The Class Index

Intermediate Macroeconomics · Fall 2026 · A semester-long project

What we are doing

Over the semester this class will build and track its own aggregate statistic: an index of **how this class is doing**.

Let's have one for yourself, and one for the class. I have written out one for the class, for that we can vote on the weights. We will have the composite index and track it throughout the semester. Once we decide on the weights, I will work on getting a google form set up for you to fill out each week.

For this class I am curious about what are the input (expenditure) which must be equal to output (grades).

The point is not the number. The point is that **you will have to make every choice that the people who built GDP had to make** — what counts, what does not, how to weight things that are not comparable, what to use as a base period. Those choices are much easier to argue about when they are yours.

The components

	Component	How you report it
1	Hours of sleep	Last night, to the nearest half hour
2	Hours studied for this class	Since our last meeting
3	Questions asked in class (to me or your neighbors)	How many you asked last class
4	Stress level	1 to 10, where **10 is least stressed**

The weights

Each of you will distribute **100 points** across the four components according to how much you think each one matters. We average everyone's allocation, and that average becomes the weight vector. Link to the survey– Link.

Our agreed weights:

Component	Weight
Hours of sleep	______
Hours studied	______
Questions asked	______
Stress (reversed)	______
Total	**100**

The base period

The first reading is set equal to **100** by definition. Every later reading is relative to it.

$$\text{Index}_t = 100 \times \sum_j w_j \cdot \frac{\bar{x}_{j,t}}{\bar{x}_{j,0}}$$

If that looks familiar, it should — it is the same structure as the GDP deflator and the CPI. A weighted average of how much each component has changed since the base period.

Questions to keep in mind as we go

You do not need to answer these now. They will come up.

1. **Which of our four components is an *input* and which is an *output*?** Hours studied is something you put in; a good grade is something you get out. GDP has exactly this problem and solves it by counting only *final* goods. Should our index?
2. **What is missing?** Name one thing that matters enormously to how this class is doing that is not in the index and could not easily be put there. Now ask why GDP does not count housework.
3. **Are the weights right?** They are the average of what twenty people said in one week in September. Would they be the same in November? The CPI basket is updated periodically for exactly this reason.
4. **Is the base period a good one?** Everything is measured relative to one particular week. What if that week was unusual?
5. **What would you do differently if you knew the index was going to be used for something?**

Your weekly reading

Fill this in as we go. Bring it to class.

Week	Sleep	Study hrs	Questions	Stress (1–10)	Index
Sep 8 (base)					**100**
Sep 15					
Sep 22					
Sep 29					
Oct 6					
Oct 8					
Oct 20					
Oct 27					
Nov 3					
Nov 10					
Nov 17					
Dec 1					
Dec 8					

You can come up with your own as well, and track yourself! Decide on your weights! :)

Our agreed weights:

Component	Weight
____________________	______
____________________	______
____________________	______
____________________	______
Total	**100**

Week	_________	_________	________	_________	Index
Sep 8 (base)					**100**
Sep 15					
Sep 22					
Sep 29					
Oct 6					
Oct 8					
Oct 20					
Oct 27					
Nov 3					
Nov 10					
Nov 17					
Dec 1					
Dec 8					