Razvojna ekonomija u borbi protiv siromaštva

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Rezime: Iskorenjivanje siromaštva u svim oblicima jedan je od osnovnih ciljeva održivog razvoja Ujedinjenih nacija. U tom kontekstu, ne iznenađuje odluka Švedske kraljevske akademije nauka da Nobelovu nagradu u oblasti ekonomije za 2019. godinu dodeli ekonomistima koji su svoje istraživačke napore usmerili upravo u ovom pravcu. Nagradu su, naime, osvojili Abidžit Banerdži, Ester Diflo i Majkl Kremer, „za svoj eksperimentalni pristup ublažavanju globalnog siromaštva“. Izučavajući različite faktore svakog pojedinačnog problema, kao i ponašanje subjekata u prirodnoj sredini, metodom randomizovanih kontrolisanih ispitivanja (*randomized controlled trials* – RCTs), ovo troje naučnika došlo je do konkretnih, praktično primenljivih zapažanja. Kombinacija ovih uvida sa razumevanjem lokalnog i institucionalnog konteksta pruža solidne smernice za razvojne politike i povećava sposobnost međunarodnih razvojnih organizacija i institucija da u postavljenim rokovima zabeleže vidljiv učinak u ublažavanju globalnog siromaštva.

Ključne reči: Abidžit Banerdži, Ester Diflo, Majkl Kremer, Nobelova nagrada, razvojna ekonomija, siromaštvo, Ujedinjene nacije, Svetska banka, održivi razvoj, eksperimentalni pristup, obrazovanje.

JEL: O10, O12, I38

Iskorenjivanje siromaštva u svim oblicima jedan je od osnovnih ciljeva održivog razvoja Ujedinjenih nacija. Kako se navodi na samom početku agende čija je realizacija predviđena do 2030. godine, neophodno je „mobilisati resurse iz različitih izvora, uključujući unapređenu razvojnu saradnju, kako bi se obezbedila adekvatna i predvidljiva sredstva za zemlje u razvoju, naročito one najmanje razvijene, u cilju implementacije programa i politika za eliminisanje siromaštva u svim njegovim dimenzijama“ (UN 2030 Agenda for Sustainable Development). Poslednjih decenija, zahvaljujući aktivnostima na kreiranju međunarodnih okvira i politika, zabeležen je izvestan napredak u pogledu iskorenjivanja siromaštva. Prema podacima iz 2015. godine 10 procenata svetske populacije živelo je na ili ispod globalne granice siromaštva sa manje od 1,9 američkih dolara dnevno. U poređenju sa 16% iz 2010. godine odnosno 36% iz 1990. godine, ovo je ohrabrujuć podatak, ali treba imati u vidu usporavanje silaznog trenda i činjenicu da ostaje ogroman prostor za napredak. Geografski posmatrano, od 736 miliona ljudi koji žive u ekstremnom siromaštvu polovina ih je grupisana u samo pet zemalja (po opadajućem redosledu): Indiji, Nigeriji, Demokratskoj republici Kongo, Etiopiji i Bangladešu. Ovo su ujedno i najnaseljenije zemlje južne Azije i supsaharske Afrike, dva regiona u kojima zajedno živi 85 odsto siromašnih na celom svetu (Katayama R, Wadhwa D, 2019).

Merenje je u ovom kontekstu posebno važno, budući da pruža uvid u to koje strategije za ublažavanje siromaštva daju konkretne rezultate. Osim toga, merenje pomaže zemljama u razvoju da ocene efikasnost pojedinih programa i usmere svoje razvojne strategije u ekonomskom okruženju koje se rapidno menja. Na osnovu raspoloživih merenja i Svetska banka je 2013. godine postavila i usvojila novi cilj – da broj ljudi koji žive ispod granice siromaštva sa 1,9 američkih dolara dnevno do 2030. godine bude manji od 3 procenta.

