

## Homework 7 – KEY

Average: 78.46 + Opts GI bonus

Due on 17/10/2023, by 23:00

This assignment is optional but STRONGLY RECOMMENDED. If you do not submit the answers till the deadline, the score of your final exam will substitute for the score for this assignment. Submit only the correct letter for each task on eLearn under 'Quizzes' within 'COR2100-Economics and Society G7-8-26-49'. Note that the actual text of questions and answers is not supposed to appear on the eLearn quiz. You have unlimited attempts. The system is programmed to credit your last attempt. Be informed that if you submit an attempt and afterwards you re-open the quiz, you must submit your answers AGAIN. Otherwise, the system will grade the unfinished attempt with 0 (because it is the last one) and there is NOTHING I can do to fix this after the fact. Late homework or homework submitted outside eLearn cannot be accepted as this would violate SMU official policy for fairness and transparency in grading. This assignment is protected by Grade Insurance™: If the assignment's average turns out to be below 75, an equal amount of bonus points will be given to every work, for the average to become 75. Direct any homework questions to your TA.

1. Which of the following is likely to increase "GDP per capita" in Canada?

- 25%A. An increase in the number of high skilled workers immigrating to Canada from USA.
- B. An increase in the number of low skilled workers immigrating to Canada from USA.
- 63%C. **Both A and B.**
- 11%D. None of the above.

*[Both low and high skilled workforce has positive impact on "GDP per capita", since it covers part of the gap left by the percentage of the population that is not working]*

2. Which of the following is most likely to increase "GDP per worker" in Canada?

- 79%A. **An increase in the number of high skilled workers immigrating to Canada from USA.**
- B. An increase in the number of low skilled workers immigrating to Canada from USA.
- 14%C. Both A and B.
- D. None of the above.

*[Low skilled workers will decrease the average productivity in Canada, which means that GDP per worker will decrease. On the contrary, high skilled workers will increase the average productivity]*

3. Which of the following is part of  $G$ , according to National Income Accounts?

- 12%A. The purchase by the government of used medical equipment from private local hospitals. *[This equipment has been part of the GDP the year it was produced]*
- B. Military retiree's pensions. *[It is a transfer payment]*
- C. The private funding of scientific research conducted by a public university. *[This is not government's expenditure]*
- 84%D. **The cost of providing public education.** *[Includes all goods and services purchased by the government in order to provide public education]*

**Table 7.1**

Consumption Expenditure	\$350 billion	Imports	\$70 billion
Investment	\$200 billion	Government Spending	\$150 billion
Corporate After-tax Profits	\$330 billion	Net Exports	-\$50 billion
Wages and Salaries	\$90 billion	Transfer Payments	\$30 billion

4✓ Refer to table 7.1. How much is the country's GDP?

- A. Around \$400 billion.
- B. Around \$450 billion.
- C. Around \$500 billion.
- D. Around \$550 billion.
- 10%E. Around \$600 billion.
- 88%F. **Around \$650 billion.**
- G. Around \$700 billion.
- H. Around \$750 billion.

*[We have all information needed to use the formula  $Y = C + I + G + (X - M) = 350 + 200 + 150 - 50 = \$650$  billion. Note that  $G$  does not include transfer payments, while corporate profits and wages and salaries are not a part of GDP from the side of aggregate expenditure]*

5 Which of the following could be a reason why the increase in nominal GDP may overstate the actual citizens' well-being?

- A. Inequality. *[When there is inequality, it is possible that some citizens take all the benefit from the increase in GDP and others take only the cost]*
- 23%B. Increase in cost of living. *[It is possible that nominal GDP appears increased only because prices have risen]*
- 73%C. **Both A and B.**
- D. None of the above.

