INDIE VS AAAS: A FAIR COMPARISON

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Abstract

The purpose of this document is to provide a comprehensive comparison between the production of AAA and indie computer games. While both approaches strive to offer the best possible experience to their audience, the quality of the product may differ depending on various factors, including budget and technology used. To achieve success, game developers must have a clear understanding of the scope that can be accomplished within a reasonable timeframe. This study examines the potential profitability of AAA and indie game development methods. Although there is no single method for success, we postulate that AAA game development generally yields a higher payoff than indie game development. Our analysis compares selected game titles with regards to development budget, marketing push, team size, technology, and franchising opportunities. Our findings

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suggest that, despite the lower cost of indie game development, AAA games offer a safer method of revenue.

Keywords: budget, risk management, marketing, gameplay, popularity, AAA, indie

JEL Classification: O33, I23, I21

1. Introduction

The present article aims to provide an overview of the characteristics and differences between "Triple-A" (AAA) and independent (indie) video game development. The former is comprised of large studios and publishers that invest substantial financial resources in the creation and promotion of high-tech franchises for home consoles, while the latter typically involves small teams of up to 15 developers who prioritize creative independence and financial autonomy. The absence of third-party financial support in indie game development often requires the use of cheaper or free alternatives to software and game assets, resulting in a greater degree of creative control but a higher need for risk management. Although both AAA and indie studios prioritize the delivery of high-quality gameplay experiences, the primary motivation behind the development of AAA games is revenue generation, while indie games are typically created for the enjoyment of the developer and their audience, with revenue being a secondary concern. It is important to acknowledge, however, that developing indie games requires significant resources and funding, and developers must devise effective financing strategies to ensure the success of their projects. Overall, this paper highlights the importance of understanding the key differences between AAA and indie game development, which can aid in better discerning the requirements and expected outcomes of each type of development approach [1].

Key Takeaways:

- AAA game development involves large studios investing heavily in high-tech game franchises for home consoles.
- Indie game development usually features small teams (up to 15 developers) focusing on creative independence and financial autonomy.
- Indie developers often use cheaper or free software and assets due to a lack of third-party financial support, leading to more creative control but increased risk.
- While both AAA and indie studios aim for high-quality gameplay, AAA is primarily motivated by revenue, whereas indie games are driven by developer and audience enjoyment, with revenue as a secondary concern.
- Indie game development requires significant resources and funding, necessitating effective financing strategies for project success.
- Understanding the key differences between AAA and indie game development is crucial for grasping the requirements and expected outcomes of each approach.

2. Developing AAA games

It appears that the principal incentive for game developers to seek employment in AAA game companies is the prospect of participating in a large-scale team effort and making a substantial contribution to game development. However, as they ascend the hierarchical ladder, their involvement in the game development process may become less hands-on. In higher-level roles, individuals may shift towards managerial responsibilities, potentially resulting in reduced motivation and drive [2].

2.1. Advantages

In the context of employment within AAA game companies, financial stability is often cited as a key advantage for employees. Working for a large studio can offer benefits such as medical and dental coverage, sick days, and flexible schedules. While these benefits may be considered standard in other software development industries, they are not always available to those working in indie studios. The financial resources available to large studios also make it easier to undertake complex projects, with sufficient manpower available to distribute tasks effectively. As such, the benefits offered to employees are considered a worthwhile investment, given the potential for large-scale game sales [3].

Collaboration with highly talented individuals from various disciplines is another benefit of working on AAA projects. Employees have the opportunity to improve and expand their skill set through collaboration with colleagues in fields such as QA, finance, legal, IT, HR, and facilities. Additionally, AAA projects often have substantial budgets for marketing, enabling them to reach a large audience early on. Furthermore, these projects are often designed for multiple gaming platforms, making them accessible to a wider audience and increasing the potential for revenue generation.

The large budgets available to AAA game companies also enable the development of massively multiplayer games, which require significant hardware and server resources, as well as ongoing expenses to sustain. These games often incorporate multiple monetization methods to recoup development costs. AAA projects can also provide opportunities for employee career development beyond on-the-job learning. With sufficient resources and funding, studios can provide training to help employees stay up-to-date with the latest technologies and ideas, fostering a positive studio culture. In contrast, smaller teams may struggle to create a supportive work environment, with limited resources focused primarily on development, resulting in less flexibility for building team dynamics [4].

2.2. Disadvantages

In AAA game development, a large budget and team do not guarantee successful game development. The pressure to deliver for a sizable team and player base can be significant and requires individuals to understand the development plan and schedule before committing to a project. However, the risk of excessive overtime or "crunch" is present, making it essential to seek out companies that prioritize reasonable work schedules.

There is a debate surrounding the length and scope of a project, as some individuals prefer shorter turnaround times while others enjoy spending more time working on a project as part of a larger team. It is crucial to consider these factors and align them with an individual's preferences and work style before committing to a project, as working on a more extended project with a large team can pose its own set of challenges.

