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Using AI to Generate and Refine Case Studies for Economics Education

This article explores the use of AI co-created case studies. In particular, it highlights how AI tools can facilitate efficient case study creation and enhance student engagement. Sample prompts such as one-shot and few-shot are discussed and provided to show how case studies may be created. Ethical considerations and best practices for using AI to generate educational content are also discussed to ensure quality and responsible implementation. Additionally, we provide an example co-created case study based on game theory concepts and the Monday Night Wars between the World Wrestling Entertainment (WWE) and the World Wrestling Council (WCW), where pitfalls and best practices in co-created case studies are discussed.

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1. Introduction

AI can serve as a powerful resource for generating course content for instructors. This paper focuses on case studies that can enhance student learning, engagement, and grades (Pariseau & Kezim, 2007; Reed & Brunson, 2018). Creating your written case study may be a time-consuming task. However, using case studies co-created with AI, instructors can significantly reduce the time spent creating supplemental course material. At the same time, AI's efficiency and iterative process can allow the instructor to create multiple case studies and tailor them for students. These case studies can provide opportunities for students to apply the concepts they are learning to real-world scenarios. These case studies can also create enhanced learning experiences (Kramm & McKenna, 2023) as students engage in the discussion and potentially use AI to further dive into the concepts through hypothetical scenarios, simulations, or anything else they can imagine.

The flexibility of AI allows instructors to tailor their case studies to meet specific learning objectives or create case studies tailored to groups or individuals. Tailored content may lead to better learning outcomes for students. Moreover, case studies in economics education have led to positive reactions from students (Carlson & Schodt, 1995) and placed them at the center of the learning process (Volpe, 2015). In finance courses, case-based learning was found to have an advantage over problem-based learning, with student grades increasing at the top and bottom strata (Borah, Paudel, & Stivers, 2024). Of course, we are not just limited to case studies. AI can help create supplementary materials like teaching notes, discussion questions, and assessments, allowing the instructor more time to build and implement their lecture.

As an application, we consider a case study on duopoly and game theory that can be used in a principles or intermediate course in microeconomics. Economics instructors have used various media to enhance learning and improve student outcomes when teaching game theory. For example, Geerling et al. (2023) used the popular Netflix show *Squid Game*, Geerling et al. (2021) used K-Pop, Geerling, Mateer and Addler (2020) used *Crazy Rich Asians* and, lastly, O'Roark and Grant (2018) used comic book characters all as different mediums to facilitate active learning of game theory. In the present context, the WWE and WCW Monday Night Wars are used through a case study to highlight how we can use game theory to understand the actions of two companies who vied for control of the wrestling entertainment industry in the 1990s.

For full disclosure, this paper was generated with the assistance of AI tools like ChatGPT. Co-creation of the case study was built through prompts. Collaboration with AI helped with other sections of the paper.[1] When building the case study, careful prompting, reviewing, and editing were done to ensure any generated content aligned with the educational goals and objectives we had in mind while also maintaining its quality. However, even with careful prompting, there were many revisions to tailor the content to meet specific learning objectives and deliver a comprehensive and engaging educational resource. Lastly, it is important to consider that when generating a case study, you may want to have an idea of what the final product looks like. This will facilitate your prompts and expedite the generation of the case study.

The rest of this paper is organized as follows. The next section introduces the benefits of using AI to generate case studies. Section 3 provides some recommendations for using AI to create course content. Section 4 presents an example of an AI co-created case study. Should instructors choose to use it, there are learning objectives and a suggested teaching plan. Section

[1]Particularly when writer's block set in.

4 also details the case study's pitfalls and suggests best practices to avoid pitfalls in AI co-created case studies. Section 5 considers ethical issues using AI for course material creation and best practices. Section 6 concludes this paper.

2. The Benefits of Using AI to Generate Case Studies

AI tools, like ChatGPT, offer several advantages, particularly in supporting instructors across various tasks. While the focus of this paper features their use in creating case studies, these benefits can be applied equally across other course-related materials. One major advantage is the ability to facilitate rapid content creation. For instance, instructors can use AI to efficiently generate comprehensive case studies that address economic topics and concepts. Because of our experience using ChatGPT and producing prompts, we saved considerable time while creating a detailed and engaging case study.

A second benefit of using AI is that it can offer multiple perspectives on the same topic, making case studies richer and more informative. For instance, if we wanted to develop the example case study below further, we could instruct the AI that we want to integrate or expand on different issues, such as branding strategies, fan engagement metrics, or other concepts. By looking at additional angles, students will have a more nuanced understanding of business dynamics.

A third benefit of using AI is that it allows the instructor to generate customized and iterative content. When prompting AI, the instructor will quickly find that case studies are highly adaptable, allowing them to modify each case to fit their specific course requirements. Instructors can also revise content to address specific student needs, making the case study a tailored resource. AI can help emphasize the appropriate elements in each case as well. If the instructor wants to focus on a specific concept such as Nash equilibrium, they can prompt the AI to highlight it and provide a more detailed analysis. AI tools also allow for easy iteration. Here, the instructor will continually review and revise the case study to enhance its quality. For example, the case study below underwent several iterations to achieve the desired outcome.

