

Indian Institute of Technology, Humanities and Social Sciences Department

Selection Procedure for PhD Admissions, December 2014

Total Marks: 100; Duration: 2 hours

SECTION B: Test for Economics Candidates: 70 MARKS

Part I: There are 15 questions in Part A. Answer any 10 questions. Each question carries 2 marks

For questions 1 to 12, write True or False?

1. A negative t-statistic indicates that the coefficient is not significant.
2. 95% confidence intervals are larger than 99% confidence intervals.
3. The F statistic provides a test that all coefficients including the constant are equal to zero.
4. If the omitted variable is positively correlated with the treatment and has a positive impact on the outcome, the effect is overestimated.
5. For the OLS estimator to be consistent and asymptotically normal, the residuals should be normally distributed.
6. Heteroskedasticity causes the Ordinary Least Squares estimator to be biased.
7. The sum of the Least Squares Residuals is always zero.
8. Linear Probability Model does not violate any Gauss-Markov assumptions.
9. Self-selection problem is generally not important in economics because we have random sample.
10. If we wish to allow for difference in slopes for two groups in a regression model, we have to use likelihood estimation because it is no longer linear.
11. Savings drive investment in the Keynesian model.
12. Public sector investment as a share of GDP declined in India after 1991.

For questions 13 to 15, fill in the blanks.

13. Interest rate is the reward for ----- according to the Keynesian theory. (Options: (i) parting with liquidity (ii) thrift (or postponing current consumption))
14. According to the SAYS Law, ----- creates its own -----
15. The 'impossible trinity' in international economics refers to: (i) perfect capital mobility (ii) -----exchange rate, and (iii) -----monetary policy (Options: fixed, flexible, independent, dependent).

Part II: Answer any two questions. Each question carries 25 marks.

Expected length of each answer is approximately 500 words (or 2 pages of your answer book)

16. There are certain situations in which markets fail and government intervention may be required. Can you list and explain briefly two types of market failures with one example for each.

17. Suppose that there are two phases of life - young and old. Your preference is separable between these two phases of life. While young, you are going to earn an amount - w ; but as old, you are earning nothing and living up on your savings. In the recent union budget, Government has proposed a tax on interest income. How will your savings be affected because of this tax? Does a tax on consumption (i.e., paying higher prices) would affect your savings in the same way as a tax on interest income? Explain through graph whenever needed.

18. According to you, what are the three most important development challenges before the Indian economy? Justify your answer.

19. Comment on the recent debate on NREGA after reading the following passage

Passage:

Jagdish Bhagwati and Arvind Panagariya, hereafter BP, have argued for phasing out the National Rural Employment Guarantee Act in favour of cash transfers ("Rural Inefficiency Act", ToI, 23 October). It's surprising—and amusing—that two eminent economists have chosen to make a case based on prior beliefs and some sophomoric wordplay ('mis'leading economists), rather than on the available evidence. A survey by one of us of the empirical literature on NREGA can be found here.

BP's main point is that NREGA is an inefficient "instrument of shifting income to the poor". They even claim that it costs five rupees to transfer one rupee to NREGA workers.

Their argument: consider a worker who currently earns Rs 80 a day in the private sector but decides to work on NREGA for Rs 130 instead. She earns an extra Rs 50, but this costs the government Rs 248: Rs 130 in wages, Rs 56 in material (assuming a material-labour ratio of 30-70), and Rs 62 in leakages (assuming 25% of expenditure is embezzled).

This argument is misleading.

The first concern is whether potential NREGA workers have alternative gainful employment. Often they don't, as NREGA work is provided mainly in the slack season. This is especially true for women—more than half of all NREGA workers. With involuntary unemployment, the question of "currently earning Rs 80 a day in the private sector" does not arise: so the income gain is Rs 130, not Rs 50.

