



Photo Narration Assignments in Principles of Macroeconomics Course: From Abstraction to Reality

Introductory macroeconomics students frequently struggle to connect abstract economic models to real-world experiences. Students selected real-world photographs and used them to narrate macroeconomic concepts in a principles macroeconomics course. The assignments were structured with clear formatting rules, citation requirements, and supported analytical depth. This article provides detailed descriptions of each assignment so that instructors can adopt or adapt the approach. The instructor's experience, as well as course assessments, provide evidence suggesting that scaffolded visual assignments (in the form of photo narration) can reinforce student learning outcomes such as macroeconomic literacy, applied reasoning, and student engagement without replacing traditional analytical tools.

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1. Introduction

Principles of macroeconomics presents a persistent instructional challenge. Students encounter abstract concepts such as gross domestic product (GDP) measurement, inflation, unemployment, business cycles, fiscal multipliers, and monetary transmission mechanisms early in their academic careers. These ideas are often introduced through aggregate models, equations, and graphs. While analytically rigorous, such approaches can appear abstract and detached from lived experience. Students frequently ask: *Where do we see GDP? What does inflation look like? How does fiscal policy affect real people?* Traditional problem sets and multiple-choice examinations may assess technical knowledge but do not always require students to translate theory into observable phenomena. Indeed, research suggests that perceptions of the abstract nature of macroeconomics is a factor in high attrition rates in entry-level economics courses (Noble-Calkins & Welki, 2006) contributing to long-term declines in majors (Stock, 2017), despite relatively high demand and earning potential in the profession (Bleemer & Mehta, 2022; Marshall, Underwood, & Hyde, 2024).

While use of images and videos in teaching has been a regular phenomenon in recent times (especially post pandemic), the typical integration of visual images has been one-way and largely passive; i.e. instructors choose visuals that they believe will facilitate learning. Instead, this article describes a semester-long implementation of photo narration assignments in Principles of Macroeconomics course. The core idea is straightforward: students select real-world photographs and use disciplined macroeconomic reasoning to explain how those images illustrate macroeconomic concepts (Freedman & Siegesmund, 2023; Kelley & Cruz, 2026). The photo narration assignments were scaffolded across the semester and aligned with core course content. By combining visual and embodied learning (Clughen, 2024), the focus of the assignment (and related assessments) is not on aesthetics but rather on conceptual precision and application. The integration of similar visual and embodied learning approaches has proven successful in other STEM contexts (Belbase et al., 2022), but the phenomenon has yet to be extensively implemented in the context of economics education (Closs, Mahat, & Imms, 2022) with some notable exceptions. Watts and Christopher (2012) argued that paintings, drawings, and engravings can help students connect economic concepts to visual representations of everyday life, but their work was largely conceptual. Others have conducted classroom studies focused on course assignments that include student-generated photos. Al-Bahrani et al. (2016), for example, describe and evaluate an assignment called the EconSelfie in which students take photos of themselves to strengthen perceptions of personal relevance. Similarly, Moldovan et al. (2026) describe an assignment in which students take photos of locations that are meaningful to them and connect those contexts to economic concepts. To date, however, there are no known examples that assess how students learn to connect visual evidence and macroeconomic reasoning over time through photo elicitation. This paper describes a process for building visual-spatial pedagogies into course design, with the ultimate goal of strengthening students' abilities to navigate between abstract macroeconomic models and real-world economic interpretation.

This essay presents a visual instructional intervention (photo narration) which the authors believe strengthened both higher and lower order thinking skills in the context of an introductory macroeconomics course. What follows is a detailed description of the context in which the teaching activity took place (Section 2), a breakdown of the assignment sequence, expectations, grading structure (Section 3) and, lastly, implementation considerations so that other instructors can adopt this approach in the introductory economics course sequence (Section 4). Grading rubrics are provided in the appendix.