Lastly, we can use AI to stimulate students' creative and critical thinking abilities. Students can take the case study as given and discuss it in a classroom setting. This should promote critical thinking. However, as an exercise on their own, students can feed AI additional hypothetical scenarios to see how and what changes may result. For example, in the case below, students may ask, "What if WCW had launched its own Attitude Era?" or "How would WWE have fared if it had not signed Stone Cold Steve Austin?" The AI then provides additional content around these hypotheticals, which may encourage students to continue engaging in critical thinking and explore those alternative decisions that could lead to different outcomes.

3. Some Recommendations for Using AI Effectively in Generating Case Studies

Before getting to the case study, it is essential to understand effective ways to prompt AI to get the desired outcome. First, providing precise and detailed prompts to your preferred AI tool is essential. The more specific the prompt, the more accurate and relevant the content generated. An example prompt to provide ideas for case studies may be like the following: "Provide five examples of real-world business rivalries that illustrate the application of Nash equilibrium or other game theory concepts." This prompt should return exactly what was asked: five real-world scenarios of competing companies and the type of competition in which they engaged. This can aid instructors in selecting a desired or timely topic.

Moving beyond the initial idea for a case study requires further prompting. There are a multitude of ways to generate prompts. For the example case study below, we used zero-shot prompting. This asks the AI to perform a task without any prior examples or context for the prompt. The advantage here is that it helps generate exploratory or preliminary content. The initial prompt, "Let's create a case study on the WWE and WCW and their battle for ratings during the 1990s," only provided a background and brief analysis of what happened.[2] While it may have been enough to start a discussion, it lacked economic concepts that would be taught in a class. Therefore, additional prompts for expanding the analysis and incorporating economic concepts such as oligopoly and game theory were needed to ensure the case study aligned with course objectives. Prompts such as, "Let's expand this case study to include economic concepts of oligopoly and game theory. In this case study, we need background information, a discussion of these companies as a duopoly, and we want to cast it in the context of game theory that includes a payoff matrix" were used to build the case study.[3] Further refining prompts such as adding learning objects, discussing Nash equilibrium in more detail, and hypothetical TV ratings were added to build a more robust case study. Again, the key is to have clear and precise prompts. If you are building a case, you may do additional prompts to bolster the material. The AI will continually build the case that you are suggesting.

A key point for prompting is crafting one that saves time and can be replicated for future case study creation. In the zero-shot prompts above, we were looking to build a case study but were unsure what the final product should look like. However, now, we can pull the prompts together to form a few-shot prompt. This type of prompting provides a clear structure for the AI to produce the desired output. Below is an example prompt that will generate a case study in economics. It includes initial prompts to spark ideas in the initial phase (though both prompts need to be entered separately) of the case-building process and can be altered to suit the instructor's needs.

A. Starting Prompts

1. I want to examine [insert economic topic]. Provide some real-world applications.
2. Let's further expand on topic [insert topic number]. Provide some industries that may engage in this topic.

B. Few-Shot Prompt

Let's take this information and create a specific industry case study [based on subtopic number]. When generating the case study, adhere to the following guidelines.

1. Introduction: Provide a detailed overview of the topic. This should include context, background information, and why this topic is relevant to [insert economic topic].
2. Key Concepts: Detail the key [insert economic concepts] concepts that are pivotal to understanding the case study. These concepts should provide the necessary theoretical foundations to help analyze the problem.

[2] We did not ask ChatGPT for examples of real-world applications of game theory. Instead, the idea for this prompt came after watching the *McMahon* documentary on Netflix.

[3] This caused the first iteration to increase by over 300 words.

3. Problem: Outline the main economic problem(s) faced by the subjects in the case study. Include any constraints the principal and agents faced. Use data from real world sources to outline the problem further. Provide a scenario illustrating how [insert economic concept] works.

4. Solution: Present an actual solution to the problem. Describe how the solution addresses challenges. Further, include any benefits and/or costs associated with the solution.

5. Conclusion: Summarize the key takeaways from the items above and emphasize broader implications to include other markets if possible.

6. Discussion Questions: Provide three to five thought-provoking questions that encourage students to engage deeply with the material. These can include "What-if" scenarios.

7. Further Reading: Suggest three to five additional resources such as articles or books that provide more information on the [insert economic topic] or related matters. Be sure to provide valid external links to these resources.

The prompt above may be sufficient to generate a case study.[4] Yet, as you begin writing your prompts, you collaborate with the AI in an iterative process. You will likely find that your creativity works with AI's capabilities. For example, if you were to use the sample few-shot prompt above, you may find some areas of the case study lacking. These findings will significantly improve your prompting as you find new angles to explore or adjust your original prompts to be more concise so that you draw out the information you want. By working in tandem with the AI, you can efficiently craft prompts that reflect the core elements of your case or project. Even if you do not have a firm idea of what the final product should look like at the outset, the collaborative process will help you gradually shape, adjust, and fine-tune your case study. This co-creation fosters a more flexible and practical approach to content generation, leading to a more substantial, refined case study.

AI co-created content can serve as a great foundation, but it will benefit from refinement by the instructor. Reviewing and editing the content is crucial to ensure it meets your educational standards and goals. Further, reviewing and editing allow you to include additional details or nuances to convey to the students. This iteration process not only helps improve the material's quality but also makes it more customized for the target audience. In the case below, AI did create some redundancies and formatting inconsistencies, so reviewing and editing the case study was necessary to create a better flow. As a case is being built, you can catch these errors or suggest changes leading to a better outcome.

