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Key Economic Indicators

Overview

Video games provide players with engaging and interactive entertainment across multiple platforms. Today, nearly half (155 million) of Americans indicated that they play video games and 42% of Americans play video games regularly (3 hours or more per week) (ESA). In 2015, the video game industry generated more than $43 billion dollars in revenue, a figure that continues to grow steadily (IBIS World).

Since the first arcade games in the early 1970s, the video game industry has expanded its content to newer platforms such as the home video game console, PC, and mobile. Like many other industries, the advent of the internet fundamentally changed the way people played games and the way publishers distributed them. However, the video game industry has not only been driven by technological innovations. Rather, the industry is credited for driving current technologies into mainstream use. Ralph Baer, the pioneer of the home video game console argues, “If it weren’t for video game enthusiasts and the absolute commercial need to keep them happy with ever-better graphics requiring ever-higher processor speeds, complex computer graphics would still be found only in the high-priced domains of the business and science world” (ESA).

One of the largest trends in the video game industry today is the rising popularity of gaming on mobile devices and PCs. These trends pose the greatest challenge to the traditional console model that still relies on retailer distribution of physical games.

Table 1
The Video Game Industry at a Glance

As we can see, the industry has experienced a healthy revenue growth of 4% for the past five years. However, IBIS World expects to see a downturn in revenue growth for 2016, estimated at 1.8%. This expected decline in revenue growth is due to the increasing popularity of low-cost and low-margin mobile games, which may slow demand for other game types. Since mobile games are sold at a much lower price compared to traditional console and PC games, their increased sales are expected to pull industry revenue downward, resulting in consumers paying less per hour for gaming entertainment overall. Despite the expected downturn in revenue growth, IBIS World expects revenue growth to rebound to 2.4% in the five years leading up to 2021, due to a growing population and an increasing percentage of Americans that play video games.

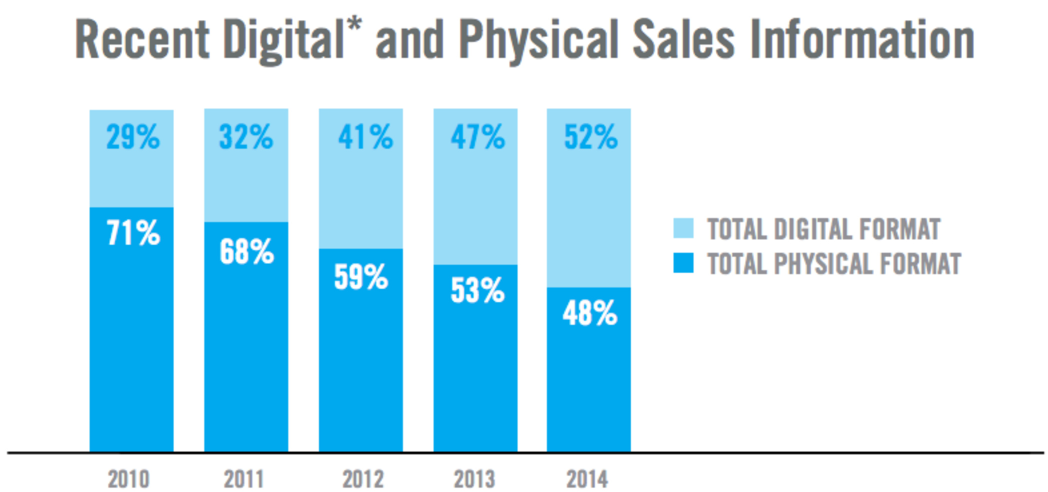

Table 2
Video Game Sales Format Breakdown

In addition to the rising popularity of mobile gaming, PC gaming has also gained increased popularity in recent years. Like mobile gamers, PC gamers mostly purchase their games online, rather than at a retailer. Table 2 shows the percentage of digital and physical game sales from 2010 to 2014. It is worth noting that digital sales include mobile and PC game downloads in addition to subscriptions, add-on content, and social network game sales. Nonetheless, the sale figures paint a clear shift from physical to digital game sales, with physical game sales occupying more than two-thirds of total games sales in 2010 to less than half four years later (ESA). This trend is not only due to the increasing popularity of mobile and PC gaming but also to the increasingly popular industry practice of selling downloadable content (DLC) to players after they initially purchase a game. DLC is not only a way for developers to extend the life of a title after its release but also an effective means of after sales monetization.

