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Macroeconomic Project

**410-CS4-AS MACROECONOMICS**

**Gr. 08374**

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1. **Go to** [**www.fin.gc.ca**](http://www.fin.gc.ca) **and select the budget for Budget 2016. Summarize in bullet point format (half a page) the key elements.    (10 points)**

* **Middle Class**
* **Canada child benefit** that gives more money to Canadian families for helping them to raise their children
* **Canada Student Loans Program** that will make student could afford more on post-secondary education
* **Improving employment insurance** to help people who lose the jobs.
* **Investing in skills and training** further improvement of quality of labor market in Canada
* **Invest in public transit systems** up to $3,4 billion.
* **Investing $5.0 billion in green infrastructure** for providing a more healthy and productive place for people to live, and it will also help with climate change.
* **Building stronger communities** by investing in social infrastructure through providing more affordable housing and child care.
* **Revitalizing federal public infrastructure** across Canadainclude water infrastructure in Saskatchewan, Rail service, and Ferry Services in Atlantic Canada
* **Indigenous peoples**
* Improve first nations’ s living standard
* Give them financial supporting
* **Clean technology**
* Clean energy
* Developing cleaner oil and gas technologies
* Adapt Climate change and reduce air pollution
* Protect and restore Canada’s natural heritage such as marine, ocean and freshwater
* **Inclusive and fair Canada**
* Improve old people’s life quality
* Give support to Veterans
* Improve health care system
* Improve the justice system
* Invest in arts and culture
* Improve public safety
* **To the world**
* International assistance
* Increase immigration

1. **Go to** [**www.fin.gc.ca**](http://www.fin.gc.ca) **and click on:**

**a.The fiscal monitor. Summarize the information for the last period (compare April-May-June- July 2016 to the same periods of 2015).     (5 points)**

**b.Your tax dollar goes. Summarize in bullet point the main elements of last fiscal year 2016.     (5 points)**

a.)

* There was a budgetary **deficit** of $1.8 billion in **July 2016**, compared to a **surplus** of $0.2 billion in **July 2015**.
* With a budgetary **deficit** of $2.8 billion and a requirement of $14.6 billion from non-budgetary transactions, there was a financial requirement of $17.4 billion for the **April to July 2016** period, compared to a financial requirement of $14.2 billion for the **same period the previous year.**
* For the **April to July 2016** period of the 2016–17 fiscal years, the Government posted a budgetary **deficit** of $2.8 billion, compared to a **surplus** of $5.2 billion reported in the **same period of 2015**–16.
* **Transaction**
* For the budgetary transactions, the cash balance at the end of period( April- July, 2015) is $3826 million, and increase to $47303 million at the end of period(April- July, 2016)
* **Revenues**
* Total revenues in April to July in 2015 is $97,171 million, and $94,890 in the same period in 2016. The percentage of change is -2.3%
* **Expenses**
* The total expenses in 2015 April to July is $92,010 million, and $97,649 in same period in 2016. The percentage change is 6.1%
* **Budgetary balance and Financial source/requirement**
* The financial source/ requirement in 2015 April to July is $-14240 million, and $-17360 in same period in 2016.
* **Financial source/requirement and net financing activities**
* Net change in financing activities and change in cash balance in 2015 April to July are $24,515 million and $10,275 million; in same period in 2016, they are and $26,818 and. $9,458 million.

b) Where your tax dollars go?

-22% for health care

-20% for defense

- 20% for social security

-13% for safety net

- 7% for federal retirees

- 4% for other

-3%for transportation

-2% for science research

-1% for international

1. **Go to** [**http://www.bankofcanada.ca/**](http://www.bankofcanada.ca/) **and click on bank notes**
   1. **Click on counterfeiting prevention**
   2. **View security features**
   3. **Choose three Canadian bills and three American bills and write a text to a friend explaining to him/her how to spot a counterfeit note.           (10 points)**

