Sujet 1

Exercice 1 Ménage producteur (14 pts)

Un ménage comprend un seul individu. Sa fonction de production domestique est donnée par :

$$X = F(H,I) = H^{1/2}I^{1/2}$$

où X est la quantité de biens domestiques produite à partir de la fonction de production F, H représente le travail domestique et I la quantité de biens marchands (exprimée en unités monétaires) utilisés dans la production domestique. On suppose que F vérifie les propriétés habituelles d'une fonction de production, et que l'utilité de l'individu ne dépend que de la quantité de biens domestiques consommés. Soit w le taux de salaire de l'individu(e) s'il/elle travaille sur le marché, et soit y son revenu hors travail. Soit T la durée totale de la période. On suppose que le temps de l'individu(e) peut être alloué seulement, soit au travail marchand, soit au travail domestique.

1) Commentez les hypothèses, en particulier en ce qui concerne le traitement du loisir dans le modèle. (2 pts)

2) Ecrire le programme de maximisation de l'individu en précisant ses contraintes. Si l'individu(e) travaille sur le marché, quelle relation entre H, I et w s'établit-elle à l'équilibre ? (2 pts)

3) Exprimer en fonction de y et T le salaire de réserve de l'individu(e) (on rappelle qu'il s'agit du salaire minimum exigé pour entrer sur le marché du travail). Commentez. (2 pts)

4) Déterminer l'offre de travail marchand et la quantité de travail domestique pour w fixé. Application numérique : T = 24 h, y =180€, w = 30€. (2pts)

5) Supposons maintenant que le ménage soit d'une taille quelconque et que F prenne la forme plus générale : $F(H,I) = AH^{a}I^{(1-a)}$, où A>0 et $0{\leq}a{\leq}1$

    a) En supposant que la valeur du paramètre a varie d'un ménage à l'autre avec la composition du bien agrégé par types de biens domestiques produits, quelles variables caractéristiques de l'individu(e) ou de son ménage sont-elles susceptibles de faire varier la valeur de A ? de a ? (expliquez en détaillant) (3 pts)

    b) Montrer que l'offre de travail marchand décroît avec a, à taux de salaire fixé et croît avec w à a fixé. En déduire que, quand w augmente, le ménage devrait, à l'équilibre, se détourner des biens domestiques plutôt intensifs en travail pour produire des biens domestiques plutôt intensifs en biens marchands. Donner des exemples illustrant cette évolution dans les dernières décennies.(3 pts)

Exercice 2 Deux firmes (6 pts)

On considère un marché sur lequel la demande s'écrit:
$$P = 200 - 5q.$$
Où P est l'unique prix de vente et q la quantité totale de bien demandée. Deux firmes interviennent sur ce marché. Leurs coûts respectifs sont donnés par l'expression suivante:
$$C_1(q_1) = \frac{15}{2} q_1^2$$
$$C_2(q_2) = 20q_2$$
On considère que les deux firmes se font concurrence de manière symétrique, par les quantités.

1) Comment s'appelle ce type d'environnement? (1 pt)
2) Calculer le prix de vente, la production et le profit de chacune des firmes, en expliquant et justifiant clairement votre démarche. (3 pts)
3) Si la concurrence s'opérait par les prix, quel serait l'équilibre? (2 pts)

Sujet 2

Exercice 1 Trappe à pauvreté (14 pts)

Un individu est susceptible de gagner sur le marché un salaire horaire w. Il n'a pas de revenus non salariaux. On suppose qu'il consomme un bien composite en quantité q, exprimé en unités monétaires et dont on supposera le prix unitaire égal à 1. La période considérée est T heures. Soit l la durée de son loisir (exprimée en heures). L'utilité de l'individu dépend des deux seules variables q et l.

