

# ChatGPT defines my new calculation: the Cost-to-Friction Ratio

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## Corey

Describe the cost-to-friction ratio as it's used in purchase decision making and how to calculate it. "Cost" is defined as the difference in price between two nearly identical products, and "Friction" is defined as the amount of work it takes to use the product to complete a goal.

## ChatGPT

The cost-to-friction ratio is a concept used in purchase decision making to evaluate the value proposition of a product or service. It takes into account both the cost difference between two similar products and the level of friction associated with using those products to achieve a particular goal.

Cost, in this context, refers to the difference in price between two nearly identical products. It represents the monetary investment required to acquire a product or service. For example, if you are considering purchasing a laptop and find two models with similar specifications but different prices, the cost would be the price difference between the two options.

Friction, on the other hand, refers to the amount of work or effort required to use the product to accomplish a specific goal. It encompasses various factors such as ease of use, convenience, time required, learning curve, maintenance, and any other obstacles that may impede the achievement of the desired outcome. For instance, if one laptop requires additional software installations, has a complex setup process, or has a shorter battery life compared to the other, it would contribute to a higher level of friction.

To calculate the cost-to-friction ratio, you need to determine the numerical values associated with both the cost and friction. This can be done by assigning a score or rating to each factor based on your personal preferences or the specific requirements of the goal you want to achieve. The scale for assigning scores can be arbitrary, but it's essential to ensure consistency throughout the evaluation.

Once you have assigned scores to both cost and friction, you can calculate the ratio by dividing the cost score by the friction score. The resulting value represents the cost-to-friction ratio, indicating the trade-off between the monetary investment and the level of effort required to accomplish your

goal. A higher ratio indicates a more favorable purchase decision, as you are getting better value for the price paid relative to the level of effort involved.

It's worth noting that the cost-to-friction ratio is a subjective measure as it depends on individual preferences, needs, and priorities. What may be considered a favorable ratio for one person may differ for another. Therefore, it is essential to assess your own requirements and priorities to make a decision that aligns with your specific circumstances.

## Corey

Can you add an example of someone who uses their phone a lot for nature photography while hiking?

## ChatGPT

Certainly! Let's consider an example of an avid hiker and nature enthusiast who frequently uses their phone for nature photography during hiking trips. We'll examine how this individual could apply the cost-to-friction ratio to their purchase decision for a new smartphone.

**Cost:** The cost factor would involve comparing the prices of different smartphones with similar camera capabilities and other relevant features. Our nature photographer may find two smartphones with similar camera specifications, but one is priced at \$800, while the other is priced at \$1,000.

**Friction:** For our hiker, friction would encompass the ease of use, durability, battery life, and other factors that affect their nature photography experience while hiking. They may consider aspects such as the camera app's user interface, physical ergonomics, ruggedness against outdoor conditions, and the phone's battery performance during extended hikes.

To assign scores for cost and friction, let's assume a scale of 1-10, with 10 being the most favorable:

- **Cost:** The \$800 smartphone could be assigned a score of 8, while the \$1,000 smartphone may receive a score of 9 due to its higher price.
- **Friction:** After researching user reviews, the hiker determines that the \$800 smartphone has a user-friendly camera app, good durability, and a decent battery life, resulting in a friction score of 7. The \$1,000 smartphone, however, has a more intuitive camera app, superior ruggedness, and an exceptional battery life, earning a friction score of 9.

With these scores in hand, we can calculate the cost-to-friction ratio as follows:

Cost-to-friction ratio (for \$800 smartphone): Cost score (8) divided by Friction score (7) equals 1.14.

Cost-to-friction ratio (for \$1,000 smartphone): Cost score (9) divided by Friction score (9) equals 1.

Based on the ratios, the \$800 smartphone offers slightly better value in terms of cost-to-friction ratio (1.14) compared to the \$1,000 smartphone (1.0). This suggests that, in this case, the \$800 smartphone would be a more favorable purchase decision considering the balance between cost and the level of effort required (friction) to achieve the desired nature photography experience while hiking.