For some developers, the size of a team on an AAA project may feel overwhelming, making it necessary to assess if this type of environment is conducive to productivity. To optimize team size and communication, limiting the team to a specific number of people, such as 120, can foster a positive culture and promote teamwork. When team members are unfamiliar with each other, maintaining empathy and effective communication can prove difficult [5].

Key Takeaways:

- AAA game development offers the chance to be part of a large-scale team effort and contribute significantly to game projects.
- As employees climb the career ladder in AAA companies, they may transition to managerial roles with less hands-on involvement in game development.
- Advantages of working in AAA game companies include financial stability, comprehensive benefits (medical, dental, sick days, flexible schedules), and the ability to handle complex projects due to ample financial resources.
- Collaboration with skilled professionals across various fields enhances skill development for AAA employees.
- AAA projects benefit from substantial marketing budgets and multi-platform releases, broadening audience reach and revenue potential.
- Large budgets in AAA studios support the development of massively multiplayer games and continuous learning opportunities for employees.
- Challenges in AAA game development include the pressure of working on large-scale projects, risk of excessive overtime, and the need to match individual work preferences with project length and scope.
- Large team sizes in AAA projects can be overwhelming, necessitating careful consideration of team dynamics and communication strategies.

3. Developing indie games

In the realm of game development, working on indie games with small teams can offer developers greater autonomy and flexibility in their creative process. This is because indie game developers are often not subject to the bureaucratic decision-making processes and financial constraints that can be present in larger organizations. This freedom can allow indie game developers to focus on bringing their creative visions to life and to have greater control over the final product.

While indie game companies may not have the resources to hire full-time writers, writing can still play a critical role in many games, particularly in RPGs and other immersive experiences. Therefore, indie game developers may rely on team members with strong writing skills or outsource writing tasks to freelance writers.

Given their limited budgets, indie game developers may only hire new team members when there is a specific need for them, rather than hiring simply based on available resources. As a result, job seekers should be mindful of this when applying for positions with indie game companies, as there may not always be open positions available.

The popularity of indie games has been on the rise in recent years, and this can be attributed to a couple of factors. Firstly, universities encourage their students to pursue innovative and original ideas for gameplay, as they are unable to compete with the graphical capabilities of AAA games, where a large team of artists is typically involved. Secondly, the prevalence of digital marketplaces for purchasing games, such as Steam for PC or the digital stores for Xbox and Playstation, has eliminated the need for shipping and disc manufacturing costs, making it easier for indie games to reach a wider audience.

In an article published by Forbes in 2008 entitled "Indie Game Developers Rise Up," game designer and professor Chris Swain stated that the rise in popularity of indie games can be attributed to these factors [6].

Key Takeaways:

- Indie game development offers developers greater autonomy and flexibility in their creative process, free from bureaucratic and financial constraints of larger organizations.
- Indie developers often have more control over their creative vision and the final product.
- Writing is crucial in indie games, especially RPGs, and may involve team members with writing skills or freelance writers.
- Indie game companies hire new team members based on specific needs, not just available resources.
- The popularity of indie games has increased due to factors like encouragement from universities for original gameplay ideas and the inability to compete with AAA graphics.

- Digital marketplaces like Steam, Xbox, and Playstation have made it easier for indie games to reach a broader audience by eliminating shipping and disc manufacturing costs.
- The rise in indie game popularity is linked to these innovative approaches and marketplace changes, as noted by game designer Chris Swain.

4. The AAA model

The AAA game development model operates similarly to other business models, with a primary focus on generating profits. This emphasis on profit stems from the considerable financial investments required for the development, testing, and marketing of a single project, given the large scale of these games.

4.1. Funding and costs

In the current gaming industry, having a sufficient budget is crucial not only for the initial development of a game but also for its ongoing support and engagement with players. With the rise of the "games as a service" model, community engagement has become more critical than ever, and game developers require enough funding to support their games with many new updates for an extended period of time, while also ensuring stable careers for their teams. The ongoing support and evolution of a game are crucial to its success. However, the high cost of game development is largely attributed to the wages of staff. As games become more complex and require larger teams, studios must hire more people with specialized skills, such as sound designers, testers, and artists. Even independent developers who possess multiple skills may need to hire additional help to fully realize their vision.

Another significant expense for game developers is securing the rights to their own intellectual property (IP). Protecting IPs is essential to prevent others from stealing elements of the game, such as artwork, music, and character designs. If a developer fails to claim the copyright, someone else might do so and potentially profit from the success of the game. Therefore, it is crucial for developers, particularly first-time developers, to protect their IPs and become familiar with the process.

