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UDK 06.068NOBEL::330"1995" ; 330.101.541Robert E. Lukas

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MEĐU NAJBOLJIMA U SVETU EKONOMSKE NAUKE

Robert E. Lukas
Nobelova nagrada za 1995.

Rezime

Robert Lukas je dobio Nobelovu nagradu za ekonomiju 1995. godine za razvoj i primenu hipoteze o racionalnim očekivanjima, čime je transformisao makroekonomsku analizu i produbio shvatanje ekonomske politike. Među najuticajnijim je svetskim ekonomistima i deseti na listi najboljih ekonomista kada su u pitanju istraživački radovi.

Ključne reči: Robert Lukas, hipoteza, makroekonomija, analiza, ekonomska politika, Nobelova nagrada, racionalna očekivanja, standardni okviri, klasična ekonomija, egzaktnost, ciklusi, endogeni rast, ekonometrija

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Robert E. Lucas

Nobel Prize for 1995

AMONG THE BEST IN THE WORLD OF ECONOMICS

Summary

Robert Lucas won the 1995 Nobel Prize in Economics for having developed and applied the hypothesis of rational expectations, thereby having transformed macroeconomic analysis and deepened the understanding of economic policy. He is one of the most influential economists in the world and ranks tenth on the list of the best economists in terms of published scientific papers.

Key words: Robert Lucas, hypothesis, macroeconomics, analysis, economic policy, Nobel Prize, rational expectations, standard frameworks, classic economy, exactness, cycles, endogenous growth, econometrics.

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Robert Lukas je dobitnik Nobelove nagrade za ekonomiju 1995. godine za razvoj i primenu hipoteze o racionalnim očekivanjima, čime je transformisao makroekonomsku analizu i produbio shvatanje ekonomske politike.

Jedan je od najuticajnijih ekonomista u poslednjih pedesetak godina i nalazi se na listi deset najboljih ekonomista sveta kada su u pitanju istraživački radovi.

O tome ko je ili šta je najviše uticalo na njegov naučni i intelektualni razvoj do ovakvih priznanja Lukas kratko objašnjava u svojoj Autobiografiji objavljenoj povodom dobijanja Nobelove nagrade: "Glavne osobine nečijeg pristupa nauci, kao i glavne osobine nečije ličnosti, formiraju se u ranom dobu. Glavni uticaj na formiranje mojih shvatanja imali su roditelji, rane godine na redovnim i postdiplomskim studijama u Čikagu i godine provedene na Karnegi-Melonu".

Biografija

Robert Lukas rođen je 1937. godine u Jakimi, malom mestu nadomak Vašingtona. Najstariji je od četvoro dece Roberta Lukasa Emersona i Džejn Templton Lukas. U Jakimi su Lukasovi roditelji otvorili restoran koji je radio samo nekoliko godina. Tokom Drugog svetskog rata sele se u Sijetl, gde otac radi u brodogradilištu, a majka nastavlja svoju ranije započetu karijeru modne umetnice.

Posle rata njegov otac se zaposlio kao zavarivač u kompaniji za rashladnu tehniku. Od majstora postaje inženjer prodaje, potom menadžer prodaje i na kraju predsednik kompanije. Kako ističe Robert Lukas, njegov otac nije imao diplomu i obrazovanje inženjera, već je to naučio od ljudi sa kojima je radio i iz priručnika. O tehnici i menadžerstvu često je razgovarao sa ocem, a dok je bio u srednjoj školi pomagao mu je svojim proračunima oko problema hlađenja. To je bio za Lukasa uzbudljiv događaj realno primenjene matematike.

Ruzveltovu visoku školu završio je 1955. godine u Sijetlu. Želeo je da bude inženjer, ali nije dobio stipendiju MIT univerziteta. Upisuje se na Univerzitet u Čikagu čiju je stipendiju dobio, ali je morao da se opredeli za oblast koju će studirati pošto ovaj univerzitet nije imao studije inženjerstva. Počeo je sa predavanjima iz matematike i fizike, ali je od njih ubrzo odustao, jer su ga zainteresovala druga: Istorija zapadne civilizacije, Organizacija, Metodi i načela saznanja. Nakon pohađanja kursa iz Drevne istorije, uzima istoriju za svoj glavni predmet.