**Three Canadian bills:**

* **$5**:The portrait of the $5 is Sir Wilfrid Laurier (Prime Minister, 1896-1911). The smaller metallic portrait of Laurier in the large window of the $5 note was colourized for adaptation as a holographic feature. Feel the raised ink on the large number. Look at the frosted maple leaf window to see its transparent outline. Feel the raised ink on the words "Banque du Canada" and "Bank of Canada". Look at the metallic building. Tilt to see it change color. Flip to see it on the other side.  Look at the numbers that match the note’s value and at the word "Canada" that feels slightly raised. Look for maple leaves that border and cross into the large window.
* **$100**: In the big window of the $ 100 bill, Borden's smaller metal portraits are colored to fit as holographic features. The image of ECG at the back of $100 symbolizes Canada's contribution to heart health, including John Hopper's pacemaker invented in 1950. The electrocardiogram shown here shows the pattern type consistent with the healthy human heart.
* **$20**: The portrait on $20 is Queen Elizabeth II. Up to 92 meters high Peace Tower is the last part of the central parliament building. Canadian architects John A. Pearson and Jean-Omer Marchand British Gothic revival of the design of the tower in 1928 in the Armistice Day (now known as for the anniversary). It was named the Peace Tower to commemorate thousands of Canadians who sacrificed their lives during the First World War. The monument is decorated with 20 allegorical characters. There is a group called "Chorus". They represent the virtues of peace, justice, hope, charity, faith, honor, truth and knowledge. With the torch upward stretch, peace is the highest figure on the monument.

**American bills:**

* **$5:**The front face of $5 is President Abraham Lincoln's picture and the back face of $5 is the Lincoln Memorials picture. All $5 make by Federal Reserve Notes.

-$5 have 2 watermarks, one is a large 5 watermark left to the portrait. The other one of watermark is a column of 3 small stars. You can keep your bill light and check two of watermarks.

-You can check the embedded security thread. Use ultraviolet light to check here, and the letters USA and 5 will be glows blue.



-Colors. In the central of the $5 have light purple, and near the purple is gray.

-The background of the $5 have a symbol of freedom.

-Serial numbers. Two times of 11numbers and letters in the $5 background left and right.

* **$50:** The front face of$50 is Ulysses S. Grant, and the back face of $50 is US Capitol.

All $50 make by Federal Reserve Notes.

-tilt the dollar and check the number 50 in lower the right. The bill changes from copper color to green.



- check the watermarks from both side. The $50 represents images of the American flag in the background. Both side of the dollar have blue and red colors. Using ultraviolet light and the security thread is yellow color.

* **$100**:The front face of $100 is Benjamin Franklin, and the back face of $100 is Independence Hall. The average life of $100 is 7years.  The old $100 got shut down at December 2010. The new $100 started at October 8, 2013 by Federal Reserve Banks.
* The $100 has a blue ribbon. If you move the bill back and forth, the blue ribbon will move side to side. If you move the bill side to side, the blue ribbon will move up and down. This is call 3-D security ribbon. Check the watermarks; see the 100 in the lower right corner of the note. Using ultraviolet light to check security thread 100 US dollar. The thread glows pink color.

1. **Go to** [**http://www.bankofcanada.ca/**](http://www.bankofcanada.ca/) **and under monetary policy** 
   1. **Summarize the central bank’s objectives in term of inflation and interest rate.**
   2. **Click on how monetary policy works and describe the different transmission mechanisms to fight inflation.**
   3. **Click on final remarks and summarize the key points of monetary policy     (10 points)**

**a)** The goal of monetary policy is to maintain the value of the currency by keeping inflation low, stable and predictable. This allows Canadians to make more confident spending and investment decisions, encourage long-term investment in the Canadian economy, and help create sustainable job opportunities and higher productivity. The core of the Canadian monetary policy framework is the inflation control target. The First proposed in 1991, the bank and the federal government work together to review it every five years. The day-to-day behavior of monetary policy, however, is the role of the banking regulatory commission. The inflation control target directs the central bank's decision on the appropriate policy rate setting, which aims to maintain a stable price environment in the medium term. The target of overnight interest rates, also known as key policy rates, is the interest rate Banks want to use in financial markets for a day loan. This key interest rate is the benchmark used by Banks and other financial institutions to set interest rates for consumer loans, mortgages and other forms of lending. In order to meet the inflation target, the bank adjusts (to raise or lower) its key policy rate. If inflation is above target, Banks may raise policy rates. If inflation falls below target, Banks may cut policy rates to encourage financial institutions to lower lending and mortgage rates and stimulate economic activity. In other words, the bank is also worried about rising inflation or below target levels. This approach can prevent high inflation and persistent deflation.