U svetlu navedenog, ne iznenađuje odluka Švedske kraljevske akademije nauka da Nobelovu nagradu u oblasti ekonomije za 2019. godinu dodeli ekonomistima koji su svoje istraživačke napore usmerili upravo u ovom pravcu. Nagradu su, naime, osvojili Abidžit Banerdži, Ester Diflo i Majkl Kremer, „za svoj eksperimentalni pristup ublažavanju globalnog siromaštva“. Istaknuti razvojni ekonomisti poslednje dve decenije posvetili su eksperimentima na terenu, shvativši da je umesto sveobuhvatnog, teorijskog pristupa neophodno problem razložiti na činioce i fokusirano pratiti manje segmente na način sličan onome koji se koristi u kliničkim studijama u medicini. Izučavajući različite faktore svakog problema, kao i ponašanje subjekata u prirodnoj sredini, metodom randomizovanih kontrolisanih ispitivanja (*randomized controlled trials – RCTs*), Banerdži, Diflo i Kremer došli su do konkretnih, praktično primenljivih zapažanja. Na ovaj način, osim što su transformisali razvojnu ekonomiju, ostvarili su veliki doprinos u samim sredinama u kojima su eksperimenti izvođeni, a i šire, postavivši standarde za primenu ovakvih programa i na drugim lokacijama koje pogađaju slični problemi.

Novi pristup i rana istraživanja

Nakon što je postao svestan da teorija može da ukaže na izvesne podsticaje, ali ne i da pruži odgovor na pitanje koliko su oni zaista moćni u praksi, Majkl Kremer okrenuo se empirijskom pristupu koji vodi ka čvrstim, nedvosmislenim zaključcima o kauzalitetu. Svoja rana istraživanja on je sredinom devedesetih godina prošlog veka započeo u zapadnoj Keniji, gde je u saradnji sa jednom nevladinom organizacijom sproveo prve eksperimentalne programe u oblasti obrazovanja i školskog sistema. Prof. Banerdži i prof. Diflo ubrzo su se pridružili i istraživanja proširili na državne škole u Indiji.

Imajući u vidu da u siromašnim zemljama deca često u školu odlaze praznog stomaka, kao i da su udžbenici retkost, Banerdži, Diflo i Kremer su u svojim prvim studijama pokušali da odgovore na pitanja poput toga koje vrste intervencija, uz minimalan trošak, dovode do boljih rezultata u obrazovanju. Drugim rečima, da li bi učenici ostvarivali bolje rezultate ukoliko bi tokom nastave koristili više udžbenika ili dobijali besplatan obrok. Na osnovu početnih premisa, škole koje su učestvovalе u eksperimentima, bile su podeljene u grupe, tako da su u jednim učenicima dobijali dodatna nastavna sredstva, a u drugim besplatnu užinu. Istraživanja su, međutim, pokazala da nijedan od ovih faktora nije značajnije uticao na promenu rezultata koje su učenici ostvarivali, te da je jedini pozitivan efekat primećen kod onih učenika koji su i inače najbolji u razredu. Na ovaj način su, daljim prilagođavanjem varijabli, istraživači došli do važnog zaključka da u siromašnim zemljama problem u školstvu nije manjak nastavnih sredstava, već činjenica da nastava nije u dovoljnoj meri prilagođena potrebama i intelektualnim mogućnostima učenika.

Posledično, Banerdži i Diflo fokusirali su se na eksperimente u kojima su u školama u Indiji

Abdul Latif Jameel Poverty Action Lab, skraćeno J-PAL, globalni je istraživački centar sa sedištem u Masačusetsu koji su 2003. godine osnovali profesori Abidžit Banerdži, Ester Diflo i Sendhil Mulenejtan. Centar organizuje i sprovodi aktivnosti podrške evaluacijama na terenu kako bi se pronašli odgovori na ključna pitanja u adresiranju problema siromaštva širom sveta. Sa ovim ciljem J-PAL uspostavlja saradnju i izgrađuje partnerstva sa državnim institucijama, nevladinim organizacijama, donatorima i ostalim stakeholderima kako bi se zajedničkim snagama generisala nova istraživanja, razmenila znanja i efektivni programi realizovali na većem broju učesnika. Do 2018. godine programi koje su istraživači ocenili kao najučinkovitije obuhvatili su više od 400 miliona ljudi u najsiromašnijim delovima sveta.