Marketing is an often-overlooked aspect of game development, but it is essential for the success of any game. Effective marketing requires a variety of skills and resources, from copywriting to campaign management to social media strategy. Even the best games may not receive the attention they deserve without adequate marketing. The development cost of Modern Warfare 2 was $50 million, but its marketing budget was $200 million, highlighting the importance of marketing in the game development process.

Cyberpunk 2077, released in 2020, is the most expensive game ever released with a development cost of $174 million and a marketing budget of $142 million. Despite its high

production costs, the game's rushed development cycle led to numerous glitches, bugs, and graphical errors upon release. As a result, the publisher, CD Projekt, faced significant financial loss due to refund requests and a 73% drop in share prices.

4.2. Graphics & Technology

In the video game industry, it is crucial to stay up to date with the latest technology to offer customers the best possible experience. One important aspect of this is the game engine that the game is built on, which determines the game's graphics, physics, and overall performance. Historically, many game development companies have developed their own in-house engines, such as Ubisoft's Snowdrop and Electronic Art's Frostbite, over the past two decades.

However, a trend has emerged in recent years to use third-party game engines, such as Epic Games' Unreal Engine or Unity, instead of investing in costly in-house engine development. While using third-party engines eliminates the high upfront development costs, game developers must pay royalties to the engine developers. It is worth noting that although powerful technologies, such as free rendering engines in Unity or Unreal Engine, are available in 2022, the AAA industry still has access to more expensive tools than the indie game industry, allowing for more realistic and immersive effects.

4.3. Franchising

In the current AAA game development model, companies often prefer to follow a risk-averse strategy by focusing on the concept of "franchising". This involves developing multiple sequels to successful games, such as Ubisoft's Assassin's Creed, Rockstar's Grand Theft Auto, and EA's FIFA, based on the popularity of the original titles. By utilizing the brand recognition of previous titles, companies increase the likelihood that players will associate the success of the franchise with a new iteration, regardless of how much the new version differs from the original.

Key Takeaways:

- AAA Game Development Focus: Prioritizes profit generation due to substantial investments in development, testing, and marketing.
- Funding Necessity: Sufficient budget is crucial for both initial development and ongoing support, including community engagement and regular updates.
- Staffing Costs: Large teams with specialized skills like sound designers, testers, and artists increase development costs.
- Intellectual Property Protection: Essential for preventing theft of game elements and securing revenue from the game's success.

- Marketing Importance: A critical, often overlooked aspect; requires substantial investment for a game's success, sometimes exceeding development costs.
- High Production Risks: Examples like Cyberpunk 2077 illustrate potential financial losses from rushed development and technical issues.
- Technology and Game Engines: Staying current with technology, like game engines, is vital for performance; trend towards using third-party engines to save on development costs.
- Franchising Strategy: AAA companies often develop sequels to successful games to leverage brand recognition and reduce risk.

5. The indie model

In contrast to AAA games that require millions of dollars, indie games are typically developed with significantly lower budgets, typically in the thousands of dollars range. Consequently, most indie game developers operate under resource constraints, often performing multiple roles such as artist, programmer, and designer.

5.1. Funding and costs

When it comes to indie game development, obtaining sufficient funding can be a challenging task. However, there are various strategies that developers can adopt to address this issue, including:

5.1.1. Bootstrapping

In the realm of indie game development, self-funding is a prominent and straightforward approach to acquiring financial support. This method typically involves obtaining monetary assistance from relatives or engaging in alternative sources of income, such as part-time or full-time employment. Although a part-time occupation can provide financial independence, it can also prolong the development timeline of the project. Therefore, switching to full-time game development may be precarious if there are insufficient funds saved for at least a year of expenses. In essence, launching a game studio through self-funding is comparable to initiating a business, as careful allocation of time and resources is necessary. It is imperative to acknowledge that self-funding can result in debt if not executed prudently, thus highlighting the significance of recognizing potential risks along the way.

5.1.2. Crowdfunding

Crowdfunding is a method of financing a project by soliciting small contributions from a large number of individuals, typically in exchange for digital goods. Indie game developers often utilize crowdfunding platforms such as Kickstarter and Patreon. Success on these platforms is often driven by an early focus on the game's design and visually appealing art. Some platforms also offer digital goods or physical merchandise in exchange for contributions. One of the main benefits of this method is the ability to build a community prior to the game's release, increasing the likelihood of future profits.

5.1.3. Publisher Funding

In the video game industry, a game publisher is a company that specializes in financing, marketing, and distributing video games. Indie game developers can benefit from partnering with a game publisher, as they can provide resources and support to help reach a larger audience. This partnership typically involves the publisher paying for the development costs of a game in advance, with the expectation that these costs will be recouped from future revenues. After the game is released, the publisher will also receive a share of ongoing revenues generated by the game. In exchange for funding the development of the game, the publisher typically provides marketing and promotion services to help attract players. It is worth noting that developers usually retain their intellectual property rights to their game, allowing them to create sequels or other related projects. However, it is important for developers to understand that this model of funding may require a trade-off between long-term rewards and upfront cash.

