



PSIHOLOGIJA I EKSPERIMENT - NEZAOBILAZNI ČINIOCI EKONOMSKIH ISTRAŽIVANJA

*Daniel Kaneman
i Vernon Smit*

Nobelova nagrada za 2002.

“Savremena istraživanja, kombinujući ekonomiju i psihologiju, pokazuju da su koncepti ograničene racionalnosti, ličnog interesa i samokontrole bitni faktori formiranja ekonomske pojave. Kao posledica korisnosti primene eksperimenata u ekonomiji, sve veći broj ekonomista smatra ovakve metode nezamenljivim alatom u istraživanjima. Nove generacije ekonomista povezuju nekada suprotstavljene oblasti eksperimentalne ekonomije i ekonomske psihologije. Vernon Smit i Danijel Kaneman, ključni inicijatori ovih procesa, najzaslužniji su za ovakve uzbudljive promene u ekonomskom istraživanju.”
(V.Vučković)

Nobelovu nagradu za ekonomiju Kaneman je dobio 2002. godine za integraciju psiholoških istraživanja i odlučivanja u uslovima neizvesnosti u nauku o ekonomiji. Smit je, u istoj godini i za istu oblast nagrađivanja, Nobelovu nagradu dobio za ustanovljavanje laboratorijskih eksperimenata kao alata u empirijskim ekonomskim analizama, naročito u proučavanju alternativnih tržišnih mehanizama.



*Daniel Kahneman and
Vernon L. Smith
Nobel Prize for 2002*

“Combining economics and psychology, contemporary studies indicate that the concepts of limited rationality, personal interest and self-control stand as significant factors for the formation of an economic phenomenon. Due to the usefulness of conducting experiments in economics, an increasing number of economists consider such methods to be irreplaceable research tools. New generations of economists interconnect once opposed fields of experimental economics and economic psychology. Vernon Smith and Daniel Kahneman, the key initiators of these processes, are to be thanked for these exciting changes in the field of economic research.” (V.Vučković)

Kahneman won the Nobel Prize in Economics in 2002, for having integrated psychological research and decision-making under uncertainty into economic science. The same year Smith won the Nobel Prize in the same field, for having established laboratory experiments as a tool in empirical economic analysis, especially in the study of alternative market mechanisms.

PSYCHOLOGY AND EXPERIMENT - UNAVOIDABLE COMPONENTS OF ECONOMIC RESEARCH

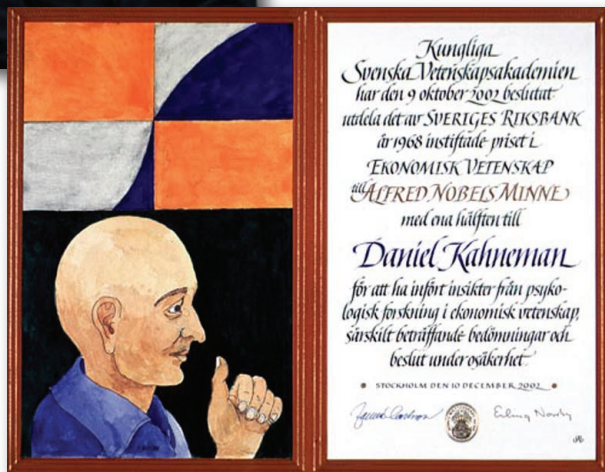
Doktor psihologije

Daniel Kaneman je rođen u Tel Avivu 1934. godine. Njegova porodica je Drugi svetski rat provela u Parizu odakle se u Izrael vratila 1946. Još kao dečak Kaneman se zainteresovao za psihologiju, jer je njegova majka volela da priča sa suprugom i prijateljima o kompleksnosti ljudske prirode. Seća se jednog događaja u školskoj 1941-

42. godini: Vraćao se iz škole sa jevrejskom zvezdom na kaputiću kada ga je zaustavio jedannemački vojnik, koji ga je sa pažnjom gledao a potom i zagrlio.