Dobivši doktorsku stipendiju Vudroa Vilsona, počeo je da pohađa predavanja iz istorije na Kalifornijskom univerzitetu. Međutim, morao je da odustane od ovih studija jer nije dovoljno poznavao francuski, nemački, grčki i latinski jezik. Prešao je na Ekonomski fakultet na Berkliju da pohađa predavanja iz istorije ekonomije. Kako nije mogao da dobije finansijsku pomoć za ovaj fakultet, morao je da ga napusti i vrati se u Čikago.

U ovom periodu bio je fasciniran knjigama: iz istorije Henrija Pirena o kraju perioda Rimskog carstva i iz ekonomije Pola Semjuelsona "Osnove ekonomske analize" (*Foundations of Economic Analysis*). Knjiga ekonomiste Semjuelsona značajno će formirati njegovo buduće bavljenje naukom.

Lukas je 1960. godine krenuo na predavanja iz Teorije cena Miltona Fridmana. Bio je oduševljen njegovim predavanjima i spremnošću da prati svoju ekonomsku logiku kuda god ona vodila. Kako Lukas ističe u svojoj autobiografiji,

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1. Lukas, R. E. (1975), "Model ravnoteže poslovnog ciklusa", *Žurnal za političku ekonomiju 83*, 1113-1144.
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3. Lukas, R. E. (1980), "Ravnoteža u ekonomiji čiste valute", *Economski upit 18*, 203-220.
4. Lukas, R. E. (1982), "Kamatne stope i cene valuta u dvovalutnom svetu", *Žurnal za monetarnu ekonomiju 10*, 335-360.
5. Lukas, R. E. (2002), "Promovisanje ekonomske pismenosti: panel diskusija", *Američki ekonomski pregled*, br. 92 (2), 473-475.
6. Lukas, R. E. (2004), "Industrijska revolucija: prošlost i budućnost", *Region*, Federalna banka rezervi Mineapolisa, 5-20.

Robert Lucas won the 1995 Nobel Prize in Economics for having developed and applied the hypothesis of rational expectations, thereby having transformed macroeconomic analysis and deepened the understanding of economic policy. He has been one of the most influential economists in the past fifty years and earned a place on the list of the top ten economists in the world in terms of published scientific papers.

When asked who or what has most influenced his scientific and intellectual development to the level of such recognitions, Lucas briefly explained in his Autobiography, published on the occasion of his winning the Nobel Prize: "The main features of one's approach to science, like the main features of one's personality more generally, are set early on. For me, the influences of my parents, my undergraduate and graduate years at Chicago, and my years at Carnegie Mellon were critical."

Biography

Robert Lucas was born in 1937 in Yakima, small town in the vicinity of Washington, USA. He was the oldest of the four children of Robert Emerson Lucas and Jane Templeton Lucas.

In Yakima Lucas's parents opened a small restaurant which was closed only several years later. During the World War II, they moved to Seattle, where his father found work in the shipyards, whereas his mother resumed her earlier career as a fashion artist.

After the war, his father found a job as a welder at a commercial refrigeration company. He became a craftsman, then a sales engineer, then sale manager, and eventually president of the company. As Robert Lucas underlines himself, his father had no college degree and no engineering training, but learned what he needed from the people he worked with and from handbooks. Lucas had many technical and managerial discussions with his father, and while in high school, he helped his father with a refrigeration design problem he was working on by providing his own calculations. It was a very exciting event for Lucas, being his first taste of real applied mathematics.

He graduated from Roosevelt High School in Seattle in 1955. He wanted to become an engineer, but MIT University did not grant him a scholarship. He enrolled at the University of Chicago, whose scholarship he did win, but he had to choose another field of study, because this University did not have an engineering school. He took some lectures in mathematics and physics, but gave up soon, after he developed an interest in another subjects, including the History of Western Civilization, Organization, Methods, and Principles of Knowledge. He took a sequence in Ancient History, and became a history major.