5.2. Graphics & Technology

A restricted budget can potentially lead to a greater emphasis on innovation or clever design rather than realistic graphics in indie game development due to the lack of guaranteed success for each title in a market with limited indie franchises. Nevertheless, 2022 appears to be a promising year for indie developers in terms of technology as several tools previously only accessible to large companies are now more affordable or even free. For example, motion capture animations can be achieved with free facial capture apps on smartphones that integrate well with popular game development software, eliminating the need for expensive setups.

5.3. Marketing Push

The allocation of budgets in game development is not always proportional to the total amount invested, as exemplified by Activision's Call of Duty franchise where the marketing budget surpassed that of the game itself, exceeding $100 million. In contrast, indie games tend to have more variable budgets depending on the scale of the release and available

resources of the development team. These games often rely on community building and word-of-mouth promotion rather than paid advertising, which allows for a larger proportion of the budget to be dedicated to the actual development process. Alternatively, some indie companies may choose to partner with a publisher to handle the marketing and promotion, which may lead to increased popularity but also may result in higher costs for the developers. Ultimately, the decision to self-promote or partner with a publisher requires careful consideration of the associated financial and marketing risks.

5.4. Franchising

In indie games, franchising is not a widespread occurrence, and only a select few highly successful games have been able to achieve this. Nonetheless, recent years have demonstrated that this possibility is indeed viable, as exemplified by the successes of franchises such as Five Nights at Freddy's, Hello Neighbor, and Hollow Knight. In contrast to the AAA game development model, it is atypical for indie games that do not meet their projected revenue to be granted sequels.

Key Takeaways:

- Indie Game Development Budgets: Indie games are developed with significantly lower budgets, often in the thousands of dollars, unlike AAA games that require millions.
- Multiple Roles in Indie Development: Indie developers frequently assume multiple roles such as artist, programmer, and designer due to resource constraints.
- Funding Challenges for Indie Games: Obtaining sufficient funding is a major challenge in indie game development.
- Bootstrapping: A common funding strategy is self-funding, which can involve personal savings, support from relatives, or income from other jobs, but carries the risk of debt and extended development timelines.
- Crowdfunding: Platforms like Kickstarter and Patreon are used for raising small amounts from many contributors, often in exchange for digital goods, and help in building a community before the game's release.
- Publisher Funding: Partnering with a game publisher provides resources and support for reaching a larger audience, with the trade-off being a share of ongoing revenues and marketing control.
- Graphics and Technology Constraints: Limited budgets in indie game development often lead to a focus on innovation over realistic graphics, but recent technological advancements have made more tools accessible to indie developers.
- Marketing StrategiesIndie games typically rely on community building and word-of-mouth instead of large-scale paid advertising, but some may partner with publishers for marketing, affecting budget allocation.

- Franchising in Indie Games: Franchising is rare in indie games, but recent successes like Five Nights at Freddy's show its viability. Unlike AAA games, indie games without significant revenue typically don't receive sequels.

6. Team size

In the realm of AAA game development, the size of development teams has grown considerably over the years. These teams often comprise over 100 individuals, and the largest companies in the industry, such as Rockstar Games and Activision, can employ over 2,000 and 9,200 individuals respectively. The trend towards increased team size has been driven by a growing need for specialized expertise in areas such as lighting, programming, and game design. However, some experts caution against overly specialized teams, arguing that this approach can lead to inefficiencies and mistakes. Specifically, Dan Vávra, a noted game designer, has critiqued the so-called "bloat" in the industry, pointing out that dividing tasks among multiple specialists can increase the likelihood of errors and communication breakdowns.

In contrast, indie games are typically developed by smaller teams, which may range from a single individual (e.g., Undertale) to a group of approximately 15 individuals. The size of the indie team is typically based on the project's scope, complexity, and available resources. For instance, a very small indie team may only consist of one developer responsible for all programming and technical art, and a second individual responsible for most of the artistic requirements. Additionally, many indie teams rely on freelancers or outsource certain tasks to other studios, such as music production if no one on the team specializes in music composition [7].

Key Takeaways:

- AAA teams are large, often over 100 people, with major companies employing thousands.
- Growing AAA team sizes driven by need for specialized skills in various development areas.
- Over-specialization in AAA teams can lead to inefficiencies and errors.
- Indie teams are much smaller, typically ranging from one to 15 members.
- Indie teams may rely on freelancers or outsource tasks like music production.

7. Development statistics and success rate

Based on a report on games published on Steam, it has been found that a significant number of developers have released or announced their games on the platform. As per the report, there are approximately 44,000 game developers who have collectively created nearly 70,000 games on Steam. However, 75% of these developers have only released one game,

while the remaining developers have released multiple games. In fact, 443 developers have released more than 10 games, and four developers have released over 100 games each on the platform, which is an impressive feat [8].