Industry Revenue

Revenue Growth

Year	Revenue $ million	Growth %
2005	31,128.8	0.0
2006	35,026.4	12.5
2007	39,282.5	12.2
2008	43,555.4	10.9
2009	39,954.3	-8.3
2010	36,450.6	-8.8
2011	36,245.2	-0.6
2012	36,035.5	-0.6
2013	39,647.0	10.0
2014	41,719.8	5.2
2015	43,306.8	3.8
2016	44,082.8	1.8

Table 3
Overall Video Game Industry Revenue

The revenue growth trend of the video game industry for the past decade reflects the cyclical nature of the industry. Revenue growth was highest in 2006 and 2007, which coincided with the November 2005 launch of Microsoft's Xbox 360, and the November 2006 launch of Sony's Playstation 3, respectively. From 2009 to 2012, industry revenue growth was negative. Revenue growth rebounded in 2013 and has remained positive since then. Again, this growth coincided with Microsoft and Sony's release of the Xbox One and Playstation 4 in November 2013. Historically, video game consoles have a lifespan of four to six years. Sales of hardware and software are strongest at the start of a console cycle and slow near the end of the cycle, as consumers anticipate the release of next generation products (Hoovers). Although the number of mobile titles has increased exponentially in recent years, their low cost (usually between $0 and $5) has made their impact on total industry revenue negligible (IBIS World).

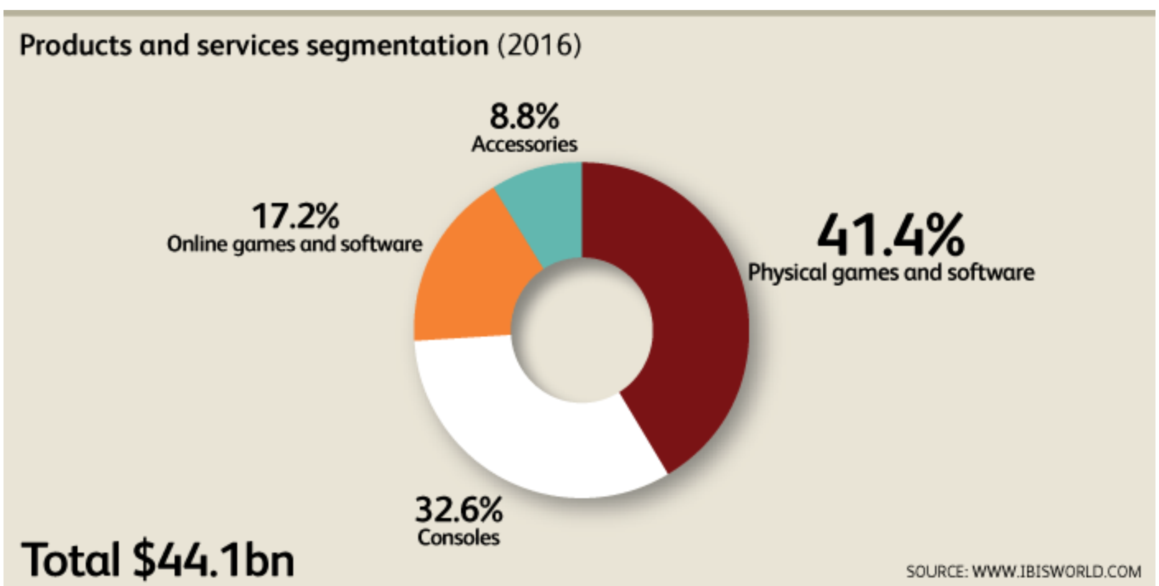

Table 4
Video Game Industry's Sources of Revenue

The video game industry's main sources of revenue can be split into hardware and software sales. Hardware sales comprise console and accessory sales, while software sales comprise retail and online game sales.

Consoles

While console sales account for almost a third of industry revenue, they generate little, if any, profit. Consoles serve as vehicles through which profitable products such as games and accessories can be sold. Consoles serve as loss leaders for hardware manufacturers such as Sony and Microsoft, who often sell their systems at or even below cost. In fact, it is estimated that a Playstation 3 unit cost Sony more than $800 dollars to produce but was sold at $499 for the base model at launch in 2006. It wasn't until 2009 until the production cost started approaching the selling price, which by then, cost Sony almost $4.5 billion dollars (IBIS World). However, as discussed earlier, consoles are important because the rest of the industry revolves around their lifecycles.

Accessories

In addition to licensing games for their systems, console manufacturers diversify their revenue streams through the sale of gaming accessories for their systems. Accessories include game specific controllers, e.g. the guitar controller for Guitar Hero, and alternative input devices such as Xbox 360's Kinect tracker for motion sensing. Accessories typically have higher margins than consoles and are a good way for manufacturers to maintain revenue in the years between console releases (IBIS World). Although it currently accounts for the smallest source of industry revenue at 8.8%, accessories are a crucial part of manufacturers' portfolios in diversifying both the gaming experience for consumers and their own revenue streams.