Having obtained a Woodrow Wilson

Selected papers

1. Lucas, R.E. (1975), "An Equilibrium Model of the Business Cycle", Journal of Political Economy 83, 1113-1144.
2. Lucas, R.E. (1978), "Asset Prices in an Exchange Economy", Econometrica 46, 1429-1445.
3. Lucas, R.E. (1980), "Equilibrium in a Pure Currency Economy", Economic Inquiry 18, 203-220.
4. Lucas, R.E. (1982), "Interest Rates and Currency Prices in a Two-Currency World", Journal of Monetary Economics 10, 335-360.
5. Lucas, R.E. (2002), "Promoting Economic Literacy: Panel Discussion", American Economic Review, vol. 92(2), 473-475.
6. Lucas, R.E. (2004), "The Industrial Revolution: past and future", The Region, Federal Reserve Bank of Minneapolis, 5-20.

osećao je, zajedno sa ostalim Fridmanovim studentima da "raspolaže moćnim aparatom za razmišljanje o ekonomskim i političkim pitanjima". Osim toga, sa pažnjom je pratio predavanja iz ekonometrije Cvija Griličesa i Grega Luisa i čitao knjigu Vilijama Felera iz teorije statistike "Uvod u teoriju verovatnoće i njene primene" (*An Introduction to Probability Theory and Its Applications*).

Pod rukovodstvom Arnolda Harbergera i Grega Luisa započeo je svoju doktorsku disertaciju "Elastičnost supstitucije između rada i kapitala na osnovu podataka industrije SAD". Rad je završio 1963. godine i zaposlio se na Višoj školi za industrijsku organizaciju GSIA na Karnegijevom institutu za tehnologiju. Doktorirao je 1964. godine na Univerzitetu u Čikagu.

U ovom periodu upoznao je mnoge naučnike, ekonomiste, pisce poznatih knjiga iz ovih oblasti kao što su: Alan Melcer, Tomas Sardžent, Edvard Preskot, Leonard Raping, Herbert Sajmon, Edmund Felps i dr. Za vreme boravka u Karnegiju kao doktorant napisao je rad "Investiranje u uslovima neizvesnosti" (*Investment under Uncertainty*) zajedno sa Edvardom Preskotom. Lukasov rad "Očekivanja i neutralnost novca" (*Expectations*

"Svi dajemo obećanja koja ne možemo da održimo, našim kreditorima i našim građanima"

Truman Factor, intervju 29.03.2012, autor J. Luis Martin

Grčka je otplatila nekih 100 milijardi evra svog duga. Prema vašoj proceni, kakva je trenutna situacija tamo?

Zdravlje grčke privrede i zdravlje grčkih kreditora nisu ista stvar. Kako god da se ovo završi, neko vreme niko neće kreditirati grčku vladu, tako da bi potpuno neizvršenje bilo najbolje rešenje za grčki narod. Pregovori kroz koje su oni prošli moraju se braniti kao spašavanje banaka.

Španija je nedavno potvrdila deficit od 8,5% za 2011. godinu, a Evropska komisija je upravo zahtevala da njen ciljani deficit u 2012. godini bude revidiran na 5,3%, u najgorem slučaju. Da li je strogost jedini spas?

Verovatnoće neizvršenja su više za Španiju i Grčku nego za Nemačku i SAD, ali svi mi imamo isti problem, a to je da želimo zemlju većeg blagostanja, a da nismo spremni da za to platimo kroz poreze. Svaki odgovor na to koji ne podrazumeva "strogost" predstavlja zabludu. Svi mi dajemo obećanja koja ne možemo da ispunimo, i našim kreditorima, i našim građanima.

Dakle, slažete se sa tekućim pristupom "jedno rešenje odgovara svima", kada je reč o rešavanju ekonomskih poteškoća u evrozoni?

U ovom slučaju, jedno rešenje zaista odgovara svima.

Da li je zajednička valuta "kamen oko vrata" ili "čamac za spasavanje"?

Ni jedno ni drugo. Švedska, Danska i Velika Britanija su zadržale svoje valute. To dovodi do izvesnih poteškoća, ali nije ništa strašno. SAD formira kurs prema Kanadi, Japanu, Koreji i Evropi: svim svojim velikim trgovinskim partnerima.

Neki smatraju da je ogromna likvidnost koju je ECB obezbedila zapravo pogoršala problem u finansijskom sektoru, time što je na veštački način održala u životu banke koje su *de facto* nesolventne - kao i time što je doprinela remećenju tržišta i nezavisnosti u odnosu na centralne banke.

To jeste problem i u Sjedinjenim Državama takođe. Centralne banke moraju unapred jasno da definišu svoje politike kreditora poslednje instance i da se tih politika pridržavaju kada dođe do krize. Najavljene politike treba da budu vremenski konzistentne, u smislu da centralne banke budu spremne da ih sprovode. Fed to nikada nije učinio i on to ne čini ni sada. Nadam se da će ECB znati bolje.