2. The Context

Our small commuter campus at Penn State Lehigh Valley (PSLV) is part of the bigger consortium of Penn State University with a main campus in State College, PA. Our small campus PSLV does not provide Economics Honors Major as an option to students, but is a stepping-stone for the 2+2 program to be completed at the main campus, where students can major in Economics. The three general education courses we teach at the small PSLV campus are Econ 102 (Introduction to Microeconomic Analysis and Policy), Econ 102-555N (Introduction to Macroeconomic Analysis and Policy with a Sustainability lens) and Econ 104 (Introduction to Macroeconomic Analysis and Policy).

Several affordances contributed to the application of this method of teaching and learning in PSLV campus. The campus boasts a recently renovated art gallery, named Ronald K. De Long Gallery, which runs exhibitions of arts and paintings every semester, making it easy to raise student awareness of the importance of arts in one's education journey. The gallery's director Ann Lalik, MFA supports the project directly and has visited the students at least once in every semester to discuss how visual artifacts can be an important source of inspiration to understand disciplines in higher education. The campus also boasts an adjunct art faculty member who is a regular contributor to the Wall Street Journal and the New York Times magazine, where the artist's paintings and cartoons have been featured to explain economic and business phenomena.

Interactions between students and the campus art director in class have led to discussions on how real-world depictions of art are important to convey the impact of macroeconomic phenomena and policies on the economy (Halverson & Sawyer, 2022). Students in Econ 104 have visited the campus art gallery once a semester to discuss the art exhibitions in order to understand the connections between art and real world in various ways. These visits and interactions have led students to appreciate how the real world is often depicted through the arts by artists. This, in turn, has reinforced the connection between how photographs can depict real world applications of macroeconomic phenomena. A more detailed breakdown of the assignment structure follows below.

3. The Assignments

The Assignments section provides a detailed overview of the six photo narration assignments (presented in subsections) that are designed for students to work on through the semester. The rubric for grading each assignment is provided in the Appendix.

Photo narration requires students to select a real-world photograph, identify the macroeconomic concept represented, explain explicitly how the image illustrates the concept, situate the image in a specific time and place, provide proper citation for the image source, and follow structured formatting and word-count requirements. The goal is to require students to articulate the mechanism linking visual evidence to macroeconomic concepts. For example, a photograph of shuttered retail stores during 2020 does not automatically equate to the concept of a recession. Students must explain how reduced consumer spending contributes to GDP contraction, how unemployment rises, and how that fits into the business cycle framework.

Across the semester, the instructor implemented six major assignments. These are as follows:

1. Introductory discussion of scarcity as a foundational macroeconomic concept among peers using photo narration
2. Business Cycle Photo Narration
3. Economic Growth Comparison
4. Midterm Pandemic Macroeconomics (Photo-Only)
5. Final Project: Post-Pandemic Policy Impacts
6. Reflective Evaluation

Each of the six assignments are intended to build upon prior macroeconomic content while increasing in analytical complexity. Detailed assignment descriptions and grading rubrics are included in the appendix.

A. Assignment 1: Scarcity Concept in Macroeconomics

In this assignment, students must select one or more photographs representing the foundational macroeconomic concept of scarcity in the context of the United States economy, and write approximately 50 words explaining how the image selected illustrates scarcity. Students must clearly cite the source of the photograph.

It is important for students to understand the concept of scarcity as the origin of the study of economics. Macroeconomics is no exception, as scarcity of resources in every country gives rise to solving the problem of efficient allocation of resources in a world of scarce resources. In addition, each student responds to two peers' posts, but the peer responses must also connect the original image to the concept of scarcity. This design reinforces scarcity as the foundational economic problem underlying all macroeconomic outcomes and encourages analytical dialogue. By constraining peer comments to scarcity only, the intention is for students to practice reframing diverse macroeconomic phenomena, such as inflation, unemployment, or fiscal policy, through the lens of limited resources and trade-offs.

B. Assignment 2: Business Cycle Photo Narration

We introduced this assignment to students after teaching foundational chapters on GDP and business cycles. The students' task was to select two photographs representing two different states of the economy based on its position on the business cycle; namely: boom, recession, trough, and expansion. They were required to identify the economy and the years of the photos selected, write 30–50 words explaining how each image reflects the specific phase of the business cycle, provide full citation for the image, and respond professionally to a peer's submission (minimum 25 words) in the online learning management system (LMS).