1) Ecrivez la contrainte de budget de l'individu et représentez la graphiquement. Précisez sa contrainte de « plein revenu ». (Application numérique : w = 50F, T = 24H). Représentez, pour une fonction d'utilité non spécifiée, un équilibre de l'individu et précisez graphiquement la quantité de travail fournie. (2 pts)

2) En réalité, l'individu ne dispose pas de l'intégralité de son revenu. On suppose en effet que l'Etat prélève un impôt proportionnel sur le revenu de taux t : pour un revenu R, le montant de l'impôt est I = tR.

    a) Ecrivez la contrainte de budget de l'individu sous cette hypothèse, et montrez que cette situation est équivalente, pour l'individu, à celle dans laquelle il disposerait de l'intégralité de son revenu en gagnant un salaire horaire de $w(1-t)$. Faites une représentation graphique de la contrainte de budget après impôt. (Application numérique : t = 20% et mêmes valeurs qu'au 1) pour w et T). (2 pts)

    b) Représentez graphiquement l'équilibre de l'individu sur la nouvelle contrainte. Travaille-t-il plus ou moins que dans la situation sans impôt (sur votre figure) ? Peut-on en déduire si un impôt proportionnel sur le revenu a, dans le cas général, pour effet de réduire ou d'augmenter la quantité de travail offerte ? Expliquez en détail ce résultat a partir des effets de revenu et de substitution, en donnant de plus l'équation de Slutsky correspondant à l'offre de travail. (4 pts).

3) L'individu appartient à une société qui a décidé que chaque citoyen devait disposer d'un revenu journalier minimum, noté RSA. On suppose que l'Etat verse alors à tout individu dont le revenu du travail, R, est inférieur au RSA une subvention journalière S = RSA – R. On suppose également que tout individu dans cette situation est exonéré d'impôt.

    a) Quel est dans ce cas le revenu total disponible d'un individu gagnant par son travail moins que le RSA ? Représentez graphiquement l'équilibre initial d'un individu dans cette situation, puis la partie correspondante de sa contrainte de budget avec subvention. (Application numérique : RSA = 100 ; changez l'échelle du graphique par rapport au 1). (2 pts)

Où se situe l'équilibre de l'individu sur la nouvelle contrainte ? Montrer que tout se passe comme si l'individu qui gagne par son travail moins que le RSA était soumis à un impôt sur le revenu de 100%. Expliquez le phénomène de « trappe à pauvreté » qu'on évoque parfois à propos des personnes qui tirent l'essentiel de leurs revenus des prestations sociales. (4 pts).

Exercice 2 Production (6 pts)

1. La fonction de production d'une entreprise est $q = 10L^{1/2}K^{1/2}$. Le coût d'une unité de travail est de 20 €, celui d'une unité de capital de 80 €.

    a. Comment s'appelle cette fonction de production ? L'entreprise produit actuellement 100 unités et a calculé que les quantités de travail et de capital qui minimisent ses coûts sont de 20 et 5 respectivement. Faites une représentation graphique à l'aide d'isoquantes et de droites d'isocoût. (2 pts)

b. L'entreprise veut augmenter sa production à 140 unités. Si le capital est fixe à court terme, quelle quantité de travail l'entreprise devra-t-elle utiliser ? faites une représentation graphique et déterminez le nouveau coût total de l'entreprise. (1 pt)

c. Déterminez graphiquement les nouvelles quantités optimales de long terme de capital et de travail pour une production de 140 unités. (1 pt)

d. Après avoir calculé le TMST pour cette fonction, donnez les quantités optimales de capital et de travail nécessaires à la production de 140 unités. (2 pts)

The New York Times

Let Them Eat Trump Steaks

By Paul Krugman
Opinion Columnist

May 10, 2018

In general, Donald Trump is notoriously uninterested in policy details. It has long been obvious, for example, that he never bothered to find out what his one major legislative victory, the 2017 tax cut, actually did. Similarly, it's pretty clear that he had no idea what was actually in the Iran agreement he just repudiated.

In each case, it was about ego rather than substance: scoring a "win," undoing his predecessor's achievement.

But there are some policy issues he really does care about. By all accounts, he really hates the idea of people receiving "welfare," by which he means any government program that helps people with low income, and he wants to eliminate such programs wherever possible.