The "transmission" of monetary policy is the process by which the bank of Canada policy changes interest rates in the economy, and ultimately inflation. The process is complex, with some uncertain times and the relative importance of specific connections. The main transmission channels are bank policy interest rate changes on the influence of various commercial interest rates, monetary policy transmission channels of the second is the interest rate changes on the price of various assets such as bonds, stocks and houses. The third channel is the impact of interest rate changes on exchange rates. In general, the Canadian interest rate rise in interest rates relative to other countries, makes the Canadian dollar-denominated assets more attractive to foreign investors, it can improve the demand of the Canadian dollar against other currencies. Finally, the fourth channel is the impact of interest rate changes on expectations of future interest rates, growth and inflation.

**c)**1. The reason for inflation is that by maintaining low and relatively stable inflation, central Banks make the best contribution to a country's economic health.

2. Low inflation is desirable. The biggest cost of inflation is the uncertainty it generates, and the inefficiency it generates by distorting the information transmitted by relative prices.

3. Stable output growth is desirable. The real gains come from having more stable real output growth and a more stable output gap.

4. Good policy or good luck is impossible to determine with certainty that greater stability in inflation and output growth is the result of better monetary policy, not just a less volatile economic environment.

5. Monetary policy is far-sighted. The monetary policy transmission mechanism is a complex cause-and-effect link between policy action and aggregate demand, output and inflation by the bank of Canada.

**5. Go to** [**www.mint.ca**](http://www.mint.ca/)**.**

**a. Describe the new security features for the new 1$ and 2$ bills.  (5 points)**

**b. Go to FAQ and choose 2 answered questions of interest   (5 points)** 

A. The New $1 Coin

A single laser mark of a maple leaf positioned within a circle on the coin's reverse

Multi-Ply Plated Steel technology

This patented process covers a steel core with alternating layers of metals such as copper, nickel and brass. The resulting coins are more economical to produce, durable and secure.



The New $2 Coin



Using the Mint's Multi-Ply Plated Steel technology.  Maintains the traditional "Polar Bear" design

* **two laser marks**
* **virtual image**
* **Edge-lettering**

B. Q1. I live outside Canada and the United States. Can I purchase items from [mint.ca](http://mint.ca)?

Yes, you can purchase in local retail store. [mint.ca](http://mint.ca) also offer international shipping with import tax and pay by Canadian dollar.

Q2. Will my personal information be secure?

Yes, all personal information is maintained in the strictest confidence in one of the highest security facilities in the country. The Mint also uses industry standard encryption technology and secures data transfer protocols to protect your account information when you place online orders with us. Please refer to our Security & Privacy section for more details.

**6. Go to** [**http://www.statcan.gc.ca/eng/start**](http://www.statcan.gc.ca/eng/start) **and gather, in one table, information about:  (20 points)**

* 1. **The consumer price index (2015-2016) and the inflation rate** for2016 for Canada, Quebec and Ontario.
  2. Use the consumer price index for September **2015 and 2016 to calculate the inflation rate of 2016 for the Canada and the 2 provinces.**
  3. How would you interpret the **CPI**? What is the base year?
  4. For Canada, Quebec and Ontario, determine the items with **biggest PI** and **biggest PI increase**.
  5. **Unemployment rate** in Canada, Quebec and Ontario for August 2016. Determine how the Unemployment rate is calculated.
  6. **GDP and last GDP** growth in 2016, **determine the industry with the biggest growth; the industry with the lowest growth; the industries with the negative growth.**
  7. **Export and Import (2015 or 2016 if available). Determine the level of EXPORT and IMPORT with Japan and the US.**
  8. **Interest rate (consumer loan rate), the exchange rate with the US $ (you *get it from Google*)**
  9. **The money supply M1 AND THE TOTAL MONEY SUPPLY.** Explain the relation**.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| a. | Canada | | Quebec | Ontario |
| 2015 | 126.6 | | 124.7 | 127.4 |
| 2016 | 128.4 | | 125.6 | 129.4 |
| b. | 1.1% | | 1.1% | 1.2% |
|  | 1.4% | | 0.7% | 1.8% |
| c. | CPI( consumer price index): measures changes in the price level of market basket of consumer goods and services purchased by households. | | | |
|  | the basic year is 2002 which is equal to 100. | | | |
| d. |  | Biggest PI | | Biggest PI growth |
|  |  | Alcoholic beverages and tobacco products | | Transportation |
|  |  | Canada | | 162.4 | 3% |
|  |  | Quebec | | 152.1 | 3% |
|  |  | Ontario | | 166.9 | 3.8% |
| e. | 7.0 | 7.1 | | 6.7 |
| f. | GDP: 2,035,506 million | GDP Growth: 2% | | |
|  | The industry with the biggest growth | Mining, quarrying, and oil and gas (10.3%) | | |
|  | The industry with the lowest growth | Administrative and support, waste management and remediation services (1.1%) | | |
|  | The industries with negative growth | Agriculture, forestry, fishing and hunting (-3.9%) | | |
| g. | Canada is the main trade partner with the U.S and Japan. The total export with the U.S is 354 Billion and the total import is 278 Billion in 2016. The total export with Japan is 11 Billion and the total import is 16 Billion in 2016 | | | |
| h. | Consumer loan rate in CIBC is 3.20% | | 1 US Dollar equals  1.29 Canadian Dollar | |
| i | * 1. M1 = Currency outside banks + demand deposits   2. M2 = M1 + personal savings deposits + non-personal savings deposits   3. M2+ = M2 + deposits at trust and mortgage loan companies + deposits and shares at caisses populaires, credit unions and mutual funds.   4. M3 =  M2 + other non-personal fixed term deposits + foreign currency deposits of residents of Canada | | | |