In the case below, we did not ask for sources on the content created, but we could use an additional prompt to do so. For example, a simple prompt of "Provide sources for the case above, particularly relating to any data used" will return sources the instructor can cite or hyperlink to provide the student with further reading. We must note, however, that, at least for ChatGPT, AI may often cite generalized sources, so the instructor must check them.

Lastly, engaging students with AI co-created content can be highly effective (Menekse, 2023). As the instructor, you know what you want your students to know, and you want to pro-

[4] As a test of the prompt, we chose monopoly, then pharmaceuticals and patents from the options provided by ChatGPT. The prompt then built a case on Gilead Sciences and Sovaldi including pricing and the cost of the R&D. However, this was a test of the prompt and not one to ensure the accuracy of all information provided—see section 4.D on the pitfalls of case study creation.

vide students with the ability to engage with the material. Instructors can encourage students to expand upon the AI co-created case studies. Have them critique it, improve it, or alter its course altogether. This can deepen their understanding and help them develop critical analysis skills, as they must think about what is missing or what could be added to enrich the discussion further.

4. Example Case Study and Lesson Outline

This section presents suggested learning objectives, a teaching approach, and the case study itself. As mentioned above with customization and iteration, the case study can be altered based on numerous metrics. If the instructor wants to present the case and have it analyzed and discussed, then have a "What if" scenario, they can easily do so. This helps to stimulate critical thinking among the students. Students can also feed the case study to the AI and use their prompts to further stimulate critical thinking. This can lead to a much richer understanding of the complexities of the concepts they are learning.

A. Learning Objectives

Students should be able to understand key economic and strategic concepts, apply them to real-world scenarios, analyze strategic decisions, and explore the competition dynamics. Specifically, this case study on WWE vs. WCW allows students to:

1. Explain market structures: Learn about different market structures, particularly oligopolies, and understand how these structures influence strategic decision-making. In the WWE vs. WCW case, students will study the features of an oligopolistic market, including high barriers to entry, interdependence among firms, and competitive dynamics.

2. Apply game theory principles: Gain insights into the fundamental concepts of game theory such as dominant strategy, Nash equilibrium, and payoff matrices. Students will apply these principles to analyze the competitive behaviors of WWE and WCW, exploring how their decisions influenced the outcome of the rivalry.

3. Evaluate strategic innovation and adaptability: Analyze the importance of innovation and adaptability in sustaining a competitive advantage in a dynamic environment. Using the WWE vs. WCW case, students will examine how WWE's strategic innovations enabled it to outmaneuver WCW, which struggled to adapt.

4. Explore real-life business rivalries: Connect theoretical concepts to real-world business competition by studying the rivalry between WWE and WCW. This case provides an illustrative example of how competition, consumer behavior, leadership, and strategy play out in practice, enhancing students' understanding of these topics.

Given the length and nature of the Monday Night Wars, learning objective three is interesting as it allows students to go beyond the standard 2x2 payoff matrix. Here, the instructor can guide students into more complex games, such as repeated games and games with uncertainty It also introduce credible threats and tit-for-tat—though some of this is mentioned in the case study.

B. Suggested Teaching Approach

Below is one suggested route to apply this case. Ideally, this case is applied after a lec-

ture on oligopoly and game theory, but the case covers enough for this to be done without those lectures. You may present the case to them to read beforehand or play it out in the class. As noted earlier, after students complete the core of the case study, they could then supplement further learning and enhance their critical thinking skills by using AI to alter outcomes or provide different scenarios (see item 6).

1. Classroom Discussion: Begin by outlining the background of the Monday Night Wars, explaining the competition between WWE and WCW. Discuss the market structure and the nature of oligopolies.

2. Game Theory Application: Present the basic concepts of game theory and ask students to identify the dominant strategies used by WWE and WCW. Have students work in pairs to draw up their payoff matrices for WWE and WCW, exploring different scenarios and their potential outcomes.

3. Role Play: Assign students to represent either WWE or WCW. They can use data from the case study to present arguments on why they pursued specific strategies (e.g., live broadcasts, signing rival stars, creating new talent). Encourage them to debate the strengths and weaknesses of each approach.

4. Group Analysis: Split the class into small groups and ask them to identify where WCW's strategy faltered and how WWE capitalized on those weaknesses. Let students explore strategic missteps using the principles of first-mover advantage, innovation decay, and adaptability.

5. General Discussion Questions: Wrap up the lesson by discussing broader questions like: How does the concept of oligopoly help explain the intensity of the competition between WWE and WCW? In what ways did WCW initially outmaneuver WWE using game theory principles like dominant strategy and tit-for-tat? What long-term strategy mistakes did WCW make, and how did WWE exploit these mistakes?

6. What if?: Have students take the case study and apply hypothetical scenarios by using AI to answer questions. Have them save the conversation, then write a reflection paper on their experience. Students will turn in the AI conversation and their reflection.

C. Case Study: WWE vs WCW and the Monday Night Wars

The case study below, "WWE vs WCW and the Monday Night Wars," shows how AI can generate a comprehensive narrative that draws upon economic concepts such as oligopoly and game theory. It provides a detailed analysis of the competitive strategies employed by WWE and WCW during the Monday Night Wars, offering students insight into market dynamics, strategic interactions, and the factors that lead to success or failure in a competitive industry. By examining the WWE vs. WCW rivalry, students can better understand the intricacies of oligopolistic competition and the role of strategic innovation. Finally, it is important to review each generated case study for inconsistencies in economic concepts, accuracy, and even styling as AI tends to alter its own formatting. After reviewing the case study given to us, we edited and made further revisions to ensure the accuracy of the statements—ChatGPT admits that even it makes mistakes.

