

# International Economics Olympiad

Moscow

## Economics

### Problems

Solve no more than 4 problems out of 5. Indicate your choice of problems to grade on page 3 of your paper.

If you provide solutions for all 5 problems, all of them will be commented by the Jury but only 4 will add to your score. In this case, if you do not specify which to grade, the maximum grade of 5 will be excluded.

Every problem is worth 30 points.

If not stated otherwise, think of all goods, services and assets as of infinitely divisible. Numbers of firms and people may be only integer.

Convey your ideas clearly. Don't skip important logical transitions in your reasoning. Take care of handwriting. If you strike something out, it won't be graded.

If you want to leave the room for a while, raise your hand and ask a volunteer.

Good luck!

**Problem 1. “True cost?”***(30 raw points)*

In Moscow, there exists a restaurant chain that uses the following pricing mechanism. A consumer must pay some entrance fee, after that they can order whatever they want for the price that is equal to the cost of ingredients.

The price of an entry ticket depends on the time of the day (being higher in the evening than in the morning), but prices of menu items remain the same and are very low for Moscow standards. For instance, a portion of pasta costs only about \$2–2.5, the price of a ribeye steak is about \$4, a burger with grilled tiger prawns and arugula can be purchased for merely \$3. For only \$3–4 a customer can drink a glass of decent wine. These prices are very low compared to other restaurants in the city. Customers must eat and drink inside; if they want to take something away, the price doubles.

a) (15 *rp*) One of the well-known models of price discrimination explains how similar pricing scheme can be profitable for a seller (for instance, in Disneyland entrance fee is high while using most of its facilities is free). Using this model, explain, how such pricing technique helps this restaurant maximize profits (use graphical analysis where appropriate).

b) (15 *rp*) While such a scheme is successful in the theme park industry and restaurant business, we don't see supermarkets or clothes shops pricing this way. Explain why.

**Problem 2. “Substitutes and complements”***(30 raw points)*

Consider two commodities, A and B, that are substitutes in consumption.

a) (10 *pr*) Suppose that the number of consumers of good A increased, thus shifting the demand for it. Assuming perfect competition in both markets, what can you say about the resulting change in the price of B? Explain in detail.

b) (10 *pr*) Suppose that A and B are not only substitutes in consumption but also complements in production. What can you say about the resulting change in the price of B? Explain in detail.

c) (10 *pr*) Give a real-world example of two commodities that are both substitutes in consumption and complements in production.

**Problem 3. “Letting the Briber Go Free”***(30 raw points)*

A situation where a government official uses his position to acquire illicit benefit is called corruption. Corruption is a big problem in many countries and governments design different policies to curb it. According to one of the proposed policies (sometimes called *the Basu proposal*<sup>1</sup>), the government should make it legal to give bribes and severely punish only bribe-takers.

a) (10 *rp*) Explain the logic behind this proposal: why may it work?

b) (10 *rp*) Suppose Alice and Beatrice are trying to pass a test to get the driver's licenses. Alice is a good driver. However, Beatrice is a hazard to other drivers and is about to fail the test. The examiner is corrupt and tries to maximize his revenue from bribes. How will implementing the Basu proposal might affect Alice and Beatrice?

c) (10 *rp*) Generalise the example above: for what *class of bribes* the Basu proposal can be an efficient policy?