Most recently, he has reportedly threatened to veto the upcoming farm bill unless it imposes stringent new work requirements on recipients of SNAP — the Supplemental Nutrition Assistance Program, still commonly referred to as food stamps.

Let me be upfront here: There's something fundamentally obscene about this spectacle. Here we have a man who inherited great wealth, then built a business career largely around duping the gullible — whether they were naïve investors in his business ventures left holding the bag when those ventures went bankrupt, or students who wasted time and money on worthless degrees from Trump University. Yet he's determined to snatch food from the mouths of the truly desperate, because he's sure that somehow or other they're getting away with something, having it too easy.

But however petty Trump's motives, this is a big deal from the other side. The Congressional Budget Office estimates that new work requirements plus other restrictions proposed by House Republicans would end up denying or reducing nutritional aid to around two million people, mostly in families with children.

Why would anyone want to do that? The thing is, it's not just Trump: Conservative hatred for food stamps is pervasive. What's behind it?

The more respectable, supposedly intellectual side of conservative opinion portrays food stamps as reducing incentives by making life too pleasant for the poor. As Paul Ryan put it, SNAP and other programs create a "hammock" that "lulls able-bodied people to lives of dependency and complacency."

But this is a problem that exists only in the right's imagination. Able-bodied SNAP recipients who should be working but aren't are very hard to find: A vast majority of the program's beneficiaries either are working — but at unstable jobs that pay low wages — or are children, elderly, disabled or essential family caregivers.

Oh, and there's strong evidence that children in low-income families that receive food stamps become more productive and healthier adults, which means that the program is actually good for long-run economic growth.

Is it about the money? The enactment of the budget-busting 2017 tax cut proved once and for all, for anyone who had doubts, that Republicans don't actually care about deficits.

But even if they did care about deficits, the C.B.O. estimates that the proposed cuts to food stamps would save less than one percent, that's right, one percent, of the revenue lost due to that tax cut. In fact, over the next decade the entire SNAP program, which helps 40 million Americans, will cost only about a third as much as the tax cut. No, it's not about the money.

What about racism? Historically, attacks on food stamps have often involved a barely disguised racial element — for example, when Ronald Reagan imagined a "strapping young buck" using food stamps to buy T-bone steaks. And I suspect that Trump himself still thinks of food stamps as a program for urban black people.

But while many urban blacks do get food stamps, so do many rural whites. Nationally, significantly more whites than blacks receive food stamps, and participation in SNAP is higher in rural than in urban counties. Food stamps are especially important in depressed regions like Appalachia that have lost jobs in coal and other traditional sectors.

And yes, this means that some of the biggest victims of Trump's obsession with cutting "welfare" will be the very people who put him in office.

Consider Owsley County, Ky., at the epicenter of Appalachia's regional crisis. More than half the county's population receives food stamps; 84 percent of its voters supported Trump in 2016. Did they know what they were voting for?

In the end, I don't believe there's any policy justification for the attack on food stamps: It's not about the incentives, and it's not about the money. And even the racial animus that traditionally underlies attacks on U.S. social programs has receded partially into the background.

No, this is about petty cruelty turned into a principle of government. It's about privileged people who look at the less fortunate and don't think, "There but for the grace of God go I"; they just see a bunch of losers. They don't want to help the less fortunate; in fact, they get angry at the very idea of public aid that makes those losers a bit less miserable.

And these are the people now running America.

Follow me on Twitter (@PaulKrugman).

Follow The New York Times Opinion section on Facebook and Twitter (@NYTopinion), and sign up for the Opinion Today newsletter.

A version of this article appears in print on May 11, 2018, on Page A27 of the New York edition with the headline: Let Them Eat Trump Steaks

The New York Times

Gnawing Away at Health Care

By Paul Krugman
Opinion Columnist

May 7, 2018

At the beginning of 2017, Republicans promised to release the kraken on Obamacare — to destroy the program with one devastating blow. But a funny thing happened: Voters realized that repealing the Affordable Care Act would mean taking health insurance away from tens of millions of Americans. They didn't like that prospect — and enough Republicans balked at the backlash that Obamacare repeal fizzled.