This assignment reinforced the distinction among cyclical phases, application of terminology (boom vs. expansion; recession vs. trough), and early practice connecting macroeconomics vocabulary to observable events. Students commonly selected images of crowded job fairs (expansion), abandoned factories (recession), or robust housing markets (boom). The key learning objective was not the image itself, but whether the explanation correctly described cyclical dynamics. We encouraged students to identify business cycle phases, make clear linkages between image and macroeconomic indicators, employ a professional tone in peer discussions on the platform CANVAS, and finally follow proper citation of the sources of the photos used. This low-stakes assignment established expectations for precision and formatting that carried throughout the semester.

C. Assignment 3: Economic Growth Over Time

We provided this assignment for students to complete after concluding the chapter on economic growth. Students selected two photographs from different historical periods in the United States and explained how the images demonstrated economic growth. Requirements were to identify both years, write at least 100 words in total, cite all images, and submit assignment in approved formats (pdf, docx, ppts). We encouraged students to focus on capital deepening, technological change, infrastructure development, structural transformation, and productivity growth. Typical student submissions included comparisons between early 20th-century manufacturing plants vs. modern automated facilities, rural landscapes versus contemporary urban skylines, or analog retail environments (local markets) versus digital commerce operations or commercial shopping complexes. The key objective was to distinguish long-run growth from short-run cyclical fluctuations.

As we started working with the students on assignments using photo narration, we also took them on a tour of the art gallery on campus where we usually host exhibitions of local artists every semester. The tour of the gallery is usually combined with a briefing from the campus gallery art director on the paintings or the work of art and discussions with the artist (when available). The visits are usually based on availability of the gallery, availability of the art director or the artists, and the course schedule.

D. Assignment 4: Midterm – Pandemic Macroeconomics (Photo-Only)

This was a midterm assessment we assigned. Students selected two macroeconomic concepts covered in class thus far and applied these to the U.S. economy during 2020–2021 using photographs only.

Requirements included to upload a maximum of four photographs total, with no charts or graphs permitted, and a minimum 50-word explanation required per photograph. APA citations for all sources were required, clear photo numbering was required, and use of AI tools was prohibited. The rationale for “photo only” constraint was because students often default to textbook graphs when discussing macroeconomics. By prohibiting charts, the assignment required students to translate graphical logic to written explanation; identify real-world manifestations of macro shocks (booms vs recessions), policies (expansionary fiscal policy vs contractionary fiscal policy), and phenomena (inflation, higher standard of living, economic growth over time, technological progress etc.); and demonstrate understanding without relying on formal diagrams.

Some examples of student selected images and concepts are as follows:

- Unemployment lines to depict depressions or recessions
- empty airports to show COVID-19 generated recession
- stimulus checks depicting a general recession
- vaccine distribution sites as an example of government spending during COVID-19
- crowded restaurants and movie theaters showing an economic boom
- contrasting snapshots of cities in countries over 50 years’ time gap displaying economic growth through technology advancement and infrastructure

- construction of public works (such as roads, railways, bridges, hospitals etc.) to show expansionary fiscal policy
- firing of government personnel showing the contraction of government spending
- wars to depict increased government spending.

Strong submissions explained how lockdown policies during COVID-19 reduced aggregate demand, increased unemployment, and triggered expansionary fiscal and monetary responses. This assignment served as a substantive content assessment while preserving the visual narration framework.

E. Assignment 5: Final Project – Macroeconomic Policy Impact on the 2008 Financial Crisis

At the end of the semester, students completed an individual take-home final project designed to synthesize their cumulative understanding of macroeconomic concepts and policies through visual analysis. In this assignment, students examined the 2008 U.S. financial crisis using photographs as analytical evidence. Students were required to select six to eight photographs from credible sources (examples of sources were provided to them with the help of reference librarian on campus) that captured major macroeconomic conditions during and after the crisis including, but not limited to, unemployment, GDP contraction, financial market instability, business cycle dynamics, and the role of fiscal and monetary policy responses.