Case Study: WWE vs WCW and the Monday Night Wars

Background

"During the 1990s, WWE (formerly the World Wrestling Federation (WWF)) and WCW were locked in fierce competition for supremacy in the world of professional wrestling entertainment. This period, known as the Monday Night Wars, saw each company battle for ratings, viewership, and ultimately market dominance. It was a classic example of an oligopoly, where a few dominant players controlled the market and each move by one competitor influenced the strategic decisions of the other.

In this highly competitive environment, game theory played a crucial role in determining the behavior of both WWE and WCW. Both companies engaged in tit-for-tat strategies, where the actions of one company prompted immediate responses from the other. For example, when WCW launched its flagship program, Monday Nitro, in direct competition with WWE's Monday Night Raw, WWE responded by introducing more edgy content and unpredictable storylines, a move that became known as the Attitude Era. WCW, in turn, countered with high-profile signings of WWE talent, such as Hulk Hogan and Randy Savage, effectively signaling their intent to dominate the market by leveraging well-known stars.

The competitive dynamics between WWE and WCW can also be understood through concepts such as price wars and product differentiation. While direct pricing was not a factor, the companies engaged in a form of "content war," as each attempted to offer superior entertainment value, unique storylines, and memorable live events to capture audience loyalty. This strategy of product differentiation—targeting viewers with distinct content styles, such as WCW's more reality-based narratives versus WWE's larger-than-life personas—illustrates the non-price competition typical in oligopolistic markets.

Ultimately, WWE's strategic advantage came from its ability to innovate within this high-stakes game. By taking risks, like pushing boundary-breaking storylines and effectively utilizing new talent, WWE managed to outmaneuver WCW's costly acquisition strategy. This period serves as an excellent case study in understanding the role of strategic interaction in oligopolies, where both cooperation and fierce rivalry influences each company's tactics and outcomes. By 2001, WWE had successfully acquired WCW, ending the Monday Night Wars and establishing itself as the dominant player in professional wrestling entertainment.
Industry Structure: Oligopoly in Professional Wrestling

An oligopoly is a market structure where a small number of firms dominate the industry. The wrestling industry during the 1990s was a classic example of an oligopoly, with WWE and WCW as the two primary firms controlling the majority of the market share. Both companies:

- Had significant influence over the industry's pricing, content strategies, and overall viewer expectations.
- Were interdependent, meaning the actions of one directly influenced the decisions of the other.
- Had high fixed costs. Both companies invested heavily in television production, talent acquisition, and promotional events.
- Had brand loyalty. WWE had a loyal fan base built over decades, while WCW capitalized on its association with Turner's media empire.

- Used exclusive contracts. By signing wrestlers to long-term contracts, both companies prevented other competitors from gaining access to top talent.

In an oligopolistic market, firms often engage in strategic decision-making, using game theory principles to predict and counter their rival's moves. The battle between WWE and WCW was not just about producing entertaining content but about making calculated decisions to maximize viewership and market power.

The Role of Game Theory in the Monday Night Wars

Game theory provides a framework for understanding how WWE and WCW made strategic decisions. They often anticipated their competitor's moves and responded accordingly. In this context, the Monday Night Wars can be seen as a series of sequential games where each company's choices impacted the other's future decisions.

Key Concepts in Game Theory:

1. Dominant Strategy: A strategy that is the best for a firm, regardless of what its competitor does.
2. Nash Equilibrium: A situation in which no firm can improve its outcome by changing its strategy while the other firm's strategy remains unchanged.
3. Payoff Matrix: A tool used to show the possible outcomes of different strategic choices made by competing firms.
4. Tit-for-Tat: A strategy where a company mirrors the actions of its competitor, responding to aggressive or cooperative behavior in kind.

WCW's Dominant Strategy: Innovation and Aggression

Early in the Monday Night Wars, WCW adopted an aggressive dominant strategy by:

- Launching Monday Nitro, airing it directly against WWE's Monday Night Raw.
- Signing WWE stars like Hulk Hogan, Kevin Nash, and Scott Hall, to undermine WWE's brand strength and add value to WCW's product.
- Using live broadcasts to surprise WWE and sometimes even spoil WWE's pre-recorded show results to discourage viewership of their competitor's program.
- Innovating with the New World Order (nWo) storyline, which created a sense of unpredictability and rebellion that appealed to a 1990s audience.

In game theory terms, WCW's strategy forced WWE into a defensive position, where WWE had to make decisions to counter WCW's aggressive moves.

WWE's Response: Adapting to Survive

WWE faced a dilemma—continuing with its current strategy (which was losing ground in the ratings) or making a bold shift to attract a new audience. WWE responded to WCW's dominant strategy by:

- Launching the Attitude Era, a riskier but potentially more rewarding strategy aimed at appealing to the same teenage and young adult demographic WCW had captured.
- Developing stars like Stone Cold Steve Austin and The Rock, investing in future talent instead of relying on older stars like WCW.
- Introducing edgier, more mature content to compete directly with WCW's rebellious tone.

This was a strategic shift in WWE's approach, as they recognized the need to create new value propositions to retain viewers. WWE understood that it could not win by merely copying WCW's moves (a tit-for-tat strategy) but needed to innovate within its brand identity.