6 Which of the following could be a reason why a low real GDP understates the actual citizens' well-being?

- A. Real GDP includes the value of illegal goods and services. *[It does not]*
- 36%B. Real GDP includes the value of goods and services that are used to repair damage caused by wars or conflicts. *[This is actually a reason why real GDP overstates well-being]*
- C. Real GDP accounts for negative externalities such as deforestation. *[It does not]*
- 57%D. **Real GDP does not include barter transactions.** *[Since they are not recorded as official transactions, they cannot be counted in GDP even if they have a positive impact in well-being]*

7✓ Which of the following could possibly be associated with an increase in the price level and at the same time a decrease in the total quantity of final goods and services produced?

- A. Increase in both nominal and real GDP.
- 85%B. **Increase in nominal GDP and decrease in real GDP.**
- C. Decrease in nominal GDP and increase in real GDP.
- 12%D. All of the above are possible outcomes.

*[Since the quantity of final goods and services produced is reduced, real GDP has fallen. However, if the increase in price level is bigger than the reduction in production, nominal GDP can be ramped-up]*

8.) Which of the following is NOT a final good?

- 66%A. A new projector procured by SMU. *[It is an intermediate good, since it will become part of SMU's equipment in order for the latter to offer its services]*
- B. A textbook bought by a student. *[Purchased for consumption]*
- C. A self-improvement book bought by a professor. *[Purchased for consumption]*
- 24%D. A new house bought by the provost of SMU. *[Purchased for consumption]*

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**Scenario 7.1:** Assume that Augusto, a Brazilian who owns a cotton farm in Sao Paolo, sells cotton to Felipe, an Argentinian textile manufacturer who operates in Mexico, at the price of \$10,000. Felipe processes the cotton, makes t-shirts and sells them to its two customers as follows: \$15,000 worth of t-shirts to Santiago, a Mexican shop owner who operates in his country and \$20,000 worth of t-shirts to Martina, an Argentinian craftswoman who owns a cottage industry store in Brazil. Santiago sells the t-shirts and his net profit is \$5,000, while Martina prints customized stamps on the t-shirts and sells them for \$30,000.

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9.) According to scenario 7.1, the activities described have increased Brazil's GDP by how much?

- A. Around \$0.
- B. Around \$5,000.
- C. Around \$10,000.
- D. Around \$15,000.
- 66%E. Around \$20,000.
- F. Around \$25,000.
- 22%G. Around \$30,000.
- H. Around \$35,000.

*[Brazil's GDP is affected by Augusto's revenue of \$10,000 and Martina's added value of 30,000 – 20,000 = \$10,000. So, Brazil's GDP is increased by 10,000 + 10,000 = \$20,000]*

10.) According to scenario 7.1, the activities described have increased Mexico's GDP by how much?

- A. Around \$0.
- B. Around \$5,000.
- C. Around \$10,000.
- D. Around \$15,000.
- 18%E. Around \$20,000.
- F. Around \$25,000.
- 53%G. Around \$30,000.
- H. Around \$35,000.

*[Mexico's GDP is affected by Felipe's added value of 15,000 + 20,000 – 10,000 = \$25,000 and Santiago's net profit of \$5,000. So, Mexico's GDP is increased by 25,000 + 5,000 = \$30,000]*

11.✓ According to scenario 7.1, the activities described have increased Argentina's GDP by how much?

- 97%A. Around \$0.
- B. Around \$5,000.
- C. Around \$10,000.
- D. Around \$15,000.
- E. Around \$20,000.
- F. Around \$25,000.
- G. Around \$30,000.
- H. Around \$35,000.

*[Argentina's GDP has remained unchanged, since none of the activities described takes place within its borders]*

12. ✓ According to scenario 7.1, the activities described have increased Brazil's GNP by how much?

- A. Around \$0.
- B. Around \$5,000.
- 84% C. **Around \$10,000.**
- D. Around \$15,000.
- E. Around \$20,000.
- F. Around \$25,000.
- G. Around \$30,000.
- H. Around \$35,000.

*[Brazil's GNP is affected only by Augusto's revenue of \$10,000]*

13. According to scenario 7.1, the activities described have increased Mexico's GNP by how much?

- A. Around \$0.
- 69% B. **Around \$5,000.**
- C. Around \$10,000.
- D. Around \$15,000.
- 14% E. Around \$20,000.
- F. Around \$25,000.
- G. Around \$30,000.
- H. Around \$35,000.