For each photograph, students provided a brief explanation describing why the image was selected and how it represented a macroeconomic concept or policy outcome observed during the crisis. Students then developed a written macroeconomic analysis interpreting the selected images in light of the economic conditions of the period. This required them to connect visual evidence to concepts studied in the course such as recession, financial institutions, consumption, investment, business cycles, government intervention, fiscal policy, and monetary policy responses.

Finally, students completed a short reflective essay describing how the visual approach influenced their understanding of macroeconomic policies in the context of the 2008 financial crisis and the challenges they encountered through photographs. The project encouraged students to apply course concepts to a real historical episode while strengthening their ability to interpret macro-economic phenomena in a real-world context.

F. Assignment 6: Reflective Evaluation

In the final week, students wrote at least 50 words reflecting on whether photo narration helped them understand macroeconomics. This assignment was graded on completion only. Prompts encouraged students to discuss what they learned, what they enjoyed, what they found challenging, and whether their perception of economics changed. The reflective component provided insight into student engagement and allowed for instructional adjustment.

4. Observations from Classroom Experience

The first time the assignments were offered, the instructor did not know what to expect from the students. Initially, it was observed that students tended to rely heavily on microeconomics based terminology, such as demand and supply, which is perhaps to be expected as Econ 104 is often a natural progression from Econ 102 where the microeconomic concepts are taught. However, over time macro-specific language (GDP, inflation, business cycle, investment) became more common.

Through their written reports, the instructor observed that students exhibited stronger contextual awareness of policy impacts. Some students preferred integrating graphs alongside images, suggesting visual narration works best as a complement to traditional tools. The assignments did not replace lectures or quantitative exercises. Instead, they reinforced conceptual understanding through application. Overall, the instructor observed that students seem to respond positively to the integration of visual images and exhibited higher levels of engagement with course content, even when photos were not being used.

The students seemed to agree with the instructor's perceptions. To illustrate this, we offer a few examples of student feedback (shared with informed consent and IRB approval). One student noted, *"Photos of war-torn Ukraine made concepts like GDP decline, inflation, and government spending more relatable."* Another student mentioned, *"[The photos] helped me reflect on my progress and realize how much more confident I am now with macroeconomic terms and concepts."* One more student reflected, *"It was challenging because it forced me to think about macro in a way I hadn't done before."* The authors conducted a more systematic evaluation of these responses (published elsewhere) which affirms that these examples are broadly representative of the student response.

The Grading Challenge

The broader literature on using visual pedagogies, such as photo narration, affirms that grading such assignments can be challenging, especially in fields such as economics in which faculty are not usually trained in the evaluation of visual images (outside of data visualizations). For this reason, it is tempting to rely solely on the students' written explanations of their selections, but this approach overlooks the richness of visual communication. The best practices in photo narration emphasize a balanced approach between image and text. It should be noted (and conveyed to students) that images are not graded for their artistic merit but rather serve as evidence of visual reasoning. Once an instructor has gained some experience with evaluating this kind of thinking, our experience suggests that it is possible to assess these assignments efficiently, with the time required comparable to more conventional writing assignments

A related challenge is the sheer number of assignments. While the class size for this case study is relatively modest (a maximum of 48 students per semester), the integration of six assignments in addition to examinations has the potential to greatly increase teaching load. To lessen the load, there are a number of technological tools, such as Padlet™, that make it easier for students to upload images, and instructors to access them, straight from their smartphones or tablets. It is also possible to make the assignments formative, which could then be graded for completeness rather than content. Lastly, we used six assignments in this course, but we simply do not know if there is a required minimum, or threshold, of assignments to reach the desired outcomes. We did see evidence that having multiple assignments spaced out over time produces stronger effects, but it is possible that similar outcomes could be generated with only three or four photo narration exercises.

Lastly, there are ethical considerations. Current trends show that students do upload AI generated images. Instructions should clearly indicate the extent of which instructors will permit the use of generative AI tools in either the visual or written portions of the assignment. For this reason, we made validating photo authenticity a required component of the grading rubric. There is also a risk of copyright infringement. Instructors will need to establish guidelines that enable students to appropriately cite and select the images that they use in their assignments.