Physical games

Physical game sales have been the bread and butter of the gaming industry for many years. This remains the case in 2016, with physical game sales being the largest contributor to the industry, accounting for 44.1% of total industry revenue. Physical game sales include console, PC, and used games sold at retail outlets. "Video game retailing is the largest single segment in the industry, but is also among the most volatile, with the purchase of games closely tied to the release of new console systems" (IBIS World). Historically, retail game sales are highest within the first two years of a console release and gradually tapers off until the next console cycle. More recently, however, retailers such as GameStop have begun to sell used games to supplement their revenue. While their practice of selling used games next to new copies at a slight discount has been met with opposition from game publishers, no law prohibits this practice and it is unlikely retailers will abandon this highly profitable segment of their business (IBIS World).

Online games

Most industry operators anticipate the online game sector to experience the fastest growth relative to other sectors. Online game sales currently account for 17.2% of total industry revenue, which is less than half of that of physical game sales. Online game sales include mobile games, PC games purchased online, online game subscriptions, and downloadable content (IBIS World). While mobile game sales are expected to rise, their thin profit margins will not contribute significantly to industry revenue. Online game distribution services such as Steam allow PC gamers to download games directly to their computers. Online game subscriptions include games that use subscription business models such as World of Warcraft and online console networks such as Xbox Live.

Finally, console developers can further monetize their games by offering downloadable content to be purchased online. While physical game sales continue to dominate the industry today, online game sales are gaining increased traction from multiple platforms, including consoles, which have traditionally been the mainstay of retail distribution.

Development, Distribution, And Marketing Costs

The areas that companies spend their money on vary according to their industry function. Broadly speaking, the console industry consists of four types of entities: console manufacturers, development studios, game publishers, and retail distributors. These entities are not necessarily mutually exclusive. For instance, the three largest console manufacturers: Sony, Microsoft, and Nintendo, all have their own game publishing divisions: Sony Computer Entertainment, Microsoft Game Studios, and Nintendo Games, respectively (IBIS World). Additionally, most of the largest publishers have multiple in-house studios.

The development, distribution, and marketing costs of a game therefore depend on which entities are involved in the game's production and which stages they are involved in. For a fully in-house game, the console manufacturer is responsible for all costs associated with game development and marketing. The only part of the supply chain that requires third parties is retail distribution. On the other hand, console manufacturers need to use third party publishers if they wish to get an external studio-owned title onto their system. For instance, if Sony wanted to get the newest *Call of Duty* game onto their Playstation 4, they would have to work with Activision Blizzard, a third-party publisher that owns the rights to the highly profitable *Call of Duty* franchise (IBIS World).

“The average cost of developing a game ranges from $1.0 million to about $20.0 million, though marquee titles are now commanding development budgets up to $100.0 million” (IBIS World). This illustrates the wide range of development costs in the industry. Indie and casual games tend to cost the least to develop, while successful game franchises may require up to a hundredfold the development costs of indie games. The stakes are much higher for established franchises to succeed because gamers have come to expect a high quality gaming experience and because one flopped game can tarnish the brand of the entire franchise (IBIS World).