Despite the significant number of developers on Steam, most game developers struggle to generate significant revenue on the platform. This is evidenced by the fact that a large percentage of developers, 57%, haven't made even $1k in gross revenue, and mostly consist of those who have released only one game. However, there are 1600 developers whose games have generated more than $1m in gross revenue, with 600 being large studios with big teams and development budgets. On the other hand, over 1,000 indie developers have generated over $1m through their games, despite having small teams and low to no budgets. Although the data supports the perspective that indie developers struggle to make money, it is important to note that success in indie game development is complex, and there are various factors at play beyond the number of indie game developers in the market.
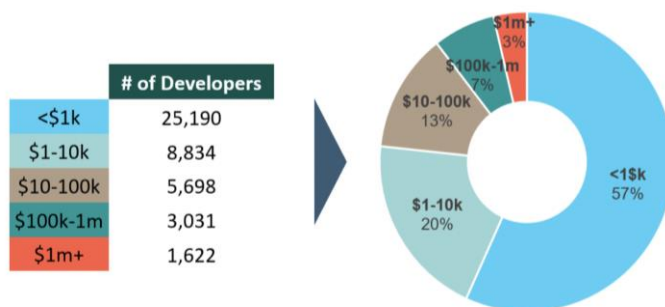

Figure 1. VG Insights – Number of Developers by lifetime gross revenue in February 2022 [9].

Despite the obstacles faced by indie game developers, their industry remains robust. Thousands of developers have released multiple games, and a considerable number have garnered considerable earnings from their creations. Although the market may seem oversaturated with the release of 30-40 games on Steam each day, many of these releases originate from amateur developers, who are improbable to be direct competitors. By considering only those developers producing games for commercial purposes, the number of actual competitors becomes much more reasonable. The indie game development industry appears to be in a sound state overall, with no discernible sign of an imminent crisis.

Key Takeaways:

- About 44,000 developers on Steam have created 70,000 games.
- 75% of these developers released only one game.
- A few developers (443) have released more than 10 games.

- 57% of developers haven't earned $1k; 1600 have earned over $1m.
- Over 1,000 indie developers made more than $1m, despite low budgets.
- Success in indie development depends on various factors.
- The indie game industry remains strong, with no signs of crisis.
- Daily, 30-40 new games are released on Steam, mostly by amateurs.

8. Future Investing

Investing in the gaming industry has become a common practice for many individuals, particularly given the industry's rapid growth. The global gaming market is expected to generate annual revenues of US$218.8 billion by 2024. Investors often purchase shares of a video game company in order to share in its profits and losses. However, this can require relinquishing some control over the company's intellectual property or decision-making processes. Investors may also negotiate revenue-sharing or royalty agreements, which may provide them with a percentage of a game's sales. Investing in Triple A games often involves purchasing stocks in specific companies. Alternatively, investing in the industry may be accomplished through an ETF, which provides diversified exposure and is often considered less risky. Major game developers, such as Activision Blizzard, Rockstar Games, and EA, control a significant portion of the industry, and investing in their stocks provides exposure to all of their products and business ventures.

Typically, investors exit a project before the game's launch to cash out on their investment. If a game is successful, some investors may choose to stay invested to capitalize on its ongoing revenue. Large companies tend to prioritize predictable profits and provide accurate revenue projections, aiming to satisfy shareholders. In contrast, indie game development is unpredictable and may not be sustainable in the long term. Investing in indie games is a high-risk endeavor with a low probability of success. However, indie developers may create unique games with innovative themes, mechanics, and aesthetics that large studios may overlook, potentially resulting in a hit game.

Given the current economic climate, investing in video game companies may be attractive as people may choose to spend less and stay indoors to play games rather than participate in other activities. The video game industry continues to grow, and advancements in technology may lead to more advanced and engaging games, attracting new players and investors.

Key Takeaways:

- Global gaming market expected to reach US$218.8 billion by 2024.
- Investors buy shares in gaming companies for profit-sharing and decision influence.
- Alternative investments include revenue-sharing or royalty agreements.

- Investing in AAA games often means buying stocks in major companies like Activision Blizzard, Rockstar Games, and EA.
- ETFs offer diversified, lower-risk gaming industry investments.
- Investors typically exit before game launch but may stay if the game is successful.
- Large companies offer predictable profits; indie game investment is high-risk but innovative.
- Economic trends increase the attractiveness of gaming investments.
- Technological advancements drive industry growth and investor interest.