Ovaj istraživački centar organizovan je po regionalnim kancelarijama, ali i prema sektorskim programima, koji pokrivaju osam oblasti: poljoprivredu, kriminal, obrazovanje, energetiku i ekologiju, finansije, zdravstvo, tržište rada, političku ekonomiju i upravljanje. J-PAL mrežu čini 190 pridruženih profesora koji su do danas sprovedi više od 948 evaluacija u 81 zemlji, dok je obuku centra za izvođenje ovih evaluacija prošlo preko 1500 ljudi.

angažovani saradnici u nastavi koji su vodili dopunske časove za decu sa posebnim potrebama. Rezultati su nedvosmisleno ukazivali na činjenicu da je targetiranje najslabijih učenika efektivna mera i na kratak i na srednji rok. Kao drugi način da se dodatno motivišu i sami nastavnici iskristalisalo se zapošljavanje na određeno vreme, po ugovoru koji bi se produžavao u zavisnosti od konkretnih rezultata koje nastavnik ostvari u radu sa učenicima.

Pored školskog i obrazovnog sistema, Banerđi, Diflo i Kremer sprovodili su eksperimentalne programe u siromašnim zemljama i u drugim oblastima. Oslanjajući se na centralne koncepte biheviornalne ekonomije i uzimajući u obzir uslovljenost čovekovih razmišljanja, postupaka i procesa odlučivanja samim siromaštvom, oni su kroz studije na terenu objasnili zašto kenijski poljoprivrednici kupuju premalo veštačkog đubriva i ne koriste mehanizaciju, zašto se zagađena voda u Keniji ne tretira razblaženim hlorom, zašto se jako malo dece u Indiji vakciniše protiv smrtonosnih bolesti iako je vakcina besplatna i određenim danima lako dostupna, kao i zašto se HIV tako brzo širi među mladim ljudima u Nigeriji. Posvećenost troje profesora i njihov rad na terenu omogućili su ogroman napredak u konkretnoj regulativi kojom se kompenzuju i prevazilaze otpor i predrasude pojedinaca na način kojim se vidno poboljšava kvalitet njihovog života (Hoff, 2019).

Promena u kulturi ekonomskih istraživanja

Razvojna ekonomija sistematično izučava strukturna ograničenja koja siromaštvo nameće procesu odlučivanja u sredini u kojoj su informacije nepotpune (The Committee, 2019b). Banerđi, Diflo i Kremer transformisali su ovu granu ekonomije primenivši mikroekonomski pristup kako bi razumeli različite aspekte širih (makroekonomskih) problema. Ono što je njihovim istraživanjima, međutim, omogućilo i eksternu validnost jeste njihova skalabilnost, odnosno mogućnost da se njihovi rezultati validno primene i u drugim, širim kontekstima. Tako su eksperimentalni programi koji su nakon višegodišnjih evaluacija u školama zabeležili pozitivne srednjeročne rezultate primenjivani i u većim regionima i grupama. Primera radi, pojedini uspešni modeli implementirani su u preko 100 hiljada škola u 13 regiona u Indiji, čime je obuhvaćeno 5 miliona dece.

Iako sami istraživači ne mogu da kontrolišu niti utiču na to u kojoj će se meri informacije prikupljene kroz njihove eksperimente kasnije zaista i inkorporirati u realne politike, ovi podaci nesumnjivo svedoče o ogromnom naučnom doprinosu koji su ostvarili Banerđi, Diflo i Kremer. S druge strane, neke studije imale su više nego direktan uticaj na nivou politika, te je tako Svetska zdravstvena organizacija, u skladu sa rezultatima relevantnih istraživanja na temu zdravstvenog sistema, izdala preporuku da se lekovi besplatno distribuiraju za preko 800 miliona dece školskog uzrasta koja žive u oblastima u kojima preko 20 procenata njih boluje od nekog tipa infekcije izazvane crevnim parazitima (The Committee, 2019a).