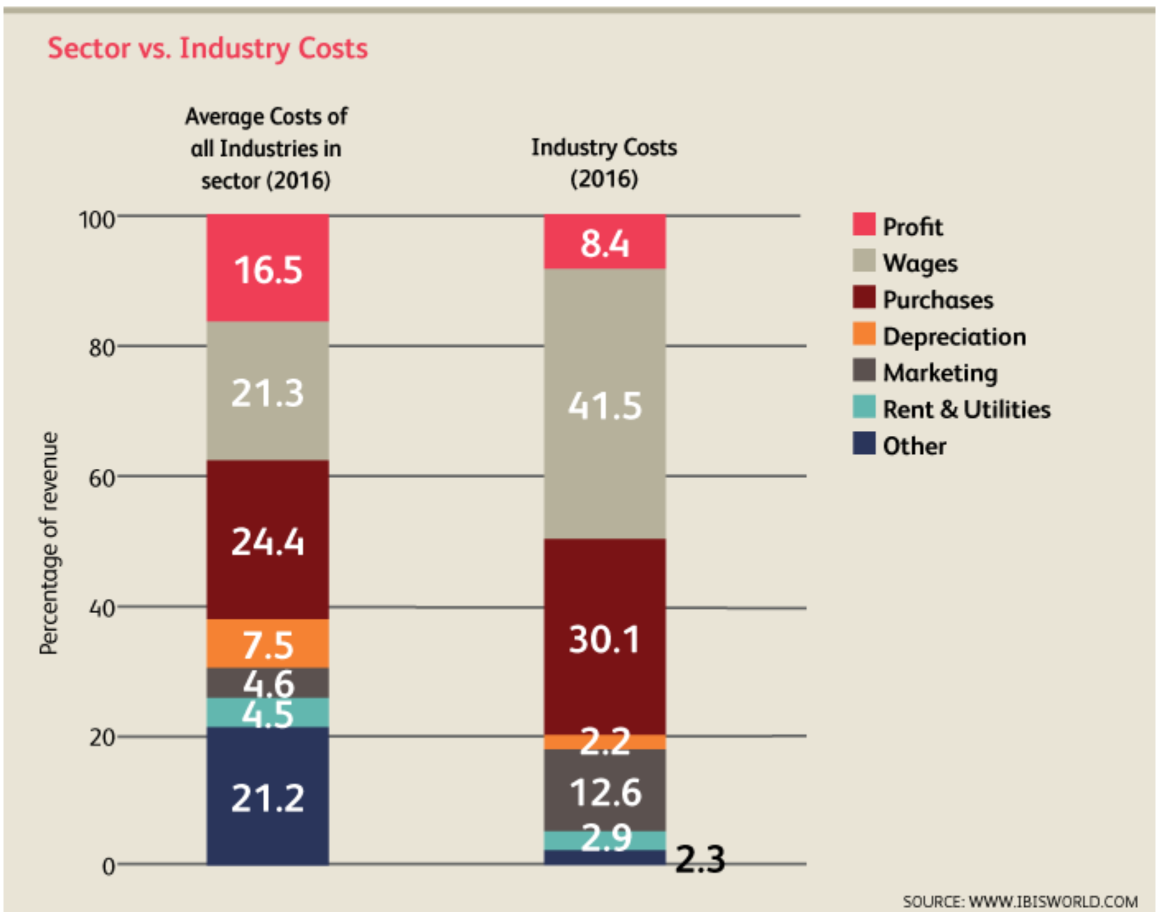

Table 5
Software Development Sector Costs vs. Video Game Industry Costs

In addition to the purchase of rights from game developers, marketing constitutes the bulk of publishers' costs. In 2016, marketing costs comprise 12.6% of total industry expenditure compared to the software development sector's average of 4.6% (IBIS World). Console manufacturers not only have to compete with other console platforms but also against other forms of entertainment. Therefore, console manufacturers and game publishers devise aggressive marketing campaigns to differentiate themselves from their competitors in the market, as well as competitors in the wider entertainment industry. As the leisure time of consumers becomes scarcer, marketing expenditure in the industry is expected to grow (IBIS World).

The distribution side of the industry is handled almost exclusively by specialty and other large chain retailers such as GameStop and Wal-Mart. Retailers spend most of their revenue on purchasing games, consoles, and accessories from manufacturers. Because these items have already incurred high sunk costs during the development process, retailers can only sell them at lower margins. "Since retail constitutes about 50.0% of all industry revenue, these high purchase costs are prominent" (IBIS World).