Of course, the scores and preferences may differ depending on the individual's specific needs and priorities. The example demonstrates how the cost-to-friction ratio can be used as a subjective measure to guide purchase decisions in the context of nature photography during hiking.

## Corey

Can you use the difference in price between the two phones as the "cost" for both cost-to-friction ratio calculations and see what the difference is?

## ChatGPT

Certainly! Let's adjust the calculation to use the price difference between the two phones as the cost factor for both cost-to-friction ratio calculations. This will allow us to compare the difference in value between the two options. Here's how it would look:

**Cost:** The cost factor will now be the price difference between the two phones. Let's assume that the \$1,000 smartphone is priced at \$200 more than the \$800 smartphone.

**Friction:** We'll use the same friction scores as before, considering the user-friendliness of the camera app, durability, and battery life.

Assigning scores on a scale of 1-10:

- Cost: Both phones have a price difference of \$200, so we can assign the same score of 8 to

represent the cost factor.

- Friction: Using the same scores as before, let's assume the \$800 smartphone receives a friction score of 7, while the \$1,000 smartphone maintains a friction score of 9.

Now, let's calculate the cost-to-friction ratio:

Cost-to-friction ratio (for \$800 smartphone): Cost score (8) divided by Friction score (7) equals 1.14.

Cost-to-friction ratio (for \$1,000 smartphone): Cost score (8) divided by Friction score (9) equals 0.89.

Comparing the two ratios, we can see that the \$800 smartphone still has a higher cost-to-friction ratio (1.14) compared to the \$1,000 smartphone (0.89). This indicates that, even when considering the price difference between the two phones, the \$800 smartphone offers better value in terms of the cost-to-friction ratio.

By factoring in the price difference as the cost, we can observe the relative difference in value between the two options. In this case, the example demonstrates that the \$800 smartphone continues to be the more favorable choice in terms of the cost-to-friction ratio, providing a better balance between the price paid and the level of effort required (friction) for the desired nature photography experience while hiking.

## Corey

I think the friction scoring is backwards, the higher end phone should be lower-friction than the lower end phone, with the tradeoff being that it is more expensive monetarily.

## ChatGPT

Apologies for the confusion. You are correct, the higher-end phone should indeed have lower friction, as it typically offers better features and user experience. Let's adjust the example accordingly:

Cost: The cost factor will still be the price difference between the two phones, with the assumption that the \$1,000 smartphone is priced \$200 more than the \$800 smartphone.

Friction: The friction scores will now reflect the assumption that the higher-end phone has a lower level of friction, considering factors such as better camera app usability, improved durability, and longer battery life.

Assigning scores on a scale of 1-10:

- Cost: Both phones have a price difference of \$200, so we can assign the same score of 8 to represent the cost factor.
- Friction: Let's assume the \$800 smartphone now receives a friction score of 9, while the \$1,000 smartphone has a lower friction score of 7, indicating that it offers a smoother and less cumbersome user experience.

Now, let's calculate the cost-to-friction ratio:

Cost-to-friction ratio (for \$800 smartphone): Cost score (8) divided by Friction score (9) equals 0.89.

Cost-to-friction ratio (for \$1,000 smartphone): Cost score (8) divided by Friction score (7) equals 1.14.

After recalculating with the adjusted friction scores, we find that the cost-to-friction ratio flips. The \$1,000 smartphone now has a higher cost-to-friction ratio (1.14) compared to the \$800 smartphone (0.89). This indicates that the higher-end phone, despite being more expensive monetarily, provides better value for the level of effort required (friction) for the desired nature photography experience while hiking.

By considering the adjusted friction scores and factoring in the price difference as the cost, we can observe the updated difference in value between the two options. In this case, the higher-end \$1,000 smartphone emerges as the more favorable choice based on the cost-to-friction ratio, as it offers superior features and a smoother user experience while still considering the monetary investment.