9. Survey

In the early weeks of January 2023, a survey was conducted in order to determine the preferences of individuals regarding video games. The survey yielded 115 participants, consisting of 34 students (30%), 48 individuals aged 11 to 18 (48%), and 33 working adults aged 30 to 60 (22%). The survey included the following questions:

1. How many hours per week do you spend playing indie games?

2. How many hours per week do you spend playing AAA games?

3. Which type of game (indie or AAA) do you prefer to play, and why?

4. On a scale of 0 to 5, how important are graphics and visual effects to you when playing a game?

5. On a scale of 0 to 5, how important are the story and characters to you when playing a game?

6. On a scale of 0 to 5, how important is the multiplayer aspect of a game to you?
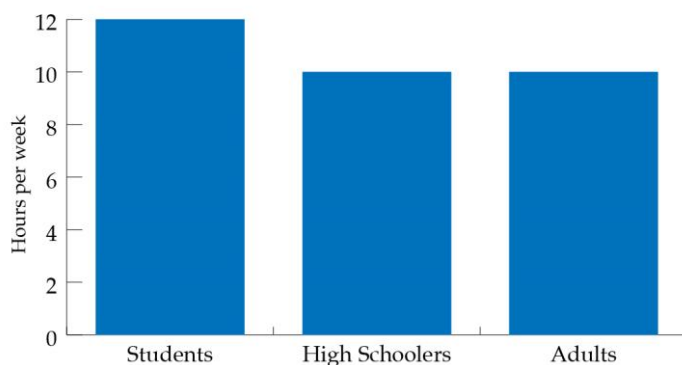

Figure 2. Responses to Question 1: How many hours a week do you play indie games?

The findings of our study indicate that the mean number of hours per week that students spend playing indie video games is approximately 12 as shown in Figure 2, whereas high

schoolers tend to spend slightly fewer hours, approximately 10, playing these types of games. However, adults devote a comparable amount of time to playing indie games. These results suggest that the target audience for indie video games is highly heterogeneous.
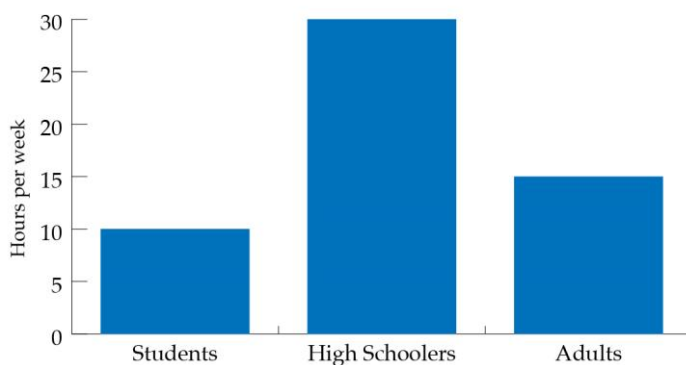

Figure 3. Responses to Question 2: How many hours a week do you play AAA games?

The second question of the survey produced notable outcomes that diverged from those of the previous inquiry. The average weekly hours that students devote to playing AAA video games diminished to approximately 10 hours, whereas individuals between 11 and 18 years of age spent thrice as much time, averaging 30 hours per week. Meanwhile, the adults' mean value of weekly AAA game time amounted to 15 hours, indicating a higher preference for this game genre. The findings suggest that the marketing strategy of AAA games tailored towards younger audiences has been efficacious, considering that children represent the primary consumer group for such games.

Question 3 aimed to investigate the definitive preference of the three participant groups, and the obtained outcomes are consistent with the findings of questions 1 and 2. The student group exhibited a greater inclination towards indie games, as indicated by more than twice the number of respondents favoring this category over AAA games (24 versus 10). Conversely, high schoolers favored AAA games to a greater extent than indie games (30 versus 18). The adult group, on the other hand, demonstrated a relatively balanced preference, with 19 respondents indicating a preference for AAA games and 13 expressing a preference for indie games. Regarding the open-ended portion of the question, the most prevalent reason for the popularity of indie games was their distinctive art style, whereas, for AAA games, the ability to engage in numerous player-versus-player (PvP) encounters was the primary factor.
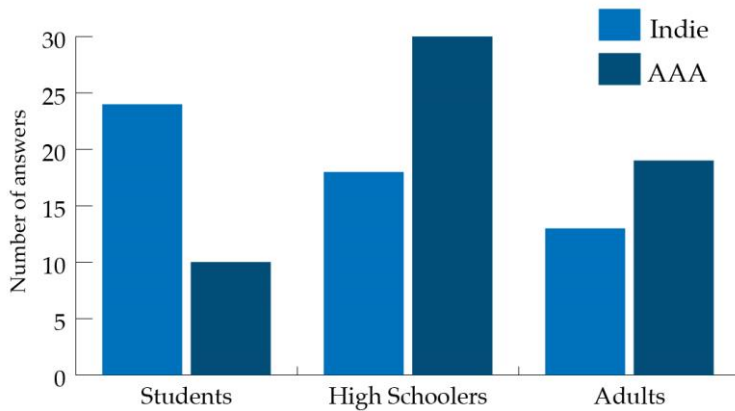
Figure 4. Responses for Question 3: Which type of game (Indie/AAA) do you prefer to play and why?