*[Mexico's GNP is affected only by Santiago's added value of \$5,000]*

14. According to scenario 7.1, the activities described have increased Argentina's GNP by how much?

- A. Around \$0.
- B. Around \$5,000.
- C. Around \$10,000.
- D. Around \$15,000.
- E. Around \$20,000.
- F. Around \$25,000.
- 13% G. Around \$30,000.
- 71% H. **Around \$35,000.**

*[Argentina's GNP is affected by Felipe's added value of  $15,000 + 20,000 - 10,000 = \$25,000$  and Martina's added value of  $30,000 - 20,000 = \$10,000$ . So, Argentina's GNP is increased by  $25,000 + 10,000 = \$35,000$ ]*

15. ✓ Two countries have the same GDP per capita in a particular year, but country A has a larger population than country B. If country A's GDP per worker is lower than country B's, which of the following is most likely true?

- 78% A. **Country A has more workers than country B.**
- B. Country A has less workers than country B.
- C. The two countries have the same number of workers.
- 13% D. We do not have sufficient information to compare the number of workers in the two countries.

*[Let  $N_A$  to be the population of country A and  $w_A$  the number of workers. The analogous notation holds for country B. We are told that  $\frac{GDP_A}{N_A} = \frac{GDP_B}{N_B}$  and  $N_A > N_B$ , which entail that  $GDP_A > GDP_B$ .*

*Then,  $\frac{GDP_A}{w_A} < \frac{GDP_B}{w_B}$  means that  $w_A > w_B$ ]*

16. ✓ Which of the following is included in GDP?

- A. Illegal drugs' trade. *[Since it will not be recorded in an official transaction, it cannot be counted in GDP]*
- 90% B. **Expenditures by nonprofit organizations.** *[Must be included in Investment]*
- C. The value of household goods produced for own consumption. *[Since it will not be recorded in an official transaction, it cannot be counted in GDP]*
- D. The loss of value of equipment because of wear and tear. *[Depreciation is not counted in GDP]*

17. ✓ Which of the following is excluded from GDP?

- A. Government spending. *[Must be included in G]*
- B. The total value of final goods sold. *[This is what GDP measures]*
- C. The construction of a new house. *[Must be included in investment]*
- 95% D. **The value of used goods sold.** *[These goods have been included in the GDP of the year they were produced]*

18. The Singaporean government buys 50 Tomahawk cruise missiles from a US manufacturer for \$200M. Which of the following is true for the National Accounts of Singapore?

- A. The transaction does not increase GDP.
- 16% B. The transaction increases *M* by \$200M.
- 23% C. The transaction increases *G* by \$200M.
- 51% D. **All of the above.**
- E. None of the above.  
*[G increases by \$200M but this is cancelled by the increase in M by also \$200M, because M enters the calculation of GDP with a negative sign. Thus, the GDP does not change (as nothing was actually produced in Singapore)]*

19. ✓ Which of the following is part of *I*, according to National Income Accounts?

- A. The purchase of a new laptop by a family. *[This is part of consumption]*
- 96% B. **An increase in inventories held by businesses.** *[As explained in the lecture, this is by definition included in investment]*
- C. The purchase of stocks by an individual. *[This is existing capital that was sold from one individual to another]*
- D. The value of an existing commercial building purchased by a real estate investor. *[The value of the building has been part of the GDP the year it was constructed]*

20. ✓ A local car manufacturer produced \$1 million worth of cars in 2021. However, due to a decrease in demand, only \$600,000 worth of cars were sold in 2021 and the remaining \$400,000 worth of cars were sold in 2022. What is the contribution of 2021's car production by the manufacturer to the country's GDP in 2021?

- A. Around \$400K.
- B. Around \$600K.
- 88% C. **Around \$1 million.**
- D. Around \$1.6 million.  
*[Even when some goods are not sold within the year, their value will be registered as inventory and be written as expenditure by the firm]*