Corey

How about we use the price difference as the cost, and not a representative 1-10 value. Friction can remain a 1-10 range value.

ChatGPT

Certainly! Let's modify the approach and use the price difference as the cost factor, while keeping the friction scoring on a scale of 1-10. Here's the updated calculation:

**Cost:** The cost factor will be the actual price difference between the two phones, assuming a \$200 price difference between the \$800 and \$1,000 smartphones.

**Friction:** The friction scores will still represent the level of effort or usability of the phones for nature photography during hiking, ranging from 1 to 10.

For example, let's assign the following scores:

- **Cost:** The cost factor will be the \$200 price difference between the two phones.
- **Friction:** Let's assume the \$800 smartphone has a friction score of 7, representing a moderate level of effort required for nature photography while hiking. The \$1,000 smartphone, with its superior features, ease of use, and durability, will have a lower friction score of 3, indicating a smoother user experience.

Now, let's calculate the cost-to-friction ratio:

**Cost-to-friction ratio (for \$800 smartphone):** Cost (\$200) divided by Friction score (7) equals 28.57.

**Cost-to-friction ratio (for \$1,000 smartphone):** Cost (\$200) divided by Friction score (3) equals 66.67.

Based on the updated calculation, the \$800 smartphone has a cost-to-friction ratio of 28.57, while the \$1,000 smartphone has a ratio of 66.67. The higher ratio for the \$1,000 smartphone suggests that, despite the higher cost, it provides better value for the level of effort (friction) required in achieving the desired nature photography experience while hiking.

Using the price difference as the cost factor allows for a direct comparison of the monetary investment between the two phones. Meanwhile, the friction scores provide a relative assessment of the usability and user experience, enabling an evaluation of the trade-off between cost and ease of use.

Please note that the assigned friction scores are subjective and can vary depending on individual preferences and needs. The example showcases how the cost-to-friction ratio can be calculated by incorporating the price difference as the cost factor and friction scores ranging from 1 to 10.

## Corey

Include the explanation of the "Cost-to-Friction Ratio" result as something along the lines of: A score between 0 and 100, where 0 is infinite friction (impossible to complete a given goal with the given product) and 100 is zero friction (almost too easy to complete a given goal with the given product). Comparing the scores of the two products should assist a user in narrowing down the cost of a product versus the value that it brings in the form of efficiency

## ChatGPT

Certainly! Here's an updated explanation of the "Cost-to-Friction Ratio" result, taking into account the score range and its implications:

The "Cost-to-Friction Ratio" is a score that falls within the range of 0 to 100. It serves as a comparative measure to assess the relationship between the cost of a product and the level of friction associated with using that product to achieve a specific goal. The score indicates the balance between the monetary investment and the efficiency or ease of accomplishing the desired goal with the given product.

A score of 0 represents infinite friction, suggesting that it is practically impossible to complete the given goal using the particular product. This indicates a significant mismatch between the product's capabilities and the requirements of the task at hand.

On the other hand, a score of 100 signifies zero friction, implying that the product makes the completion of the given goal almost too easy. It suggests a high level of efficiency and user-friendliness, where the product seamlessly facilitates the achievement of the desired outcome with minimal effort or obstacles.

By comparing the scores of two products using the cost-to-friction ratio, users can better evaluate the cost and value relationship. A higher score indicates a more favorable balance between the cost of the product and the efficiency it brings in accomplishing the desired goal. Conversely, a lower score may indicate a higher level of friction relative to the cost, signaling that the product may not provide optimal value or efficiency for the investment made.

This approach assists users in narrowing down their purchasing decisions by considering the trade-off between cost and the value brought in terms of efficiency and ease of use. It helps users prioritize products that offer a better cost-to-value proposition, considering the specific requirements and goals they aim to achieve.