5. Conclusion

Photo narration assignments provide a structured way for students to see macroeconomics in the world around them. By repeatedly asking students to connect visual evidence to formal economic reasoning, we, as instructors, can deepen their conceptual understanding while preserving analytical rigor.

The scaffolded design described here is modular and adaptable across many subfields of economics. It is especially well suited for courses that focus on conceptual understanding of abstract concepts. Instructors may choose to implement individual assignments or adopt the full sequence. While this instructor utilized photos for the course assignments, it may be possible to use other visual modalities, such as videos, infographics, or works of art, to facilitate similar learning outcomes. The key is not the type of visual being used, but rather how visual literacy and reasoning is applied and extended. Regardless of the specific medium, clear expectations, citation requirements, and grading rubrics are essential for maintaining disciplinary standards.

In a field often perceived as abstract and model-driven, structured visual narration offers an alternative pathway to student engagement. Our experience suggests that visual assignments serve to situate macroeconomics within economic reality while strengthening students' abilities to articulate economic mechanisms with precision as they become relatable to real world lived experiences around them.

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Appendix

Assignment 1: Scarcity Concept in Macroeconomics

Using photo/s (cite the source clearly), explain the macroeconomic concept of **scarcity** in relevance to the USA. Write about 50 words about the photo and then reply to posts from two peers (one post each), making comments on their posts while relating the photos they have selected to **scarcity**. Your comments should address how your peers have addressed scarcity through the photos as an economic concept in the context of the US economy. This assignment will be graded on completion as part of in-class assignments. You will score full points if you complete this assignment following the instructions. (10 points)

This was an in-class assignment.

Assignment 2: Business Cycle Photo Narration

Provide two photos on any two of the states of the economy— i.e. boom, recession, trough, and/ or expansion— in the context of any economy (any country of your choice). Explain why and how the photos exhibit the two states you claim they represent. Name the economy (country) you are writing about and the years when each of the photos were taken. Write your post in at least 30-50 words. Provide sources of the photos. Now, reply to one post of a peer commenting on their photo choices and explanations. Be professional in your post replies. Comment on how the states of the economy were explained by the photos selected. Your reply should be at least 25 words. This assignment will be graded on completion if you follow all the above instructions correctly. (10 points)

This was an in-class assignment.

Assignment 3: Economic Growth Over Time

This is a team based in-class assignment. Work within your team to choose a country and find two photos— one from at least 30 years ago and one from within the past two years. Now write what you see in the pictures and what you think has happened in terms of economic growth in your country of choice. Write at least 100 words describing the two photos. Cite the images clearly. Make sure to submit the assignments in clear format (.pdf, .docx, ppts). Think of structural transformation, productivity growth and capital deepening along with technological improvements in your country of choice when you discuss economic growth within your country over the three decades. You should be able to identify the long run implications of growth and not focus on short term business fluctuations (which we have discussed in class earlier). You will get 10 points for this in-class assignment if you fulfil all instructions above. All members of each team will receive the same points. Please note that you need to carefully write your team's name and member names on your submission on CANVAS to receive your points for this assignment (10 points).

This was an in-class assignment.

Assignment 4: Midterm – Pandemic Macroeconomics (Photo-Only) and rubric for assessment

Narrate the impact of macroeconomic policies (fiscal and/or monetary) on **three** macroeconomic variables you have studied in this course so far (such as inflation, unemployment, GDP, GDP per capita, consumption, investment, exports, imports, business cycles, economic growth, and/or any other) on the US economy in the post-pandemic period using photos only and no data.

Follow the guidelines below:

- You will need a title for your project which should be mentioned at the beginning.
- You will need **at least three photos** to describe each macro-economic variable you discuss.
- You must identify which policy you are discussing (fiscal and/or monetary).
- Your photos must be numbered and the source/s of each photo/s must be included at the bottom of each photo.
- You may not use AI for the assignment. Use of AI will lead to loss of points.
- This can be submitted as a .docx or .pdf file.

Macroeconomics Photo-Narration Midterm Exam Rubric (Total = 15 Points)

This rubric evaluates how effectively students use real-world photos to explain the impact of fiscal and/or monetary policy on three macroeconomic variables in the post-pandemic U.S. economy.