Doctoral Scholarship, he entered the graduate program in History at the University of California. However, with insufficient knowledge of French, German, Greek and Latin, he was in no position to pursue this line of study. He switched to the School of Economics at Berkeley to attend the courses in Economic History. Given that he could not obtain any financial support for this School, he had to quit and go back to Chicago.

This period was marked by his fascination by books: Henri Pirenne's history books on the end of the Roman era, and Paul Samuelson's *Foundations of Economic Analysis*. The latter book by the economist Samuelson considerably shaped his future scientific research.

In 1960 Lucas started to attend the course in Milton Friedman's Price Theory. He was thrilled by his lectures and willingness to follow his economic logic wherever it led. As Lucas underlines in his Autobiography, he felt, together with other Friedman's students, that "he had acquired a powerful apparatus for thinking about economic and political questions". In addition, he studiously attended the courses in Econometrics by Zvi Griliches and Gregg Lewis, and read a book by William Feller in the theory of statistics - *An Introduction*

"We are all making promises that we cannot keep, to our creditors and to our citizens"

Truman Factor, interview 29.03.2012, author J. Luis Martin

Greece wiped out some 100bn Euros of its debt. What is your assessment of the current situation there?

The health of the Greek economy and the health of Greece's creditors are not the same issue. However this turns out, no one is going to lend to the Greek government for a while, so a complete default would have been the best course for Greek people. The negotiations they have gone through have to be defended as bank bailouts.

Spain has recently confirmed an 8.5% deficit for 2011 and the European Commission has just demanded that its deficit goal for 2012 be revised to at least 5.3%. Is austerity the only way out?

Default probabilities are higher for Spain and Greece than for Germany or the U.S., but all of us have the common problem that we want a larger welfare state than we are willing to pay for with taxes. Any response to this that is not "austerity" is a delusion. We are all making promises that we cannot keep, to our creditors and to our citizens.

So, you agree with the current "one size fits all" approach to solving the euro zone's economic woes?

In this case, one size really does fit all.

Is the common currency a straitjacket or a lifeboat?

Neither one. Sweden, Denmark, and the UK have kept their own currencies. This causes some inconveniences, but it is not a big deal. The US floats against Canada, Japan, Korea, and Europe: All our large trading partners.

Some argue that the tremendous liquidity that has been provided by the ECB has actually worsened the problem in the financial sector by artificially keeping alive banks that are de facto insolvent – as well as further contributed to market distortions and independence from the central bank.

That is a problem in the U.S. too. Central banks need to make clear their lender-of-last-resort policies in advance and they have to stick with them when the crunch comes. The announced policies should be time consistent, in the sense that they are willing to carry them out. The Fed has never done this and they are not doing so now. I hope the ECB does better.

and the Neutrality of Money), koji je napisao 1970. a koji je objavljen 1972. godine, njegov je najznačajniji rad koji mu je zajedno sa radom "Evaluacija ekonometrijske politike: kritika" (*Econometric Policy Evaluation: A Critique*) iz 1976. godine doneo Nobelovu nagradu.

U Čikago se vratio 1974. godine, a 1980. je postao profesor na Univerzitetu u Čikagu, gde i danas radi.

Iz braka sa Ritom Koen, sa kojom se venčao 1959. godine u Njujorku, ima sinove Stivena i Džozefa. Od 1982. godine je u drugom braku sa koleginicom Nensi Stouki.

Profesionalno angažovanje

Lukasova ulaznica u svet poznatih ekonomista i naučnika od autoriteta bio je rad "Očekivanja i neutralnost novca" (*Expectations and the Neutrality of Money*) iz 1972. godine. Sa ovim i još nekim njegovim pionirskim radovima hipoteza o racionalnim očekivanjima postala je standardni okvir i polazište daljih proučavanja formiranja očekivanja, kao na primer uz ograničenu racionalnost, ograničen kapacitet procesiranja informacija ili uz postepenost učenja. Sa Lukasovim doprinosom otpočelo je stvaranje novog područja u ekonometriji - ekonometrije racionalnih očekivanja. U ovom području se koriste rezultati teorijske analize posledica primene hipoteze o racionalnim očekivanjima prilikom identifikacije najpogodnijih metoda ocene ovih relacija i modela u kojima očekivanja predstavljaju ključnu komponentu. Neki od ranih doprinosa štampani su u radu Lukasa i Sardženta iz 1981. godine.