But Republicans still hate the idea of helping Americans get health care. So instead of releasing the kraken, they've brought on the termites. Rather than trying to eliminate Obamacare in one fell swoop, they're trying to undermine it with multiple acts of sabotage — while hoping voters won't realize who's responsible for rising premiums and falling coverage.

Which is why it's important to place the blame where it belongs.

The first thing you need to understand is that Obamacare has been a highly successful program. When the legislation was passed, Republicans insisted it would fail to cut the number of uninsured and would blow a huge hole in the federal budget. In fact, it led to major gains in coverage, reducing the uninsured rate to its lowest level in history, at relatively low cost.

It's true that the coverage expansion was somewhat less than originally predicted, although the shortfall was much less than you may have heard. It's also true that after initially offering surprisingly cheap policies on the Obamacare exchanges, insurers found that the people signing up were sicker, on average, than they expected, leading to higher premiums. But as of last year, the markets appeared to have stabilized, with insurers generally profitable.

Nobody would claim that Obamacare is perfect; many Americans remain uninsured, and too many of those with coverage face troublingly high out-of-pocket expenses. Still, health reform delivered most of what its advocates promised and caused none of the disasters its opponents predicted.

Yet Republicans still want to destroy it. One reason is that much of the coverage expansion was paid for with taxes on high incomes, so repeal would be a way to cut taxes on the wealthy. More broadly, conservatives hate Obamacare precisely because it works. It shows that government actually can help tens of millions of Americans lead better, more secure lives, and in so doing it threatens their low-tax, small-government ideology.

But outright repeal failed, so now it's time for sabotage, which is taking place on two main fronts.

One of these fronts involves the expansion of Medicaid, which probably accounted for more than half the gains in coverage under Obamacare. Now a number of Republican-controlled states are trying to make Medicaid harder to get, notably by imposing work requirements on recipients.

What is the point of these work requirements? The ostensible justification — cracking down on able-bodied Medicaid recipients who should be working but aren't — is nonsense: There are very few people meeting that description. The real goal is simply to make getting health care harder, by imposing onerous reporting and paperwork requirements and punishing people who lose their jobs for reasons beyond their control.

The other front involves trying to reduce the number of people signing up for private coverage. Last year the Trump administration drastically reduced outreach — the effort to let Americans know when and how to get health insurance.

The administration is also promoting various dodges that would in effect let insurance companies go back to discriminating against people in poor health. And when Congress passed a huge tax cut for corporations and the wealthy, it also eliminated the individual mandate, the requirement that people sign up for insurance even if they're currently healthy.

Preliminary evidence suggests that these efforts at sabotage have already partially reversed the coverage gains achieved under Obama, especially among lower-income Americans. (Curiously, all the coverage losses seem to have happened among self-identified Republicans.) But the worst is yet to come.

You see, G.O.P. sabotage disproportionately discourages young and healthy people from signing up, which, as one commentator put it, "drives up the cost for other folks within that market." Who said that? Tom Price, President Trump's first secretary of health and human services.

Sure enough, insurers are already proposing major premium hikes — and they are specifically attributing those hikes to G.O.P. actions that are driving healthy Americans out of the market, leaving a sicker, more expensive pool behind.

So here's what's going to happen: Soon, many Americans will suffer sticker shock from their insurance policies; federal subsidies will protect most of them, but by no means everyone. They'll also hear news about declining insurance coverage. And Republicans will say, "See, Obamacare is failing."

But the problem isn't with Obamacare, it's with the politicians who unleashed this termite infestation — who are doing all they can to take away your health coverage. And they need to be held accountable.

Follow me on Twitter (@PaulKrugman) and Facebook.

Follow The New York Times Opinion section on Facebook and Twitter (@NYTopinion), and sign up for the Opinion Today newsletter.

A version of this article appears in print on May 8, 2018, on Page A25 of the New York edition with the headline: Gnawing Away at Health Care