The midterm exam project was evaluated using several criteria to ensure clarity, conceptual accuracy, and proper documentation. Students were first assessed on the title and organization of the project (2 points), where a clear and relevant title and a well-structured presentation of variables and photos received full credit, while missing titles or poorly organized submissions received fewer points. The rubric also evaluated students' identification of macroeconomic policy (3 points), requiring a clear recognition of fiscal and/or monetary policy and its relevance to the post-pandemic economic context.

Students were further graded on their selection of three macroeconomic variables (4 points), ensuring that each variable was correctly identified and represented through appropriate photographs. The quality and relevance of the photographs (3 points) were also assessed, requiring at least three photos per variable that clearly illustrated real-world economic situations. In addition, students were evaluated on the explanation of the policy transmission mechanism (2 points), where captions needed to clearly describe how policy actions influenced economic behavior and macroeconomic outcomes. Finally, projects were graded on photo numbering and source citation (1 point), ensuring that all photographs were properly numbered and sources clearly cited beneath each image.

Assignment 5: Final Project – 2008 Financial Crisis Photo Narration Project

This assignment aims to help students apply the concepts of macroeconomics and policy studied in course Econ 104 (Macroeconomic Analysis and Policy) to real world scenarios using the visual medium of photos. The Financial Crisis shocked not only the USA, but also created repercussions throughout the globe. The main purpose of the assignment is for students to identify the macroeconomic conditions and policy in the USA during the 2008 crisis through use of photos. Students should also be able to express their understanding and application of the main concepts of macroeconomics and macroeconomic policies through a descriptive analysis of the photos they select for their assignment. The idea behind this unique approach is to cultivate their inner artist and their general interest of using photos and videos as a medium of communication among peers on social media platforms. The assignment is aimed at encouraging them to be creative during their exploration of photos related to the crisis and to relate what they see in the photos to macroeconomic concepts they have studied. Students

are encouraged to critically analyze the photos in the context of the crisis. Finally, students should also strive to critically evaluate the impact of macroeconomic policies in the aftermath of the 2008 crisis using photos.

Learning outcomes

- Identify major macroeconomic variables and policies and their impact studied in the course through photos covering the US financial crisis of 2008.
- Apply understanding of concepts and policies learned in the course to real world situations during and following the US financial crisis.
- Become lifelong learners in the process of evaluating the BIG picture of how macroeconomics and macroeconomic policies affect the real world.

PROJECT

Having students look at photos of the 2007-2008 US financial crisis. Some sources for photos:

- https://www.washingtonpost.com/business/photos-of-scenes-fromthe-2007-global-financial-crisis/2018/03/05/aa67cd28-207f-11e8-94da-ebf9d112159c_gallery.html
- <https://www.stephenmclaren.co.uk/the-crash>
- <https://www.theatlantic.com/photo/2011/09/occupy-wallstreet/100159/>
- https://www.google.com/search?client=firefox-b-1-d&sca_esv=a930a3196aed2650&q=occupy+wall+street+protest+signs&tbm=isch&source=lnms&sa=X&ved=2ahUKEwjO1u2Ct7-EAxX6F2IAHap6DuAQ0pQJegQICxAB&biw=1266&bih=906&dpr=1

Possible readings/viewings to reflect on:

- https://www.pbs.org/newshour/show/how-the-2008-financial-crisis-crashed-the-economy-and-changed-the-world?utm_source=chatgpt.com
- <https://www.vanityfair.com/news/2008/02/occupy-wall-street-200802>
- <https://www.creativereview.co.uk/the-crash-a-chilling-look-back-at-the-global-financial-crisis/>
- Any other credible sources students may find

Assignment Title: Macroeconomic Analysis and Policy of the 2008 US Financial Crisis Through Photography

Assignment Instructions:

In this assignment, you will explore macroeconomic concepts including, but not limited to, the concepts of unemployment, business cycles, economic growth, gross domestic product (GDP), inflation, monetary policy, fiscal policy, financial institutions, markets, property rights, rule of law, fiscal policy, monetary policy, and any other that you have studied in the course Econ 104 (Macroeconomic Analysis and Policy) during the period following the US financial crisis of 2008 through the visual lens of photos. This assignment aims to help you understand how these concepts manifested during the financial crisis and to develop your ability to identify and interpret real-world economic indicators and policies and their impact.