Dodatno, istraživanja i rezultati do kojih su došli Banerđi, Diflo i Kremer poslužili su kao izuzetan podsticaj za ostale naučnike i istraživače, a mnoge organizacije posvećene borbi protiv siromaštva počele su da sistematično

evaluiraju nove predloge na osnovu eksperimenata i da koriste zaključke iz tih evaluacija u svom radu i odlučivanju. Drugim rečima, pristup koji je razvilo ovo troje naučnika omogućio je uvid u nove i postojeće programe koji su osmišljeni tako da kontinuirano poboljšavaju uslove života za najugroženije. Kombinacija ovih uvida sa razumevanjem lokalnog i institucionalnog konteksta pruža solidne smernice za razvojne politike i povećava sposobnost međunarodnih razvojnih organizacija i institucija da u postavljenim rokovima zabeleže vidljiv učinak u ublažavanju globalnog siromaštva.

Abidžit Banerdži rođen je 1961. godine u Indiji. Doktorsku titulu stekao je 1988. godine odbranivši tezu na Univerzitetu Harvard. Kao profesor ekonomije radi na Masačusetskom institutu za tehnologiju (MIT), Kembriđž, SAD.

Ester Diflo takođe predaje na MIT-u, kao profesor razvojne ekonomije i ublažavanja siromaštva. Ona je svoju doktorsku tezu, pod mentorstvom profesora Banerdžija, odbranila na ovom Institutu 1999. godine. Rođena u Francuskoj 1972. godine, Ester je najmlađi dobitnik Nobelove nagrade za ekonomiju, od kada je ona ustanovljena 1968. godine. Ujedno, Ester je tek druga žena kojoj je Švedska kraljevska akademija nauka dodelila ovo prestižno priznanje, nakon Elinor Ostrom, laureatkinje iz 2009. godine.

Majkl Kremer je Njujorčanin, rođen 1964. godine. Doktorirao je 1992. godine na Univerzitetu Harvard, gde je i zaposlen kao profesor društava u razvoju.

Svo troje laureata autori su brojnih studija, udžbenika i radova objavljenih u vodećim naučnim časopisima, kao i nosioci velikog broja međunarodnih priznanja za svoj, mahom zajednički, naučno-istraživački rad.

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Development Economics in the Fight Against Poverty

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Summary: Eradicating poverty in all its forms is one of the fundamental goals of the United Nations' plan for sustainable development. In this context, it is not surprising that the Swedish Royal Academy of Sciences has decided to award the 2019 Nobel Prize in Economic Sciences to the economists who have focused their research efforts in this direction. Namely, Abhijit Banerjee, Esther Duflo and Michael Kremer won the award "for their experimental approach to alleviating global poverty". By examining the different factors of each individual problem, as well as the behaviour of subjects in the natural environment, using the method of randomised controlled trials (RCTs), these three scientists came to concrete, practically applicable observations. The combination of these insights and an understanding of the local and institutional context provides solid guidance for development policies and enhances the capacity of international development organisations and institutions to record a visible impact in alleviating global poverty within the set deadlines.

Keywords: Abhijit Banerjee, Esther Duflo, Michael Kremer, the Nobel Prize, development economics, poverty, the United Nations, the World Bank, sustainable development, experimental approach, education.