The following question yielded a conclusive outcome, as nearly 40 respondents indicated that graphics and visual effects are significant factors in their gaming experience, regardless of game type as is shown in Figure 4. The remaining 75 respondents predominantly provided moderate ratings between 2-3 on the scale of importance, with 45 answers falling within this range. These findings suggest that developers should prioritize the development of captivating visual design, whether it be a realistic approach for AAA games or a distinctive one for indie titles.
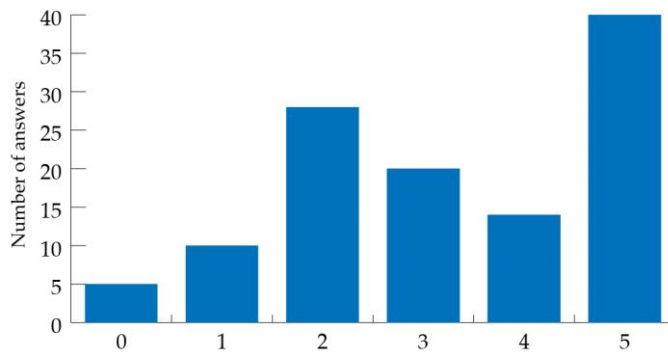

Figure 5. Responses to Question 4: How important are graphics and visual effects to you when playing a game?
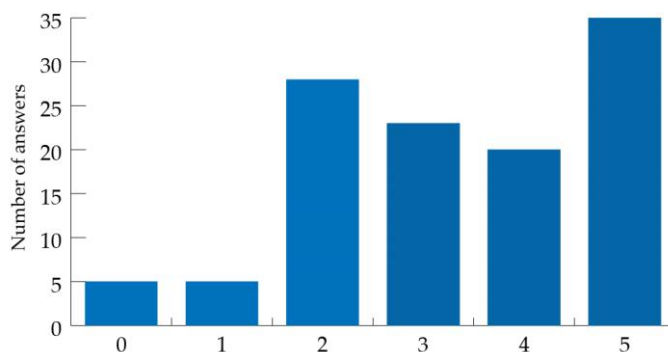
Figure 6. Responses to Question 5: How important are story and characters to you when playing a game?

Question 5 elicited responses that were more evenly distributed across the rating scale, with a slight shift towards the lower end of the scale compared to Question 4. Specifically, 35 respondents indicated that the story and characters of a game are of high importance (rating of 4 or 5 on the scale), while 28 respondents expressed uncertainty or a lower level of importance (rating of 2 or 3 on the scale). These results suggest that while story and characters are an essential aspect of gaming for some, they are not as universally valued as graphics and visual effects.

Question 6 elicited mixed responses from the participants, similar to the previous question. Of the 115 respondents, 30 indicated a strong preference for the multiplayer aspect of video games, while 25 expressed little interest in it. The remaining 60 respondents fell somewhere in between, suggesting that the importance of multiplayer functionality is highly subjective and depends on the individual gamer. Therefore, it is recommended that game developers consider the inclusion of multiplayer elements in their games, without making it a mandatory feature that detracts from the solo experience.
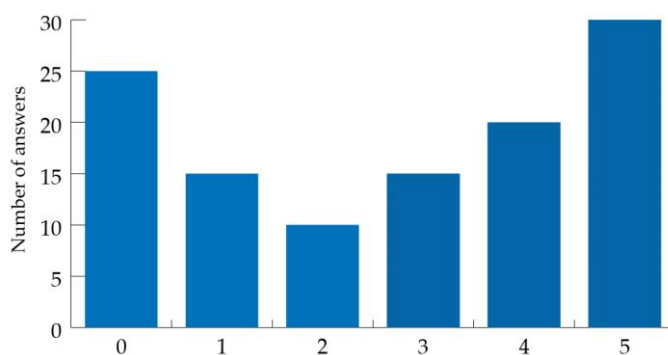

Figure 7. Responses for Question 6: How important is the multiplayer aspect of a game to you?

