Notes:

- You may answer the questions in English or Mandarin.
- Answer ALL questions.
- The total marks is 100.

Question 1

Read the following article and answer questions:

Is Driving Drunk Rational? by Stephen J. Dubner from ***Freakonomics*** on May 31, 2013

Benjamin Hansen, an economist at the University of Oregon whose work I've written about in the past, recently presented a conference paper that looks at this question in the case of drunk driving. Specifically, he examines whether people commit fewer crimes because of fear of what may happen to them if they do ("deterrence") versus what they've learned emotionally from punishments that have already happened to them (called "specific deterrence").

Hansen's study takes advantage of a large database of DUI (酒駕) offenders in Washington State, which has laws similar to the rest of the US. The key to the study is that there are two definitions of DUI: the regular old garden variety offence if BAC (血液酒精濃度) is over .08, and "aggravated" DUI with a level over .15. Aggravated DUI brings a harsher punishment for the offense in question, but it has no special effect on the level of punishment for the next offense (which rises in severity the same amount no matter the level of the prior conviction).

First, Hansen finds that having been convicted and punished for a DUI reduces the chances of getting caught with a DUI in the future. Since the punishment scale for DUI ramps up with prior convictions, this appears to fit with the standard theory that harsher punishment is a deterrent for reoffending.

However, one aspect of Hansen's findings calls the model of the rational criminal into question. Since there is no extra future penalty for those convicted of an aggravated DUI (compared to those convicted of minor offenses), if drunk drivers rationally calculated the future cost of punishment they would all have the same odds of reoffending regardless of the level of their past conviction. However, Hansen finds that those who got aggravated DUIs were actually less likely to reoffend, all else equal. This suggests that the experience of having received harsh punishment teaches you a lesson. This is called a "learning effect." Another implication is that drunk drivers may not fully understand the system of punishment, and base their estimation of the cost of the next conviction on past experience and not accurate knowledge of the law.

These findings are interesting in terms of both psychology and deterring crime. They suggest that increased sanctions for drunk driving—such as lower permissible BAC levels, longer license suspensions, ignition lock systems, and harsher fines—are indeed likely to have additional deterrent effects. In fact, Hansen computes that raising penalties by 10 percent would reduce drunk driving by about 4 to 7 percent, and this is just counting the effects on repeat offenders and not deterrence for those who have never been caught. However, there is one catch; the positive impacts of such a learning effect would take a while to play out, as the deterrent will only mount as people get caught and punished over time.

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見背面

As for psychology, it probably doesn't come as a surprise that criminals suffer from "bounded rationality," and with possible rare exception of a Bernie Madoff or a Unabomber probably lack the mathematical acumen to calculate the present and expected future value of their crimes. I'd be quite interested to know if, given that the extra penalty from an aggravated DUI is a "sunk cost" which according to economic theory any rational person should disregard, chronically drunken economists are more likely to reoffend than the rest of us.

(A) [10%] Why does the author of this article (namely, Dubner) call the extra penalty from a past experience of the aggravated DUI is a "sunk cost"? Briefly explain.

(B) [15%] Specify the evidence found in Hansen's study against the hypothesis that drunk driving is rational? Briefly explain why it is opposing the hypothesis.

Question 2

Read the following article and answer questions:

What's wrong with selling kidneys? from *New York Times* on June 20, 2008

This was the question recently posed in the prestigious British Medical Journal. An American transplant surgeon (in favor of selling kidneys) squared off against an Australian nephrologist (against). In an accompanying article, a leading British transplant surgeon called for legalizing organ sales……

.....One of us is a British transplant surgeon who has seen too many patients die for want of a kidney. The other is an American recipient of a kidney who was once desperate enough to contemplate obtaining a kidney in the overseas organ bazaar.

We believe in compensating healthy individuals who are willing to relinquish one of their kidneys to save the life of a dying stranger.

There really is no other option. As the world has seen, altruistic appeals to organ donation have not yielded enough organs for transplantation. An estimated 40,000 patients are waiting for a transplant in Western Europe, more than 6,000 of them in Britain. Fifteen to 30 percent will die on the waiting list.

Granted, not all countries have made the most use of posthumous donation and they should. But even in Spain, which is famously successful at retrieving organs from the newly deceased because of its robust procurement infrastructure, there are deaths on the waiting list.

We face a dual tragedy: On one side, thousands of patients who die each year for want of a kidney; on the other a human-rights fiasco in which corrupt brokers deceive indigent donors about the nature of surgery, cheat them out of payment and ignore their postsurgical needs.

The World Health Organization estimates that 5 to 10 percent of all transplants performed annually - perhaps 63,000 in all - take place in the clinical netherworlds of China, Pakistan, Egypt, Colombia and the Philippines.

Unfortunately, much of the world transplant establishment - including the WHO, the international Transplantation Society and the World Medical Association – advocate remedies that do not go far enough. They insist on obliterating organ trafficking but ignore the time-tested fact that trying to stamp out underground markets either drives corruption further underground or causes it to flourish elsewhere. The truth is that trafficking will only recede when the crying need for organs disappears.

Opponents also allege that a legal system of exchange will inevitably replicate the sins of the black market. This is utterly backward. The remedy to this corrupt and unregulated system of exchange is its mirror image: a regulated and transparent regime devoted to donor protection.