Pokazao mu je sliku svog sina, jer ga je na njega podsetio, i dao mu nešto para. Školarac Kaneman je tada zaključio da mu je majka u pravu kada govori da su ljudi zanimljivi i komplikovani. Otac mu nije otišao u logor zahvaljujući poslu istraživača u fabrici hemije i preporukama te firme. Morali su da se sklone u Viši a potom su pobjegli u centralni deo Francuske. Zbog neadekvatnog lečenja otac mu umire 1944. godine od dijabetisa. Sa sestrom i majkom 1946. godine odlazi za Izrael, gde je morao da ponovi osmi razred, ali je bio mnogo srećniji nego u Francuskoj jer se nije razlikovao od druge dece.

Sa sedamnaest godina prijavio se u vojsku, u jedinicu koja mu je omogućila da nastavi sa školovanjem. Odnosno, tokom godine išao je u školu a leti u vojsku. Već tada je znao da će biti psiholog pošto su ga zanimala pitanja o suštini života, postojanje boga, šta su moralna ograničenja u ponašanju itd.



Studije je završio na Hebrejskom univerzitetu u Jerusalimu, diplomirao je psihologiju i matematiku. Vojsku je završio 1956. godine kada mu je odobrena stipendija za doktorske studije, pod uslovom da se vrati na katedru za psihologiju ovog fakulteta. Sa suprugom Irom odlazi u San Francisco gde počinje postdiplomske studije. Doktorat stiže iz oblasti psihologije 1961. godine na Univerzitetu Kalifornija.

Po završetku doktorskih studija vraća se na univerzitet u Jerusalim. Taj posao je voleo, radio ga je odlično i sa zadovoljstvom. Prvo uspešno istraživanje sproveo je 1965. godine na univerzitetu u Mičigenu. Istraživanja su se odnosila na emotivna stanja pod hipnozom. Nakon dve godine, vratio se u Jerusalim kao iskusan psiholog istraživač. Od 1968 do 1969. godine držao je seminare o primeni psihologije u realnom svetu. Potom, 1969. godine na katedri u Kembridžu radi na istraživanju u oblasti

primenjene psihologije.

Osam godina posle venčanja sa Anom Trajsman, 1986. godine, odlaze u Berkli gde predaje na Univerzitetu Kalifornija. Na Princeton univerzitet, na katedru za psihologiju

i ekonomiju, prelazi 1993. godine gde se i danas nalazi. Njegova deca i unučići ostali su u Izraelu.

“U iscrpnom istraživanju ljudskog ponašanja baziranog na eksperimentima, Daniel Kaneman je doveo u pitanje pretpostavke o racionalnom odlučivanju u određenim situacijama. Vrednovanje u stvarnom svetu često se ne odvija prema zakonu verovatnoće, niti se odlučivanje odvija u skladu sa principima maksimizacije korisnosti. Profesor Kaneman (najčešće u saradnji sa u 1996. godini preminulim Amosom Tverskijem) je pokazao da ekonomski akteri ne mogu da obave sveobuhvatnu analizu složenih problema kada su buduće posledice neizvesne. U takvim uslovima oni će se pre osloniti

Doctor of Psychology

Daniel Kahneman was born in Tel Aviv in 1934. During the Second World War, his family was in Paris, from which they came back to Israel in 1946. Already as a young boy, Kahneman developed an interest in psychology, because his mother loved to discuss the complexity of human nature with her husband and friends. He vividly remembers one experience from the school year of 1941-1942: As he was coming back from school wearing the Star of David on his coat, a German soldier approached him, looked at him intently and then hugged him. He showed him a picture of his son, which little Kahnman reminded him of, and gave him some money. The little schoolboy went home more certain than ever that his mother was right - people were endlessly complicated and interesting. His father was not taken to a prison camp thanks to his position of a researcher in a chemical factory and an intervention of his firm. Still, they had to escape to Vichy, France, and then to central France.

In 1944 his father died of inadequately treated diabetes. In 1946, with his mother and sister, he went to Israel, where he had to enrol in the eighth grade for a second time, but where he was much happier than in France, since he was no longer exceptional.