Teorija endogenog ekonomskog rasta u oblasti makroekonomije, čiji je tvorac Robert Lukas, nastala je u periodu naglog razvoja ove oblasti ekonomije. Tada se pojavilo nekoliko klasičnih radova među kojima i Lukasov "O mehanici ekonomskog razvoja" (*On the Mechanics of Economic Development*). U njima se iznose nova shvatanja da je stopa rasta privrede određena endogeno, jer akumulacija fizičkog kapitala, ljudskog kapitala i novih tehnoloških znanja ne dovodi do opadajućih prinosa. Danas velika grupa Lukasovih sledbenika radi na problemima endogenog rasta, a odgovarajuća literatura postaje sve bogatija.

Lukasova bogata karijera traje do današnjih dana. Iako je ušao u devetu deceniju života, veoma je profesionalno angažovan, voljan da ponekad za časopise i novine daje tumačenja aktuelnih događanja iz sveta ekonomije sa prognozama daljeg razvoja događaja.

Rad Roberta Lukasa "doprineo je naglom i revolucionarnom razvoju u primeni hipoteze o racionalnim očekivanjima, pojavi teorije ravnotežnih privrednih ciklusa i makroekonometrijskom vrednovanju efekata ekonomske politike" (Babić, 2004: 240-241). Smatra se osnivačem nove klasične ekonomike jer je "uveo visoke metodološke standarde u oblasti makroekonomske analize i time je učinio naukom zavidnog stepena egzaktnosti" (Babić, 2004: 241).

to Probability Theory and Its Applications.

Under the guidance of Arnold Harberger and Gregg Lewis, Lucas started his doctoral dissertation "Elasticities of substitution between capital and labor based on the US industry data". The thesis was completed in 1963 when he got a faculty position at the Graduate School of Industrial Administration (GSIA) at Carnegie Institute of Technology. He defended his doctoral thesis in 1964 at the University of Chicago.

In this period Lucas met many scientists, economists, authors of the famous books in this field, including: Allan Meltzer, Thomas Sargent, Edward Prescott, Leonard Rapping, Herbert Simon, Edmund Phelps, etc. During his stay at Carnegie, as a doctoral student, together with Edward Prescott, he wrote the paper titled "Investment under Uncertainty". Lucas's paper "Expectations and the Neutrality of Money", written in 1970 and published in 1972, is his most significant paper, which, together with the paper from 1976 titled "Econometric Policy Evaluation: A Critique", brought him the Nobel Prize.

He returned to Chicago in 1974, and in 1980 he became a professor at the University of Chicago, the position he holds today.

In 1959 in New York he married Rita Cohen, with whom he has two sons, Stephen and Joseph. Since 1982 he has lived with his colleague Nancy Stokey.

Professional engagements

Lucas entered the scene of the world-famous economists and scientists of authority after he wrote his paper "Expectations and the Neutrality of Money" in 1972. Thanks to this and some other pioneer papers that he wrote in this field, the rational expectations hypothesis became a standard framework and a starting point for further research of expectations formation, including, for instance, limited rationality, limited information processing capacity, or gradual learning. Lucas contributed to the creation of a new field in econometrics – econometrics of rational expectations. This field uses the results of the theoretic analysis of implications of rational expectations hypothesis, in the process of identifying the most suitable methods to assess these relations and models in which expectations are the key component. Some of the earlier contributions were published in the paper written by Lucas and Sargent in 1981.

The theory of endogenous economic growth in the field of macroeconomics was created by Robert Lucas in the period marked by a sudden development of this field of economics. It was then that several classic papers were published, including Lucas's "On the Mechanics of Economic Development". These papers presented some new ideas to the point that the economic growth rate is defined endogenously, given that the accumulation of physical capital, human capital and new technological knowledge does not result in declining revenues. Today a large group of Lucas's disciples work on the problems related to endogenous growth, and the relevant literature becomes more extensive by day.

Lucas's intricate career has lasted till the present day. Although he entered the ninth decade of his life, he is still professionally engaged, willing to provide interpretations of the current events in the world of economy, and forecasts of the further developments, to occasional magazines and newspapers.

The work of Robert Lucas "contributed to a sudden and revolutionary development in the implementation of the rational expectations hypothesis, creation of the theory of equilibrium economic cycles and macroeconomic valuation of economic policy effects" (Babić, 2004: 240-241). He is considered the founder of the new classic economics because he "introduced the high methodological standards into the macroeconomic analysis, thereby making it a science of an enviable level of exactness" (Babić, 2004: 241).

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