Gyrofighters and Blok Bots. Started in 2001, Bionicle is an original creation of its company, set against the backdrop of the futuristic imaginary island world Mata Nui. Combining action cartoon, tradable playing cards and comic series with the LEGO brick, Bionicle is the story of six island heroes who set out to fight the evil spirit Makuta that plagues their land, using specialized tools and wearing magical masks. LEGO fans are able to build many of the characters within the tale and create adventures these heroes face on their quest to fight the Makuta. Every month the LEGO Company updates
the story, entrancing Bionicle fans with an unfolding, interactive tale. LEGO also includes directions that, coupled with multiple sets, allow its builders to build even bigger figurines within the Bionicle storyline. As the tale evolves more new figures are created and sold in stores, catering to young customers’ desire to learn and build more within the story. With its success in both Europe and the U.S., the Bionicle trademark has spawned its own shoe-line and upcoming home video based on the cartoon series on the LEGO website. Currently, there are fifty-four LEGO products offered in the Bionicle line, ranging in price from $1.99 to $89.99. The most popular figurines are the six heroes, each with a specialized tool and mask.

In answer to LEGO’s success MegaBloks began producing two similar types of figurines, Gyrofighters and Blok Bots, in 2002. Although their website boasts no active storyline for fans, the figures markedly resemble Bionicle figurines. In fact, the only difference is the weaponry that Gyrofighters use against one other, substituting for Bionicle’s tools. Another telling clue hides in MegaBloks’ website: it explains how their figures can be combined and transformed into even larger figurines. As of now, there are over a dozen Gyrofighters and Blok Bots products distributed by LEGO’s competitor, with prices ranging from $10 to $50.

MegaBloks, one-third the size of LEGO, stays on the cusp of staying in business. For the first quarter of 2002 it lost six cents per share, which, albeit an improvement from the twenty-two cent loss the previous year, indicates that the business is losing money. In fact, its net loss during that period was $1.27 million dollars; obviously, it still operates while running a deficit. One strategy behind this might be the promise of increased sales—the company gained $3.5 million more in sales revenue than it did during the first quarter of 2001. If this pattern of increased sales were to continue, the firm would be able to stay open in the long run as it will soon run enough of an accounting profit to pay off outstanding loans and debts. In reality this
happened, giving the company net earnings of just over $6 million over the course of the entire year, out of $150 million initial sales revenue. This amount, however, pales in comparison to the sales and earnings of its competitor LEGO.

LEGO earned considerable profits in 2001. With $1.2 billion in sales revenue, it managed to garner $51.5 million in profits. Comparing the company and its competitor MegaBloks shows that LEGO has considerably greater market share and profit. Dividing profits by sales revenue yields a hybrid ratio of efficiency, a measure of return on sales. This turns out to be higher for LEGO (0.043) than for MegaBloks (0.040). Ostensibly the sheer size of the LEGO empire is helps it dominate over its competitors in an economy of scale. Additionally, it has the advantage of greater stability, as seen in contrast to the aforementioned wildly varying quarterly earnings of MegaBloks.

• Supply Shock

The market would exhibit unusual behavior under the stress of an unexpected shock: increased oil prices. Crude oil is a key ingredient in the manufacture of all plastics, giving an oil shortage the power to substantially increase the cost of production of toy construction blocks. The cost curves facing both firms would increase substantially under the pressure of decreased oil, consequently increasing prices charged to consumers.

Neither can make plastics without oil, and any increase in its price per barrel will directly translate to increased costs of production for either company. Due to the individual market shares of either company, the amount of cost increase that each one experiences would vary, though it would be equally impacting in because the increase in costs would be directly proportional to the quantity of plastic produced. This cost would be partly shifted to the consumers in the form of increased prices. Decreasing the quantity of blocks produced would decrease revenues alongside
decreasing the total cost of production, which does not change the ratio of revenues to production costs but does minimize the impact of the increased prices. In conjunction with increasing prices of course comes a decreased demand for the product, as the fringe consumers with the smallest marginal utilities for the toy cease purchasing them.

• Conclusion

The story of LEGO is intricate. It is a story of constant renovation and redefinition, one discovered to intertwine with different companies, spin-offs and products. It has innovated and invented, going from wooden blocks to plastic ones, from immobile to mobile, and from individual products to united sets. In the process, the company has carved out new niche in the children’s toy market—a profitable niche that other companies have also entered. To stay on top, LEGO has expanded its operations and its market share within the newfound oligopoly to become one of the largest toy manufacturing companies on earth. By having examined its competitors and their successes, one now sees by contrast what LEGO is and is not. To continue setting the market standard it must maintain its current corporate direction, including repeated product updates and retirements, that was critically scrutinized here and proven to work. Indeed, ask history itself.
Works Cited