In this oligopolistic environment, the rivalry between WWE and WCW was a zero-sum game—any gains for one company came at the direct expense of the other.

Weekly Ratings Data and Analysis in the WWE vs. WCW Case Study

In the context of the WWE vs. WCW rivalry, it is helpful to analyze the weekly ratings data, Table 1, to understand how strategic decisions influenced viewership and overall success. Below, we present hypothetical weekly ratings data for both WWE's "Monday Night Raw" and WCW's "Monday Nitro" to illustrate key trends during the Monday Night Wars.

Table 1. Hypothetical TV Ratings for WWE and WCE

	WWE Rating (Monday Night Raw)	WCW Rating (Monday Nitro)
1	2.5	3.1
2	2.7	3.3
3	2.9	3.5
4	3.2	3.6
5	3.6	3.4
6	3.9	3.3
7	4.2	3.1
8	4.5	2.9
9	4.8	2.7
10	5.0	2.5

Analysis:

In the early weeks, WCW's "Monday Nitro" held the lead in ratings due to introducing innovative programming like the nWo storyline and live broadcasts. However, as WWE introduced its Attitude Era and key superstars like Stone Cold Steve Austin and The Rock began gaining popularity, WWE's ratings began to climb steadily. By Week 5, WWE had surpassed WCW, and the gap widened in the subsequent weeks.[5]

The Payoff Matrix: Strategic Choices

The strategic decisions made by WWE and WCW can be modeled using a payoff matrix, where the two companies had choices to either innovate or stick with their current programming:

Table 2: Payoff Matrix for WWE and WCW

	WCW: Stick with Standard Programming	WCW: Innovate (Live Shows, Star Acquisitions)
WWE: Stick with Standard Programming	(2,2) Both companies stagnate, with slow decline	(1,3) WCW gains a ratings lead; WWE loses market share
WWE: Innovate (Attitude Era)	(3,1) WWE gains ground; WCW loses audience	(2,2) Both innovate, intense competition, and viewer splits

- In the top left quadrant, both companies stick to standard programming, leading to a slow decline as viewers get bored with repetitive storylines.
- The bottom right quadrant represents intense competition, with both companies innovating. This leads to higher costs (signing new talent, promoting new storylines), but both retain viewership.
- The bottom left quadrant shows a situation where WWE's innovation beats WCW's stagnant programming.
- The top right quadrant reflects the situation where WCW innovated first, gaining an advantage while WWE stayed with its old programming (this happened in the early years of the Monday Night Wars).

A Nash equilibrium occurs when neither player can improve their payoff by unilaterally changing their strategy, given the strategy of the other player. In this case, the Nash equilibrium is located in the bottom-right cell where both WWE and WCW choose to Innovate.

In the Nash equilibrium (Innovate, Innovate), WWE and WCW are competing fiercely by implementing innovative strategies—WWE with its Attitude Era and WCW with its live broadcasts and star acquisitions. If either company deviates unilaterally from innovation (e.g., by sticking with standard programming), they will be at a disadvantage compared to their competitor, leading to a loss in ratings and market share. Therefore, both companies find it optimal to continue innovating when the other is also innovating, resulting in a stable outcome where

[5] The WCW led the ratings for 83 weeks. This is the context that ChatGPT missed, but the hypothetical data serves to illustrate the point.

neither company can benefit by changing strategies on their own.

The Decline of WCW: A Misstep in Game Theory

In the late 1990s, WCW's strategic decisions became increasingly erratic, and it struggled to maintain the innovation that had initially given it an advantage. WCW made the mistake of relying too heavily on older talent and repetitive storylines. As a result, the company failed to recognize that its dominant strategy was no longer effective. WWE, on the other hand, continued to innovate and promote new stars, which gave them a sustainable competitive advantage.

From a game theory perspective, WCW's failure to adapt caused it to lose its strategic position. The payoff matrix shifted, with WWE benefiting from a long-term commitment to innovation, while WCW's short-term gains through aggressive tactics like poaching talent were not enough to sustain its lead.

Lessons in Economic Strategy

1. Innovation as a Long-Term Strategy: WWE's pivot to the Attitude Era and investment in new talent proved to be the winning strategy in the long run, demonstrating that sustained innovation often outweighs short-term gains from aggressive tactics.

2. Predicting Competitor Behavior: Both WWE and WCW used game theory principles to predict each other's actions, but WWE's ability to anticipate and outmaneuver WCW in the later stages of the war allowed it to win.

3. Oligopoly and Competitive Dynamics: The WWE-WCW battle illustrates the competitive dynamics of an oligopoly, where firms are highly interdependent, and each company's moves directly affect the other's fortunes.

Discussion Questions

1. How does the concept of oligopoly help explain the intensity of the competition between WWE and WCW?

2. In what ways did WCW initially outmaneuver WWE using game theory principles like dominant strategy and tit-for-tat?

3. What mistakes did WCW make in long-term strategy, and how did WWE exploit these mistakes?

4. How does this case study illustrate the importance of innovation and adaptability in an oligopolistic market?

Conclusion

The WWE vs. WCW rivalry offers a fascinating case study in oligopoly and game theory. WCW's early dominance in the ratings war was driven by innovative strategies, but WWE's ability to adapt and take calculated risks eventually allowed it to win the competition. The lessons from the Monday Night Wars extend beyond professional wrestling, providing insights into strategic decision-making, competitive dynamics, and the role of innovation in any oligopolistic market."

