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Practice Set 7

Macroeconomic Aggregates & Global Inequality

This set contains problems for your own practice. It is highly recommended to work on the problems on your own. Do not just read the provided solutions. Instead, try to solve the problems and use the solutions only when you cannot continue on your own. Reading problems that someone else has solved has the same value for your preparation like watching someone else running a marathon on TV and then expecting to be able to run it, too. If you have questions on this set, please ask your section's teaching assistant.

1. Explain under what theoretical circumstances different GDP can be calculated under the production, the income and the expenditure approach.
2. This year, company A produced a jackhammer and locally sold it for \$1K to company B who used it up entirely in the production of a house valued at \$500K. Explain how it is possible that the jackhammer *is not* a part of GDP because it is not a final good but *it is* part of investment (I), which *is* a component of GDP, and it *will bring* income to the seller, which *also is* a component of GDP.
3. Firm A imports from abroad raw materials valued at \$2,000 and produces goods of value \$7,000. Firm B buys those goods, processes them and sells them to firm C for \$12,000. Firm C retails those goods for \$15,000. How much GDP was produced in this scenario?
4. A Singaporean consumer orders a vacuum cleaner from China for \$40, including shipping. The Chinese seller pays a Singaporean company \$5 for handling the online sale and the delivery.
   (a) How is this transaction going to affect the Singapore's national income accounts of *production*?
   (b) How is this transaction going to affect the Singapore's national income accounts of *expenditure*?
   (c) How is this transaction going to affect the Singapore's national income accounts of *income*?
   (d) Does this transaction cause GDP to change by a different amount from each of its three sides (production, expenditure, income)?
5. In 2012, Mr. Chung bought a Toyota Corolla for 16,000 dollars. Yesterday, he sold it to Ms. Ong for 9,000 dollars. What change did yesterday's transaction cause to GDP?
6. An economy produces only one good the price and quantity of which evolved as:

Year	*2015*	*2016*	*2017*	*2018*
Price	*10*	*11*	*14*	*12*
Quantity	*100*	*105*	*95*	*122*

   (a) Calculate *real GDP* for all 4 years using 2015 as the base year.
   (b) Calculate real GDP for all 4 years using 2018 as the base year.
   (c) Calculate percentage change in *nominal GDP* from 2015 to 2016.
   (d) Calculate percentage change in *real GDP* (base year 2015) from 2015 to 2016.
   (e) Compare your results in (c) and (d) and explain the reason for the difference.
7. Explain how a product, the production of which causes a positive externality, may have a negative effect on the GDP.