If, for the sake of argument, workers do currently earn Rs 80, it is only true that the gain for the NREGA worker is Rs 50. However, what matters is the gain, direct and indirect, for all workers. In this scenario, there will typically be a wage increase (though not "by leaps and bounds", as attributed by BP to mysterious propagandists), which benefits all employed workers. This is possible even when NREGA employment is wholly concentrated in the slack season, if higher slack earnings tighten peak labour supply. Even small increases in the market wage translate into huge aggregate benefits, given the size of the labor force under consideration. In short, only extreme assumptions—unspecified by BP—would yield a net gain as dismally low as they claim.

Second, BP ignore non-transfer benefits, starting with NREGA assets. Rural roads, soil conservation, flood control, groundwater recharge and land improvement projects may not shine as brightly as the smart cities BP so enthusiastically endorse, but they do contribute to India's development. A recent study of over 4,000 NREGA assets across Maharashtra, by the Indira Gandhi Institute of Development Research, found that most of them are valued by local residents. BP assume they are all useless. They also ignore the evidence on other benefits: for instance, empowerment of women who work in large numbers, reduction in distress migration

and impact on schooling achievements.

In other words, BP's argument is based on inflating the costs of NREGA and deflating the benefits. This biased accounting spills over to their espousal of cash transfers: how a cash transfer system will identify the poor is glossed over, as is the inherent self-selection advantage of NREGA (clearly only the most needy are willing to do hard manual work), which after all provides a conditional cash transfer. If BP intend cash transfers to be universal, there would be enormous leakages in terms of transfers to the well-off.

BP assert that the poor wish to exit from public schemes. That assertion appears irrelevant here, as the large unmet demand for NREGA shows no sign of the poor wanting out. National Sample Survey data for 2009/10 show that in Uttar Pradesh 36% of rural households wanted to work under NREGA, of whom slightly less than half actually did. The problem will not disappear if the programme is confined only to the 200 poorest districts: even in richer states like Punjab, Haryana and Gujarat respectively 31%, 20% and 38% want to work on that programme. For India as a whole, among the poorest two quintiles of rural households, over 40% of those who want NREGA employment did not get it. This reflects bad governance (which was worse in poorer states), not a mass exodus. What is called for is better implementation and oversight, not a dismantling of the programme. After all, the new government has been elected on the promise of improving governance.

Shortcomings of NREGA implementation have certainly been reported: these include delays in wage payments, benami payments, unmet work requests and material irregularities. Yet numerous careful studies based on independent household survey data have shown significant benefits in terms of income security for the most vulnerable. NREGA provides employment to some 50 million rural households, affecting the lives of up to 250 million individuals. When more than 90% of the workforce is informal and lacks access to social security, this is a critical intervention. Leakage rates remain substantial, but they are declining and no higher than in many other subsidy programs.

We share BP's lament about "the folly of embracing substantial spending programmes unmatched by revenues", but not their astonishing inference that "this alone justifies the decision to confine NREGA to 200 poorest districts". To put matters in perspective, consider estimates by the National Institute of Public Finance and Policy of total "non-merit" subsidies (implicit and explicit, Centre and States) to the better-off in India: about 9% of GDP, over 20 times the expenditure on NREGA (less than 0.4% of GDP). BP would be doing us all a service, therefore, by taking their lament elsewhere. Surely, there are better ways of ensuring fiscal responsibility than to deprive millions of workers of an important (and sometimes crucial) source of livelihood.

We do not claim that all is well with NREGA. The programme needs better design and implementation, not slow suffocation. And certainly the public debate is not well-served by facile attacks uninformed by the facts.

(This article was written by Dilip Abreu, Pranab Bardhan, Maitreesh Ghatak, Ashok Kotwal, Dilip Mookherjee and Debra Ray. The article can be accessed from the Times of India website” <http://timesofindia.indiatimes.com/home/stoi/all-that-matters/Wrong-numbers-Attack-NREGA-is-misleading/articleshow/45085301.cms>)