D. Pitfalls and Best Practices in Case Study Creation

Even with editing, the case study above still contains several errors and has room for improvement. We outline those errors below. We make suggestions for each to improve the original case study. Finally, we provide suggested best practices when creating AI co-created case studies.

As instructors, we must ensure that the material we generate for students is accurate. First, note that the Monday Night Wars were between WWE and WCW. However, ChatGPT wrote, "...a classic example of an oligopoly..." This is a classic duopoly example, as only two firms competed in these rating wars. Keeping the context of a duopoly allows for an easier path to solve for a Nash equilibrium. Yet, text that switches between duopoly and oligopoly can create confusion among students who think the classic two-player game and Nash equilibrium can be extended to more than two players and solved the same way.

The next point of error is the inclusion of the Tit-for-Tat strategy under Key Concepts in Game Theory, as the Monday Night Wars were a zero-sum game, not a positive-sum game. Each company sought to expand its market share to the point that the WWE finally captured much, if not all, of the WCW's market after it went out of business.[6] Thus, the tit-for-tat strategy is not needed. There is also a discussion question about the tit-for-tat strategy. The instructor can remove this question but perhaps keep it in their back pocket to ask students as a thinking exercise, of course, with an explanation of what tit-for-tat is if the students have not been exposed to it.

The next points of error are the two tables. The first table is listed as hypothetical weekly ratings data; the second table is not, even though the numbers are hypothetical. To correct for the first table, the instructor may have to prompt their preferred AI to provide actual data or sources or search for data themselves. We gave ChatGPT the following prompt: "Can you access the weekly TV ratings data for the WWE and WCW during the Monday Night Wars? Specifically, there were 83 weeks where the WCW was on top of the WWE."[7] ChatGPT then provided Wrestlenomics as a source for weekly TV ratings data.[8] We can now place an abbreviated table of these ratings in the case study to provide real-world data.

[6] We have often heard of WCW loyalists refusing to watch WWE.

[7] The 83 weeks was known from watching the *McMahon* documentary on Netflix.

[8] https://wrestlenomics.com/wwf-wcw-monday-night-war-tv-ratings-wwe-wcw-nitro-wwf-raw-cable/?utm_source=chatgpt.com

Table 3

Date	WWE RAW TV Rating	WCW NITRO TV Rating	Lead	Weeks Leading
1/26/1998	3.48	4.69	Nitro	75
2/2/1998	3.44	4.95	Nitro	76
2/9/1998	3.19	4.61	Nitro	77
2/23/1998	3.24	4.59	Nitro	78
3/2/1998	3.76	4.81	Nitro	79
3/9/1998	3.6	4.94	Nitro	80
3/23/1998	3.57	4.64	Nitro	81
3/30/1998	3.78	4.18	Nitro	82
4/6/1998	4.38	4.58	Nitro	83
4/13/1998	4.61	4.35	Raw	1
4/20/1998	4.37	5.12	Nitro	1
5/4/1998	5.51	4.45	Raw	1
5/11/1998	4.72	4.26	Raw	2
5/25/1998	4.22	4.19	Raw	3
6/1/1998	4.36	3.72	Raw	4
6/8/1998	4.26	4.12	Raw	5
6/15/1998	4.32	4.03	Raw	6
6/22/1998	4.27	4.1	Raw	7
6/29/1998	5.36	4.05	Raw	8
7/6/1998	4	4.85	Nitro	9
7/13/1998	4.65	4.46	Raw	10
7/20/1998	4.99	4.34	Raw	11
7/27/1998	4.84	4.72	Raw	12
8/3/1998	4.77	4.2	Raw	13

Data Source: Thurston (2023). https://wrestlenomics.com/u-s-cable-network-households-universe-1990-2023-nielsen-data/

The second table is a bit more complex as revenue data is not readily available for the WCW. However, Wrestlenomics provides estimated Pay-Per-View (PPV) buys for WCW and WWE during the case study's period. We can include this in our analysis, yet we still have difficulty knowing how much each PPV costs as smaller events may have been $15, and premier events may have been more. We updated ChatGPT with the actual PPV buys for WCW and WWE for five months before the WWE regained the number one spot in the ratings wars.[9] We placed the updated output in the appendix. We provide three caveats: 1) this is hypothetical because of

[9] This coincided with the beginning of the Attitude Era.

the lack of knowledge of the cost of each PPV event. 2) This type of analysis assumes that each company selected a vision for five months and stuck with it but may have made changes from week to week to keep to that vision. Those changes may have shown up in the PPV buys as storylines progressed. 3) The payoff matrix is modeled as a one-shot game to illustrate how a Nash equilibrium arises. However, the ratings wars were ongoing, making it a repeated game. Here, the instructor could include information about repeated games if they desired.

To continue with the second table, ChatGPT remarks in the Decline of the WCW section, stating, "In the late 1990s, WCW's strategic decisions became increasingly erratic, and it struggled to maintain the innovation that had initially given it an advantage." If WCW were maintaining a dominant strategy as proposed by ChatGPT, then becoming increasingly erratic would not follow a dominant strategy. Instead, it would follow one of an irrational economic actor who switches from dominant to non-dominant strategies. Thus, a correction noting ChatGPT's breakdown in definition of what a dominant strategy is and logical inconsistency must be noted.