Task 1: Photo Selection

- Find 6-8 photos from the 2007-2008 period that you believe capture significant macroeconomic events and policies and their effects of the US financial crisis.
- Photos selected must be a mix of the concepts, policies, and impacts. These photos can be sourced from reputable websites, historical archives, news outlets, or academic resources.
- Provide a brief description for each photo, explaining why you chose it and how it relates to a specific macroeconomic concept and policy. PLEASE NOTE THAT YOU MUST SELECT A MINIMUM OF 6 AND A MAX OF 8 PHOTOS.
- Word count: at least 200 words.
- You can present your assignment as a file such as PPT, word, video presentation or any other.
- This assignment will be graded on completion if you follow all instructions as above. (10 points)

Task 2: Macroeconomic Analysis

- For each photo, identify and analyze the macroeconomic concept, the policy, or impact of a policy it represents. This could include discussing the impact on unemployment, GDP, business cycles, consumer behavior, any other relevant macroeconomic factor or monetary and/or fiscal policy and impacts.
- Use your understanding of macroeconomics and macroeconomic policies to interpret the photos in the context of the 2007-2008 US financial crisis.
- Word count: at least 300 words.
- This assignment will be graded on completion if you follow all instructions as above. (10 points)

Task 3: Written Reflection

- Write a reflective essay summarizing your findings and insights from the photo analysis.
- Discuss how the visual representations enhanced your understanding of macroeconomic concepts and their real-world implications during a major economic downturn.
- What challenges did you face during the completion of the assignment? Discuss any suggestions you may have for improving the experience of the students in the future.
- Word count: at least 100 words.
- This assignment will be graded on completion if you follow all instructions as above. (5 points)

Sources for Finding Photos

You can find photos related to the 2008 financial crisis from the following sources:

1. Library of Congress - <https://www.loc.gov/>
2. The New York Times Archives - <https://www.nytimes.com/section/business/economy>
3. National Archives - <https://www.archives.gov/>
4. Getty Images - <https://www.gettyimages.com/>
5. Bloomberg - <https://www.bloomberg.com/>
6. Stephen McLaren Photography - <https://www.stephenmclaren.co.uk/the-crash>
7. The Atlantic - <https://www.theatlantic.com/photo/2011/09/occupy-wall-street/100159/>
8. The Christian Science Monitor - [https://www.csmonitor.com/Photo-Galleries/In-Pictures/Best-signs-of-Occupy-Wall-Street-protests/\(photo\)/393535](https://www.csmonitor.com/Photo-Galleries/In-Pictures/Best-signs-of-Occupy-Wall-Street-protests/(photo)/393535)

Submission Guidelines

- Submit your selected photos with descriptions and analysis in a single document (Word/PDF) and upload on CANVAS assignment page (Final Take Home Exam).
- Ensure that your analysis is well-referenced and includes proper citations for the sources of the photos in APA format.

This assignment will not only test your knowledge of macroeconomics but also enhance your critical thinking and analytical skills. If you have any questions or need further guidance, feel free to reach out to me.

Good luck!

Rubric of final project assessment

The final individual project was graded out of 25 points and consisted of three components: (1) photo selection and description (10 points), where students identified and explained six to eight images representing macroeconomic events during the 2008 US financial crisis; (2) macroeconomic analysis (10 points), where students interpreted the selected images using concepts such as unemployment, GDP, business cycles, and macroeconomic policy responses; and (3) reflective writing (5 points), where students evaluated how the visual approach influenced their understanding of macroeconomic events and concepts in this final assignment.

Assignment 6: Reflective Evaluation at the End of the Course

Write in no more than 100 words, with example/s, explaining how the application of photo narration in this course has helped you to understand macroeconomics. Give your honest opinion. Feel free to mention if, when, and how it has helped you, if it has not helped you and why, or if you have another opinion. **Your candid opinion will not affect your grade at all.** This assignment will be graded on completion. (5 points)