**7. Research the definitions of the following terms: DEFICITS, FEDERAL NET PUBLIC DEBT, ECONOMIC GROWTH, PURCHASING POWER, TRADE DEFICIT, SUPPLY SIDE ECONOMY, BALANCE OF PAYMENTS and DUMPING AND ANTI-DUMPING LEGISLATIONS.**

* Deficits: It means the amount by which a resource falls short of a mark. For example, a company’s expense more than revenue.
* Federal Net Public Debt: It is the amount of debt owed by government to creditors.
* Economic Growth: It means the gross domestic product increase in a period. On the other hand, it can mean the Production Possibility Curve of an economy increase.
* Purchasing Power: It is the number and quality or value of goods and services that can be purchased with a unit of currency. Apart from this, purchasing power is the dollar amount of credit available to a customer to buy additional securities.
* Trade Deficit: It means the import of a country larger than their export.
* Supply Side Economy: It is an idea of macroeconomic. It says that when an economy decrease their supply, will bring and economic growth to them.
* Balance of Payments: It is also known as balance of international payment and abbreviated B.O.P. It is the list of all trading record listed by economy in a period of time.
* Dumping and Anti-dumping Legislations: In traditional thinking, dumpling is a kind of anti-competitive behavior. An economy set their price lower than cost for expelling others, and they set the price to the high level for compensation afterward.
  + On the other hand, anti-dumping legislation is a way to fight against dumpling. Anti-dumping legislation is not going to affect products’ price directly; however, they will affect the price by adding tax that the products cannot be sold in a low price.

**8. Go to the CIA faxback** [**http://www.cia**](http://www.cia) **gov/library/publications/the-world-factbook/, select 2 countries of our choice and compare in a summarized text their economic profile.**

**Hong Kong**: As one of the world’s leading international financial centers, Hong Kong has a free market economy, and it’s economy is relying on international trade and finance. Its currency, the Hong Kong dollars, is legally issued by three major international commercial banks, and pegged to the US dollar. Hong Kong does not have officially recognized central banking system. Hong Kong has the highest degree of economic freedom in the world since the inception of the index in 1995. “Big Market, Small government” is the concept of positive non-interventionism of the economic policy of Hong Kong.

Moreover, Hong Kong has the sixth largest stock exchange market in the world; call The Hong Kong Stock Exchange, with a market capitalization of about US $3.732 trillion.

According to the information from the link, the largest percentage of labor force is wholesale and retail trade, restaurant, and hotels, it is 53.3%; financing, transport and social services are all more than 10%; however, manufacturing and construction just have 3.8% and 2.8%. Therefore, Hong Kong is mostly focusing on tertiary production.

For the GDP, Hong Kong’s real growth rate since 2014, was 2.8%, 2.4 %( 2015 est.) And 2% (2016 est.). It’s GDP (purchasing power parity) is $430.1 billion, and comparing to the world country is 45; however, if calculate it per capita, it will be $58,400, its ranking is 19 in the world.