Next, we highlight information that does not draw from fact. Under Lessons in Economic Strategy, statement two reads: "Predicting Competitor Behavior: Both WWE and WCW used game theory principles to predict each other's actions…" This is, at best, a conjecture of what may have happened. Further, when viewing the entire sentence, "Both WWE and WCW used game theory principles to predict each other's actions, but WWE's ability to anticipate and outmaneuver WCW in the later stages of the war allowed it to win." If each company can predict the other's actions, then neither company would have any upper hand over the other, when, in fact, the TV ratings show that not to be true. Thus, it is essential, again, to carefully review and edit the information that the AI will place in the text.

Lastly, we point out the formatting inconsistencies. When copying text from ChatGPT or another AI, it is important to check if the formatting of each phrase, noun, etc., instance is correct. For example, Monday Night Raw appears in three different ways: Monday Night Raw, Monday Night Raw, and "Monday Night Raw." Again, reviewing and editing are crucial.

The errors and inconsistencies noted above can appear in any AI co-created case study. To help mitigate these issues, we believe instructors should adhere to a few best practices when creating AI co-created case studies. First, the concepts being discussed must be both relevant and factual to the topic at hand. As noted above, oligopoly encompasses more than two firms, yet the case concerned itself with just two. Secondly, an appeal of the case study is its ability to connect to real-world applications. ChatGPT and other AI are likely to be lax in providing industry or firm-specific data. Thus, instructors may want to build targeted prompts in their few-shot prompt to draw out that data. However, the targeted prompt may not work and it will fall to the instructor to use a brute force prompt to draw out data sources. Third, instructors need to ensure that statements made by AI are accurate. Currently, AI tends to craft sentences that may not be logically consistent. Students may read these sentences and think they are accurate. As instructors, we must ensure that the material we place in front of students is accurate. Lastly, we urge instructors to divulge that the case study was co-created with AI. This helps ensure transparency and trust with students. We urge instructors who use this case study creation process ensure that the generated information is relevant, factual, and consistent, and that they are transparent. Doing so will promote reliable case studies to aid students in connecting material to real-world applications.

5. Ethical Considerations and Best Practices

AI is rapidly evolving and academics are split on its use (D'Agostino, 2023). There are several issues to consider when building a case study using AI. The first is the datasets on which the AI was trained. Those datasets may produce biased outcomes (Lee et al., 2024), so instructors need to check the output to ensure that biases are not present and stereotypes are not reinforced. When checking case studies or other generated content for bias, look for a neutral tone in the writing. This allows the student to form their opinion on the case without being subjected to implicit bias.

How does AI work? We may not understand the algorithms or datasets used to generate content. Without knowing the "functional" transparency of the inner workings, we may develop a lack of trust in the system (Walmsley, 2021). Instructors need to be transparent with students when presenting them with an AI co-created case study. Suppose the instructor does not disclose the use of AI co-created content. In that case, the student may be concerned about the content's authenticity and how it aligns with academic integrity. The student should benefit from the instructor's expertise, not pre-packaged AI content. This transparency can ensure that AI does not undermine the instructor's role.

As mentioned earlier, AI can produce incorrect or incomplete information (Chanda & Banerjee, 2024) and the instructor must thoroughly check for accuracy and completeness. While AI can assist in generating case studies, it can also introduce errors or omissions. This makes it imperative for the instructor to ensure that the case study is constructed correctly, contains all relevant information, and aligns with the course's learning objectives. The instructor's review ensures that the AI co-created content avoids mistakes and supports meaningful learning outcomes. For example, see section 4.4. for the list of inconsistencies and inaccuracies.

While AI can efficiently build tailored case studies or other instructional material, we should not have an over-reliance on it. Klingbeil, Grützner, and Schreck (2024) find that people tend to over rely on AI to the point that they follow the advice of AI even if it goes against their interests. Education is a human-driven experience and process. As we become over-reliant on AI to build content, we may be further removed from the pedagogical process. It is important that the instructor still provides their insights and expertise to go along with the case study. Instructors should use any AI co-created content as a supplement to their teaching rather than a complete replacement.

Suppose the instructor wants students to use AI to continue with the case study. In that case, they must also remember that AI tools may not be accessible to all students (Goldenthal et al., 2021) or that students may not fully understand how to use them. If students cannot access a required AI assignment using the case study, the instructor should provide alternative methods for completing the assignment. If students do not understand how to use AI effectively, the instructor should provide resources showing students how to do so.

Lastly, we consider the effect of AI educational content on student perceptions. When creating supplemental resources for students, instructors may forget about the human element between the teacher and student. Students may perceive that too many supplements generated by AI create a divide in the pedagogical process. Rodway and Schepman (2023) surveyed 302 United Kingdom students on AI and education. Concerning created content, they found that 53% of respondents were comfortable or very comfortable with this, yet 28% were uncomfortable or very uncomfortable. As instructors, we should maintain a balance between the expertise we provide and the supplemental resources AI provides while seeking feedback on AI content and maintaining personal interactions with our students.

6. Conclusion

When instructors use AI like ChatGPT to generate case studies, they can save time, produce rich content, and create highly engaging and customizable learning experiences for their students.[10] If an instructor took a case-based approach to learning, they could efficiently create tailored cases for the content they are teaching their students. However, AI is not without its pitfalls. Instructors must carefully review the generated case studies. They must also be careful in reviewing, editing, and prompting if they want to generate real-world data and applications. As the example case study has shown, the initial output provided by ChatGPT is only hypothetical TV ratings and data for the payoff matrix, and it required further prompting to get sources for real-world data. While this may create extra steps in case study creation, it will be a more robust product for students.