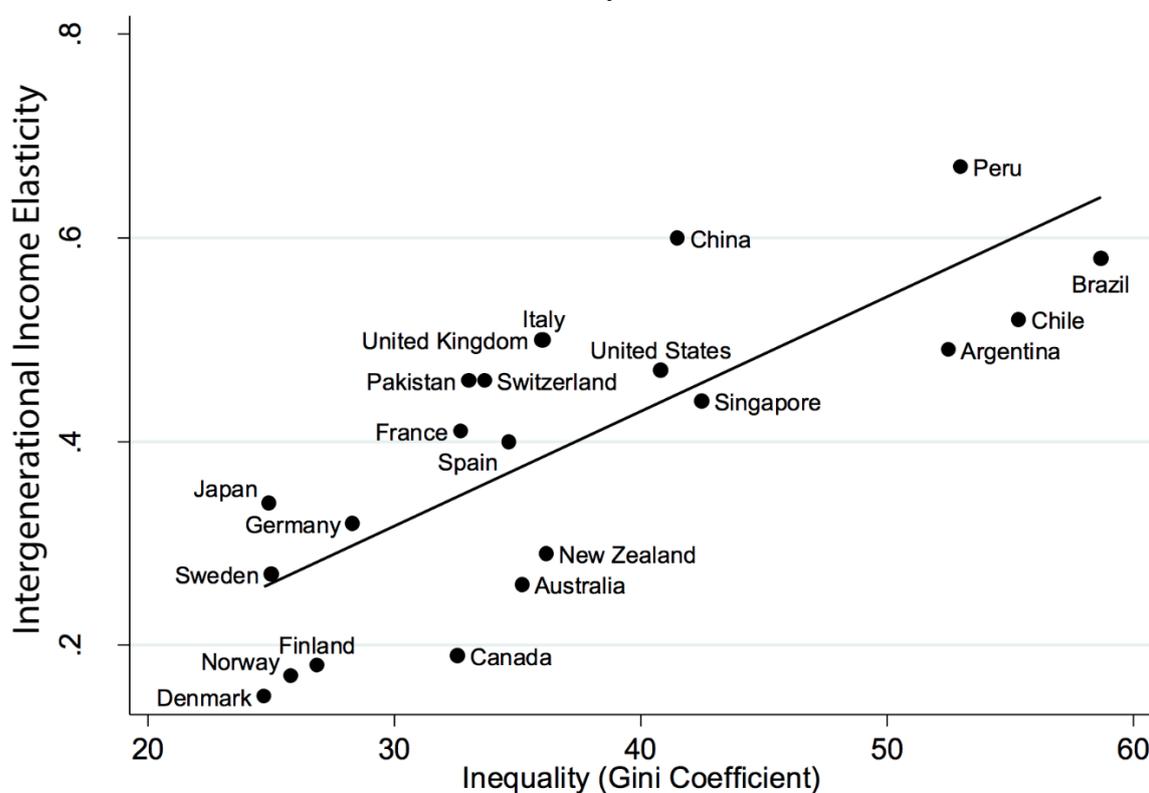
<sup>1</sup>See Basu, K. (2011). *Why, for a Class of Bribes, the Act of Giving a Bribe should be Treated as Legal.*

### Problem 4. “Intergenerational Elasticity” (30 raw points)

The degree to which members of society have equal opportunity of success, irrespective of their family background, is often measured by *intergenerational elasticity of income*. Roughly, it measures what percentage of inequality between members of the generation is passed on to the members of the next generation. Here is a definition from *The Economy* by CORE:

*[C]onsider two pairs of fathers and children. The father in the first pair is richer than the father in the second. The intergenerational elasticity measures how much richer the child of the well off father will be than the child of the poorer father. An elasticity of 0.5, for example, means that if one father is 10% richer, then his child, when grown up, will be on average 5% richer than the other child.*

The following graph show the relation between inequality and intergenerational income elasticity. Sometimes it is called *The Great Gatsby Curve*<sup>2</sup>.



Corak, M. (2012). *Inequality from generation to generation: The United States in comparison*.

Provide two distinct economic arguments that explain the positive correlation between current inequality (measured by the Gini coefficient) and intergenerational inequality.

### Problem 5. “Current Account Deficit” (30 raw points)

During his lecture at Sberbank Corporate University, Ilya Androsov was talking about countries that find themselves in a situation of current account deficit.

a) (15 rp) Using the example of Turkey, explain why this deficit can be detrimental to economic growth.

b) (15 rp) Can you tell a story where such current account deficit can be beneficial for the economy of the country?

<sup>2</sup>The term is attributed to Alan Krueger.