JEL: O10, O12, I38

Eradicating poverty in all its forms is one of the fundamental goals of the United Nations' plan for sustainable development. As stated at the beginning of its 2030 Agenda, it is necessary to "ensure significant mobilization of resources from a variety of sources, including through enhanced development cooperation, in order to provide adequate and predictable means for developing countries, in particular least developed countries, to implement programmes and policies to end poverty in all its dimensions" (UN 2030 Agenda for Sustainable Development). In recent decades, due to activities undertaken in order to create international frameworks and policies, there has been some progress in eradicating poverty. According to the 2015 data, 10% of the world's population lived at or below the global poverty line with less than US \$ 1.9 a day. Compared to 16% in 2010 and 36% in 1990, this is encouraging, but one should keep in mind the deceleration of the downward trend and the fact that plenty of room for progress still remains. Geographically, out of the 736 million people living in extreme poverty, half are grouped in only five countries (in descending order): India, Nigeria, Democratic Republic of Congo, Ethiopia and Bangladesh. They also happen to be the most populous countries of South Asia and Sub-Saharan Africa, the two regions that together account for 85 percent of the world's poor (Katayama R, Wadhwa D, 2019).

Measurement is particularly important in this context, as it provides insight into which poverty reduction strategies deliver solid results. In addition, collecting data helps developing countries evaluate the effectiveness of individual programs and direct their development strategies in a rapidly changing economic environment. Based on the available data, the World Bank has also set and adopted a new goal in 2013 - to keep the number of people living below the poverty line with US \$ 1.9 per day below 3 percent by 2030.

In light of the above, it is not surprising the Royal Swedish Academy of Sciences decided to award the 2019 Nobel Prize in Economic Sciences to the economists who have directed their research efforts in this very direction. Namely, the award was given to Abhijit Banerjee, Esther Duflo and Michael Kremer "for their experimental approach to alleviating global poverty". These prominent development economists have devoted the last two decades to field experiments, having realised that, instead of opting for a comprehensive, theoretical approach, it is necessary to break down the problem into different factors and focus on smaller segments, in a manner similar to that used in clinical medicine research. By studying the various factors of each problem, as well as the behaviour of subjects in the natural environment, using the method of randomised controlled trials (RCTs), Banerjee, Duflo, and Kremer came to concrete, practically applicable observations. Thus, in addition to transforming the development economics, they have made a major contribution in the very environments in which the experiments were performed and beyond, setting the standards for the implementation of such programs in other locations that are likewise affected by similar problems.

New Approach and Early Stages of Research

After becoming aware that, while theory could point to certain incentives, it cannot answer the question of how effective those incentives really are in practice, Michael Kremer turned to an empirical approach that leads to solid, unambiguous conclusions about causality. He began his early research in the mid-1990s in western Kenya, where, in collaboration with an NGO, he conducted the first experimental programs in the field of education and the school system. Banerjee and Duflo soon joined in and expanded their research to include public schools in India.

Bearing in mind that, in poverty-stricken countries, children often go to school hungry, while textbooks are rare, Banerjee, Duflo and Kremer, in their first studies, tried to answer questions such as: what types of interventions, with minimal cost, lead to better results in education. In other words, would students be better off using more textbooks or receiving a free meal during schooltime. Based on the initial premise, the schools participating in the experiments were divided into groups, so that in one group students would receive additional teaching aids and, in the other, a free snack. Research has, however, shown that none of these factors significantly instigated a change in the students' results, and that the only positive effect was observed in students who were already at the top of the class. In this way, by further adjusting the variables, the researchers came to the important conclusion that, in poverty-stricken countries, the problem in education is not the lack of teaching resources, but the fact that teaching is not sufficiently adapted to the needs and intellectual abilities of the students.

Consequently, Banerjee and Duflo focused on experiments in which teaching associates were hired at schools in India to provide supplementary classes for children with special needs. The results clearly indicated that targeting the

Abdul Latif Jameel Poverty Action Lab, abbreviated J-PAL, is a Massachusetts-based global research centre founded in 2003 by Professors Abhijit Banerjee, Esther Duflo, and Sendhil Mullainathan. The Centre organises and implements field evaluation support activities to find key answers to addressing poverty worldwide. To this end, J-PAL establishes cooperation and builds partnerships with state institutions, non-governmental organisations, donors and other stakeholders in order to jointly generate new research, exchange of knowledge and effective programs for more participants. By 2018, the programs rated as most effective by researchers have covered more than 400 million people in the poorest parts of the world.