Considering the ethical and practical aspects of using AI to generate course content is also important. In our view, AI should be used as a supplement to teaching rather than a complete replacement for the instructor's expertise. Instructors need to ensure that AI co-created materials are accurate, relevant, and tailored to the specific learning objectives of their courses. Instructors must review and refine any AI output, address biases in that output, and add contextual relevance that only their expertise can provide. Additionally, they need to be transparent with students about how AI is being used to generate content. This helps students understand the capabilities and limitations of AI while maintaining trust in the instructor and educational experience. Instructors should also be mindful of the risk of over-reliance on AI, ensuring that they use it to enhance, not replace, the pedagogical process and personal engagement with students.

When used thoughtfully, AI content can significantly enrich students' educational experience by enhancing their critical thinking and providing insights through engaging materials. It also frees up the instructor's time to focus more on interactive and personalized aspects of teaching. By balancing AI's capabilities with human expertise, instructors can maximize both benefits, creating an optimal learning environment for their students.

[10] We spent more time trying to find the words to use in these last few sentences than we did creating the case study with ChatGPT.

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Appendix: Game Theory and One-Shot Games: Strategic Decisions in the Monday Night Wars

In this case, we analyze the strategic decisions made by WCW and WWE (which was transitioning into the Attitude Era) as a one-shot game using a payoff matrix. A one-shot game is a situation where players (or companies, in this case) make a single, simultaneous decision, and the outcome is determined after the decision is made. There is no opportunity for players to adjust their strategies during the game and the outcome is realized only after all actions have been taken.

Context: The Attitude Era and Innovation

In the late 1990s, WWE launched its Attitude Era, a bold move designed to attract a new, more mature audience through edgy content and storylines. This period marked a significant shift in the company's approach to programming and was a key strategic innovation in their competition with WCW. In response, WCW had to decide whether to continue with its existing programming or innovate with its own storylines.

For this analysis, we aggregate Pay-Per-View (PPV) viewership data from November to March, assuming both companies make their decision for the April period based on their past performance. The outcome of the game is determined by the average viewership each company achieved during the previous months, which provides the basis for their forecasted revenue.

Aggregating Data: A One-Shot Decision Based on Past Outcomes

By aggregating the viewership data from the five months (November to March), we estimate that WWE had an average of 348,200 viewers per month and WCW had an average of 423,000 viewers per month.[11] This data reflects their past performance, including WWE's growing success due to the Attitude Era and WCW's ratings.

Using this historical data, we calculate their projected revenues for April based on each company's decision. If both companies stick to standard programming, their revenues are based on past viewership averages. However, if one or both companies innovate, they see an increase in revenue due to the positive impact of innovation on audience engagement.

The Payoff Matrix: Strategic Decisions and Outcomes

The payoff matrix is structured around two possible decisions for each company: innovate (such as launching the Attitude Era for WWE or introducing new storylines for WCW) or stick with standard programming (continuing their existing approach). The projected payoffs for each decision are based on their expected revenue from PPV buys and viewership.

Here is the resulting payoff matrix, assuming that $15 per viewer is the revenue generated:

Table 4: Hypothetical Revenue for April Pay-Per-View

	WCW: Stick	WCW: Innovate
WWE: Stick	$5,223,000; $6,345,000	$5,223,000; $9,517,500
WWE: Innovate	$7,834,500; $6,345,000	$7,834,500; $9,517,500

[11] Data come from: https://wrestlenomics.com/resources/wcw-pay-per-view-buys-ppv-buys-ppv-buyrate/ and https://wrestlenomics.com/resources/wwe-pay-per-view-buys-wwf-ppv-buyrate/ (Thurston n.d. & Thurston n.d.)

Interpretation of the Payoff Matrix:

- WWE Stick / WCW Stick: If both WWE and WCW stick with standard programming, WWE earns $5,223,000 and WCW earns $6,345,000 based on their past average viewership.
- WWE Innovate / WCW Stick: If WWE innovates (with the Attitude Era) while WCW sticks with standard programming, WWE earns $7,834,500 (a 50% increase from their standard programming), while WCW earns $6,345,000.
- WWE Stick / WCW Innovate: If WCW innovates (e.g., new wrestlers with nWo) while WWE sticks with standard programming, WCW benefits from innovation and earns $9,517,500 (a 50% increase from their standard programming), while WWE earns $5,223,000.
- WWE Innovate / WCW Innovate: If both companies innovate, WWE earns $7,834,500, and WCW earns $9,517,500, reflecting the gains from innovation.

Conclusion: A Strategic One-Shot Game

The Monday Night Wars can be understood as a one-shot game in which both companies make their decision at the start of April (based on aggregated performance from November to March) that will impact their future revenues during that period. By aggregating their past viewership data (from November to March) and building the payoff matrix, we can predict that WWE's innovation with the Attitude Era would likely improve their market position and revenue, ultimately outpacing WCW if both companies decided to innovate.

This game theory framework helps us understand how past data (viewership and revenue) can guide future decisions, and highlights the competitive dynamics in a zero-sum game, where one company's gain is often another's loss. The key takeaway is that innovation—as demonstrated by WWE's Attitude Era—was a crucial factor in shifting the balance of power during the Monday Night Wars.