<u>Top Ten Leading Firms</u>

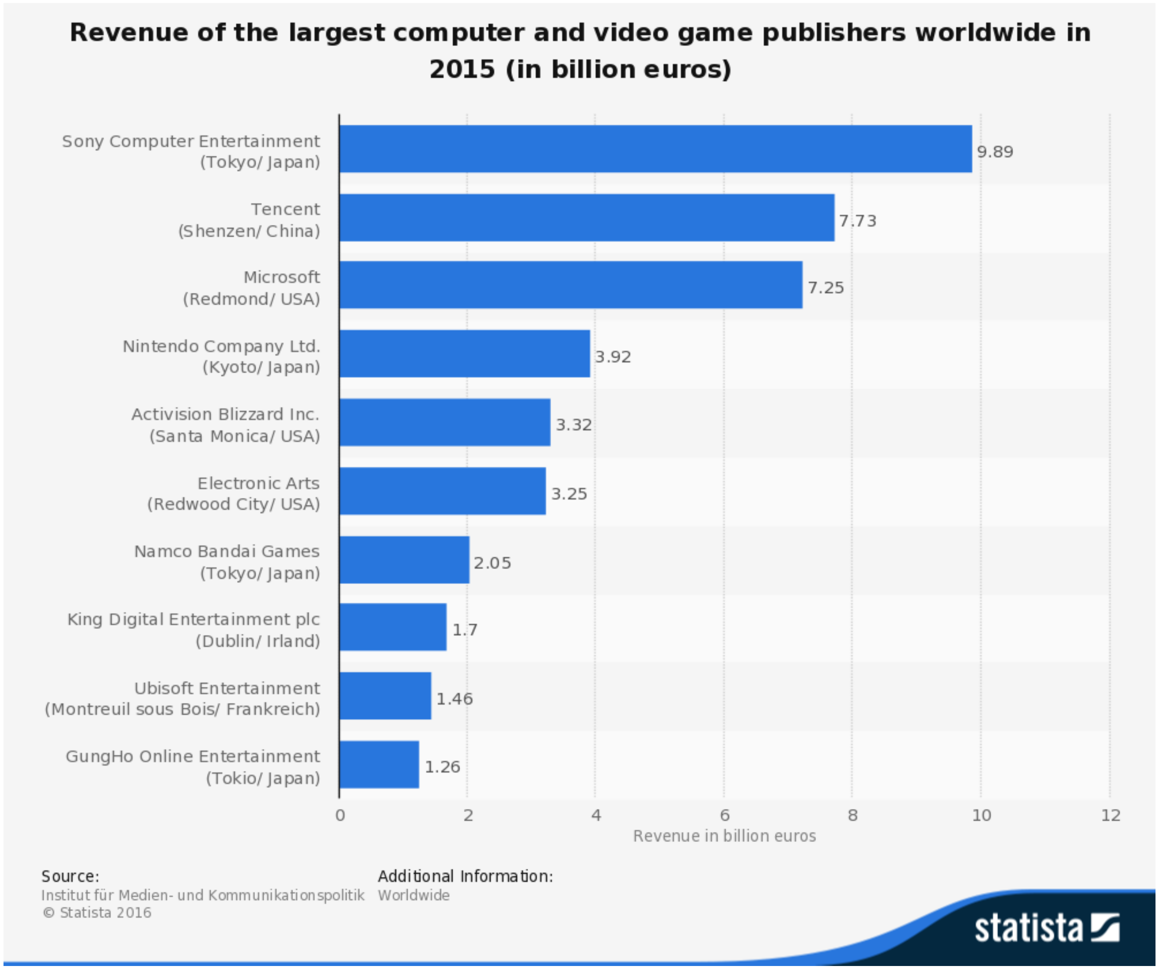

Table 6
Top 10 Companies in the Video Game Industry

Three out of the top four companies in the video game industry have a console manufacturing business: Sony, Microsoft, and Nintendo, with the Chinese company Tencent being the exception. The remaining companies are third-party game publishers from the U.S. (Activision Blizzard, Electronic Arts), Japan (Namco Bandai, GunHo Online Entertainment), Ireland (King Digital Entertainment), and France (Ubisoft).

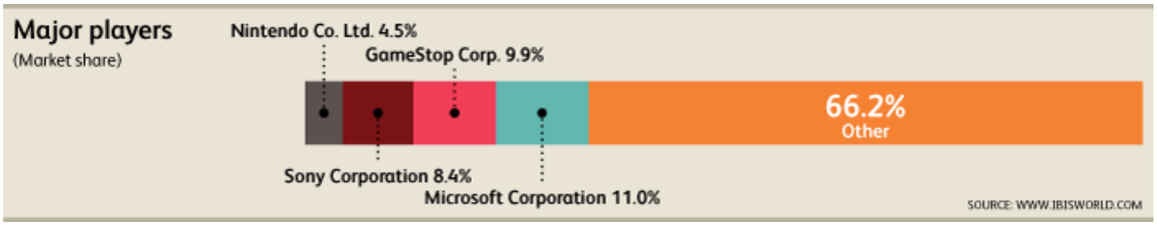

Table 7
Major Players' Market Share

The gaming industry has a low market share concentration, with the top four companies contributing 33.8% of total industry revenue in 2016. However, higher concentration exists within each part of the business, with GameStop dominating the retail market; Sony, Microsoft, and Nintendo dominating the hardware market; and Activision Blizzard and Electronic Arts dominating the software market. Not included in this chart is Activision Blizzard, with a market share of 4.3%, and Electronic Arts, with a market share of 4.6% (IBIS World).

Conclusion

The video game industry has certainly come a long way since its birth in the 1970s. Today, it represents a maturing industry sector that continues to enjoy steady growth. While the core of the industry is still centered on the tried and tested console model, new industry segments and practices have emerged, including mobile and online gaming. So far, these industry trends have not challenged the foundations of the industry. However, the next decade will truly put the console model and its established infrastructure to the test, as we experience the convergence of not only gaming but also entertainment as a whole.

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