This research centre is divided into regional offices, and into different sectorial programs, covering eight areas: agriculture, crime, education, energy and ecology, finance, health, labour market, political economy and governance. The J-PAL network consists of 190 associate professors who have conducted over 948 evaluations in 81 countries to date, while more than 1500 people have been trained by the centre to perform these evaluations.

poorest students was an effective measure, both in the short and medium term. Another way to motivate the teachers themselves proved to be part-time employment, under a contract that would be extended depending on the specific results the teacher achieved while working with students.

In addition to the school and education systems, Banerjee, Duflo, and Kremer conducted experimental programs in poverty-stricken countries in other areas as well. Drawing on the central concepts of behavioural economics, and taking into account the fact that human thinking, actions and decision-making processes are conditioned by poverty, they have explained through field studies why Kenyan farmers buy too little artificial fertiliser and use no mechanisation, why Kenya's polluted water is not treated with diluted chlorine, why few children in India get vaccinated against deadly diseases, even though the vaccine is free and, on certain days, easily available, and why HIV is spreading so quickly among young people in Nigeria. The commitment of the three professors and their work in the field "made possible large advances in real-world policies to offset individuals' biases in ways that made their lives much better" (Hoff, 2019).

Change in the Economic Research Culture

Development economics "systematically explores the structural constraints that poverty imposes on decision-making in an environment where information is incomplete" (The Committee, 2019b). Banerjee, Duflo and Kremer transformed this branch of economics by applying a microeconomic approach to understand the various aspects of broader (macroeconomic) problems. What also granted their research external validation was its scalability, i.e. the ability for the results to be validly applied in other, broader, contexts. Thereby, experimental programs which, after years of evaluations in schools, recorded positive medium-term results were also applied in larger regions and groups. For example, some successful models have been implemented in over 100,000 schools in 13 regions in India, having reached 5 million children.

Although the researchers themselves cannot control or influence the extent to which the information gathered through their experiments will later be incorporated into real policies, these data undoubtedly testify to the huge scientific contributions made by Banerjee, Duflo and Kremer. On the other hand, some studies have had a strong direct impact at the policy level. For instance, in accordance with the results of relevant research concerning the health system, the World Health Organisation has issued a recommendation that medicines should be distributed free of charge to over 800 million schoolchildren living in areas where more than 20 percent of them have a specific type of parasitic worm infection (The Committee, 2019a).

Banerjee, Duflo, and Kremer's research and results have served as an exceptional incentive for other scholars and researchers, while many organisations dedicated to combating poverty have begun to systematically evaluate new proposals based on experiments, and to draw conclusions from these evaluations in their work and decision making. In other words, the approach devel-

oped by these three scholars has provided insight into both new and existing programs designed to continually improve the living conditions for the most vulnerable groups. The combination of these insights and an understanding of the local and institutional context provides solid guidance for development policies, and enhances the capacity of international development organisations and institutions to achieve a visible impact in alleviating global poverty within the set deadlines.

Abhijit Banerjee was born in 1961 in India. He obtained his doctorate in 1988 defending his thesis at Harvard University. As a Professor of Economics, he works at the Massachusetts Institute of Technology (MIT), Cambridge, USA.

Esther Duflo also teaches at MIT, as a Professor of Development Economics and Poverty Alleviation. She defended her PhD thesis under the mentorship of Professor Banerjee, at this Institute, in 1999. Born in France in 1972, Esther is the youngest person to have received the Nobel Prize in Economic Sciences, since it was established back in 1968. At the same time, Esther is the second woman ever to have received this prestigious recognition from the Royal Swedish Academy of Sciences, after Elinor Ostrom, a 2009 laureate.

Michael Kremer is a New Yorker, born in 1964. He received his PhD in 1992 from Harvard University, where he also works as a Professor of Developing Societies.

All three laureates are authors of numerous studies, textbooks and papers published in leading scientific journals, as well as holders of a large number of international awards for their, largely collaborative, scientific and research work.

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