Question 7 yielded intriguing outcomes, with popular responses already featuring prominent indie games like "Stardew Valley" and "Hollow Knight". Respondents desire indie games to gain more recognition in the AAA world, with titles like "Celeste" contending against Ubisoft or Rockstar games. Nevertheless, such a scenario is improbable, but it is compelling that most individuals perceive accomplished indie games as "underrated" relative to their AAA equivalents.
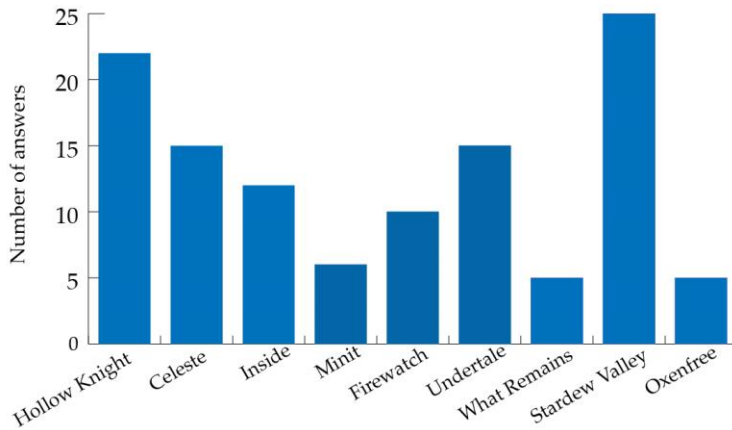
Figure 8. Responses for Question 7: Have you ever played an indie game that you believe should have been as popular as an AAA game?
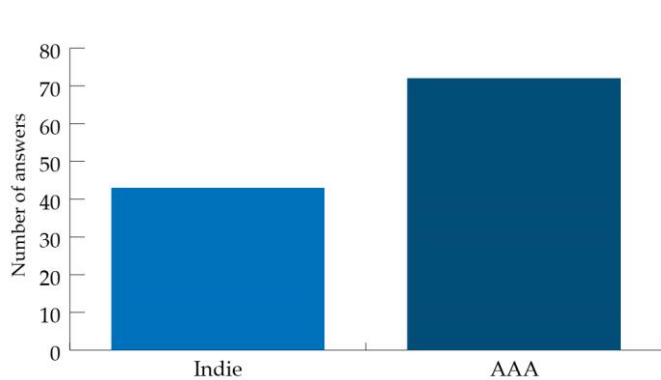
Figure 9. Responses for Question 8: Are you most likely to recommend an indie game or AAA game to a friend?

Question 8 represents a pivotal inquiry, given that personal recommendations from acquaintances are influential in shaping one's gaming preferences. The survey data highlights that 72 respondents would suggest an AAA game, compared to 43 recommending

an indie game. This outcome may reflect the perception that indie games cater to a more specialized audience, whereas AAA games strive to attract a broader range of players. As such, promoting an AAA game appears more likely to result in a favorable response from the recommended party, especially in the context of multiplayer games.

Key Takeaways:

- Diverse Indie Game Audience: Students, high schoolers, and adults all devote significant time to playing indie games, indicating a heterogeneous target audience for indie video games.
- High Schoolers Prefer AAA Games: High school-aged individuals spend considerably more time on AAA games (30 hours per week) compared to indie games.
- Student Inclination Toward Indie Games: Students show a greater preference for indie games, with more than twice as many favoring them over AAA games.
- Balanced Adult Preferences: Adults demonstrate a relatively balanced preference between AAA and indie games.
- Importance of Game Art Style: The distinctive art style is a key reason for the popularity of indie games, while PvP encounters drive the appeal of AAA games.
- Graphics and Visual Effects Are Crucial: A significant portion of respondents, regardless of game type, rate graphics and visual effects as important in their gaming experience.
- Story and Characters Vary in Importance: While some gamers value story and characters highly, these elements are not as universally important as graphics and visual effects.
- Mixed Views on Multiplayer: Opinions on the importance of multiplayer aspects in games are varied, suggesting it should be an optional rather than mandatory feature.
- Indie Games Seen as Underrated: Many respondents view successful indie games like "Stardew Valley" and "Hollow Knight" as underrated compared to AAA games.
- AAA Games More Likely to Be Recommended: A majority of respondents are more likely to recommend AAA games to friends, possibly due to their broader appeal and multiplayer features.

10. Conclusions

Success in any project is not solely determined by the budget or team size, but rather by one's determination and perseverance. Our survey has highlighted the contrasting opinions between indie and AAA games, indicating that there is no universal solution to achieve success in the industry. It is evident that even large-scale titles are not immune to financial failure, while many smaller titles fail regularly. Although AAA game development may be

considered a safer option, as established design formulas are often adopted, indie game development may be more suitable for budgetary constraints. Nevertheless, independent developers must create innovative game development and marketing approaches to compete with established AAA game studios in the highly saturated market. Launching a new IP can be challenging, particularly with a limited budget, emphasizing the importance of a comprehensive marketing strategy that maximizes available resources to stand out in the competitive field.

Key Takeaways:

- Success in projects depends on determination and perseverance, not just budget or team size.
- There's no one-size-fits-all approach to success in the gaming industry, as highlighted by contrasting opinions between indie and AAA games.
- Large-scale AAA titles can still face financial failure, and many smaller indie games fail regularly.
- AAA game development, often relying on established design formulas, might be seen as safer but is not always financially successful.
- Indie game development can be more suited to limited budgets but requires innovative approaches in both development and marketing.
- Independent developers face challenges in competing with AAA studios in a saturated market.
- Launching a new intellectual property (IP) is difficult with a limited budget, stressing the need for an effective marketing strategy to stand out.

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