**China**: Since 1970s, the Chinese economic reform, China had one of the world’s largest and most advanced economies prior to the nineteenth century. It introducing market principles. In the late 1970s and early 1980s, involved the opening up of the country to foreign investment and permission for entrepreneurs to start businesses. Nowadays, China became the world’s largest exporter, and the largest trading nation. In 2016, China stood as the largest economy in the world. However, the economic growth of China had slowed down since 2011. The Chinese Government faces numerous economic challenges, such as dampening speculative investment in the real estate sector and reducing its high domestic savings rate and correspondingly low domestic household consumption, etc.

According to the labor force are 28.3% agriculture, 29.3% industry and 42.4% services. In 19 century, China was mostly focused on the primary and secondary production, and very lack of tertiary production. Since China’s economy have been developing, there is almost half of the labor is working on services, but add up the percentage of primary and secondary production, is still have more than half of the labor working on it.

On the other hand, the GDP (purchasing power parity) of China is ranked the first economy in the world comparing to other economies, it is $21.29 trillion; nevertheless, their GDP per capita is below the world average, and it ranked number 106 in the world. But still, their real growth rate of GDP is 6.7% during 2016，ranked sixteenth.

**Comparing:** The Hong Kong’s economy had been growing earlier than China. And Hong Kong is the international trade center in the world. Comparing to China, they needed to develop well in their own area, so they were mainly produced primary and secondary production before. After their economic reform, their economy had been restructured into tertiary production, there had more people working on service until now.

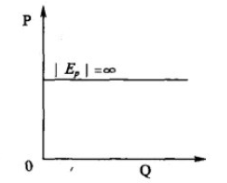
For the GDP, as long as the ranking shows us, China had been the first economy in the world. Although Hong Kong is one of the world’s leading international financial center, their GDP isn’t better than China, and they had just 2% GDP growth during 2016 which was not that much with the 6.7% growth rate of GDP of China during 2016.

In conclusion, both Hong Kong’s and China’s economy have well-developed right now. In 90 century, the economy of Hong Kong was actually better than China. In spite of they have been the trading partner for each other, the economy of China have chased over Hong Kong.

**9. Write one page explaining and commenting on ONE OF THE FOLLOWING topics (3 references minimum with a section on different opinions):**

**The Liquidity Trap**

Description:

 The liquidity trap, it can be called the Keynes economics, it is described by an England economist, John Maynard Keynes. This theory shows that when the interest rate have been reduced to a lowest level, no matter how much is money supply increased, interest rate won’t reduce anymore. Due to the lower level of interest rate, people would like to hold cash, monetary Policy does not work anymore.

Liquidity usually happens when the money demand is perfectly elastic (Ed=∞). For example, if an economy enters a liquidity trap, further increases in the money stock will fail to further interest rates; therefore, fail to stimulate, and the function of monetary policy will lose its function.

Other viewpoints:

There are some economists, such as Ludwig Von Mises Institute reject the liquidity trap. They are arguing that a lack of domestic investment during periods of low interest rates i the result of previous malinvestment and time preference rather than liquidity preference.

Many Post-Keynesian economists claim that Keynes’ idea had nothing to do with the zero-lower bound or the central bank’s inability to stimulate investment. However, the liquidity trap always happens after the zero-lower bound. When an economy implements zero-lower bound, it current account will have too much surplus that leads to the lower rate. Thus, the economy will lose the balance that zero-lower bound is not effective anymore, and there will be a liquidity trap afterward.

Personal opinion:

To my mind, it is true that there is a relationship between the liquidity trap and zero-lower bound. The zero-lower bound might be the kind of expansionary monetary policy, to lower the interest rate and increase currency supply for stimulating the economy. However, if the interest rate is close to zero percent, people won’t put their money into bank for less reward, they will choose to have cash; in this moment, the money supply will be perfectly elastic, then the economy will fall into the liquidity trap.

To avoid the liquidity trap, the economy can raise the inflation target, to target a rate of inflation high enough to reduce to acceptable levels the risk of hitting the zero interest floors, but this need to be done before the economy gets into the trap.

The question 1-4 are done by Xuxin Qin

The question 5-6 are done by Xiaoyu Wen

The question 7-9 are done by Chun Hin Chan