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We suggest a system in which compensation is provided by a third party (government, a charity or insurance) and overseen by the government. Because bidding and private buying will not be permitted, available organs will be distributed to the next in line – not just to the wealthy.

Finally, we suggest that lump-sum cash payments not be offered. By providing in-kind rewards - such as a down payment on a house, a contribution to a retirement fund or lifetime health insurance - the program would not be attractive to people who might otherwise rush to donate on the promise of a large sum of instant cash.

The only way to stop illicit markets is to create legal ones. Indeed, there is no better justification for testing legal modes of exchange than the very depredations of the underground market.

There is nothing wrong with selling kidneys. And until we do so, the fates of third-world donors and the patients who need their organs to survive will remain morbidly entwined.

(A) [10%] What is the primary flaw of the existing altruistic organ donation system?

(B) [15%] Does the author of the article propose a free market for organs? Briefly explain why so or why not.

Question 3

The following is an excerpt from the article "**The used-car conundrum**" published on ***The Economist*** on November 6, 2021. Read the excerpt and answer questions.

......Consumer-price inflation has risen to 5.4% in America, the highest in 30 years. On November 3rd the Federal Reserve said it would taper bond purchases, a step towards higher interest rates. Most economists say that this bout of inflation is a result of temporary disruptions caused by covid-19, and that it will pass. But some think it presages a longer-term trend.

A leading argument by inflation doves has been that just a few items have caused a large share of total price increases......This case rests on two claims, which both merit scrutiny. One clearly stands up: when compared with past periods with similar inflation, current price rises are indeed unusually concentrated. The other- that inflation is likely to slow down as a result-is also broadly true.....

To test these hypotheses, we built a dataset of price levels since 1959 for every item-from housing to lottery tickets-in the personal consumption expenditures (PCE) index, one of the Fed's preferred metrics. For each rolling 12-month period, we calculated a measure of how much price changes vary between items: their standard deviation. When a few components account for a large share of inflation, this number is high. When most items' prices change by similar amounts, it is low. This measure is now abnormally high.....

The notion that a few big price changes can lead forecasters astray is hardly new. In the 1970s economists devised "core" inflation, which excludes food and energy. More recently, "trimmed-mean" measures, which drop the items whose prices have swung the most, have come into vogue. The Dallas Fed has published papers showing that its version, which excludes the bottom 24% and top 31% of the PCE index, predicts inflation better than core does.

However, both of these methods have flaws. Changes in food and energy prices are not necessarily unusually large or short-lived. And trimmed means' weighting schemes are plagued by abrupt cliffs. In the Cleveland Fed's version, which lops off the top and bottom 8% of the index, an item in the 93rd percentile when sorted by price changes is removed entirely, whereas one in the 92nd gets its full weight.

With this in mind, we have devised an alternative inflation index. Like trimmed means, it adjusts items' weights based on their recent price changes. But its weights are shaped like a smooth hill rather than a box. Components with inflation near the median get the most emphasis, and those with the biggest price changes get the least.....

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(A) [10%] Use one sentence to summarize the article.

(B) [15%] Based on the hypotheses test results presented in the article, do you predict that the inflation rate will rise, fall, or remain stagnant in the near future? Why?

Question 4

The following is an excerpt from the article "**Both demand and supply continue to rise**" published on ***Global Property Guide*** on August 25, 2021. Read the excerpt and answer questions.

Taiwan's Lutheran home price index rose by 10.8% (9.4% inflation-adjusted) during the year to Q1 2021, a sharp improvement from the previous year's 2.7% increase and the biggest y-o-y growth in seven years, according to Sinyi Real Estate Planning and Research. Quarter-on-quarter, nationwide house prices increased 4.3% (4% inflation-adjusted) in Q1 2021.

In Taipei, the capital, house prices were up 9.2% (7.8% inflation-adjusted) during the year to Q1 2021, in contrast to a 0.1% fall in the previous year. It was the capital city's best performance since Q4 2013. On a quarterly basis, house prices in Taipei increased 2.5% (2.2% inflation-adjusted) during the latest quarter......

Both demand and supply continue to rise, despite the pandemic. In the first four months of 2021, housing transactions in Taiwan's six major cities rose by 19.3% y-o-y to 84,677 units, with Kaohsiung registering the highest growth of 24.7%. During 2020, housing transactions were estimated to have reached 250,000 units – the highest level in six years.....

Taipei now vies with Monaco for having the lowest yields in the world. With buying prices per square metre averaging a steller US$7,200 to US$9,200, depending on size, and rents still affordable (where else can you rent a US$1.8 million home for just US$2,200 per month?), Taipei is not a happy place for landlords.

The owner of an apartment in Taipei will be lucky to realize 2% yields, except on the very smallest apartments. Given that the Global Property Guide's figures are for gross rental yields, i.e., do not make any allowance for vacant periods, for legal costs, administration costs, cleaning and repairs, rental taxes, property taxes, and other taxes, it is safe to say that landlords in Taiwan earn nothing on their apartments.

We believe apartments in Taipei are overvalued - and will fall in price. But we should warn readers that we can get it wrong!

(A) [10%] Use one sentence to summarize the article.

(B) [8%] Does the "2% yields" refer to a nominal or real term? Briefly explain your answer.

(C) [7%] Does the "2% yields" refer to a gross or net term? Briefly explain your answer.

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