At the age of seventeen, he enrolled in the army, choosing a unit that allowed him to defer his service until he completed his schooling. Thus, he went to school all year round, and spent his summers doing military training. Even back then he knew

that he would become a psychologist, since the questions he was interested in included the meaning of life, the existence of God, moral reasons not to misbehave, etc. He graduated from the Hebrew University in Jerusalem, with a major in psychology and a minor in mathematics. He came out of the Army in 1956, when he was granted a fellowship to obtain a PhD abroad, on condition that he returns to teach in the psychology department of the Hebrew University. With his wife, Irah, he went to San Francisco, where he began his post-graduate studies. He gained his PhD in psychology in 1961 at the University of California.

After the completion of his doctoral studies, he returned to the Hebrew University in Jerusalem. He loved teaching; he was good at it and quite enjoyed it. His first successful research was conducted in 1965 at the University of Michigan. He investigated the grip of powerful emotional states induced by hypnosis. After two years, he returned to Jerusalem as an experienced, well-trained research psychologist. From 1968 to 1969 he taught seminars on the application of psychology to real-world problems. After that, he spent the summer of 1969 doing research in applied psychology in Cambridge, England.

Eight years after marrying Anne Treisman, in 1986, they moved together to Berkeley, University of California, where he started teaching. In 1993, they moved to Princeton University, Psychology and Economics

Department, where he still teaches today. His children and grandchildren remained in Israel.

“In his extensive research of human behaviour based on experiments, Daniel

Kahneman brought into question the assumptions on rational decision-making in certain situations. Real world valuation



na iskustvo ili opšte prihvaćeno pravilo.” (V.Vučković)

Kaneman i Tverski razvili su 1979. godine teoriju izgleda u svom najpoznatijem radu “Prospect Theory: An Analysis of Decisions under Risk”. Teorijom se objašnjavaju odstupanja od tradicionalnog koncepta: otpor da se umanju potrošnja na lošu vest o dugoročnim prihodima ili da se nakon već učinjene kupovine raspituje o cenama istog proizvoda i sl.

Tvorac standarda za uspešnost eksperimenata u ekonomskim istraživanjima

Vernon Smit je rođen 1927. godine u Vičiti koja ja smeštena u ravninama Kanzasa. Rano detinjstvo proveo je u godinama velike ekonomske krize. Otac Vernon Česman Smit radio je kao mehaničar dok mu je majka Lulu Bel Lomaks bila domaćica. Uložili su novac u farmu na koju su se preselili kada je Vernonov otac 1932. godine izgubio posao. Težak život na farmi bio je još mukotrpniji bez struje i vode. Dok su živeli na farmi Smit je išao u seosku školu. Kada se otac vratio na posao 1934. godine i kada su izgubili farmu zbog hipoteke, prešli su u grad gde je Vernon nastavio da ide u školu. U gradskoj školi Vernon je bio dobar đak. U devetom razredu radio je i u apoteci, biciklom je raznosio lekove po kućama. U leto 1943. godine, počeo je da radi u Boingu. To mu je odgovaralo zbog dobre zarade, a ujedno je mogao da ide u letnju školu. Srednju školu je završio 1944. godine. Veoma brzo je prestao da radi u Boingu i godinu dana se pripremao za fakultet iz matematike,

fizike, astronomije i književnosti. Nakon toga, položio je prijemni na Kaltek fakultetu i sredinom 1945. postao student. Naporno je radio ali i uživao na predavanjima iz hemije, fizike i drugih predmeta, posebno kada su gostovali poznati svetski naučnici. U toku studija prebacio se na elektrotehniku na istom fakultetu - Kaltek gde je i diplomirao. Magistrirao je 1952. godine na Kanzas univerzitetu. Doktorat iz ekonomije odbranio je 1955. godine na Harvardskom univerzitetu.

U brak sa Džojz Harkleroud ušao je 1950. godine a blizance, devojčicu i dečaka, dobili su 1951. Posle 4 godine rodila im se još jedna ćerka. U avgustu 1955. porodica se preseljava jer je Smit dobio zaposlenje na univerzitetu Purdu kao predavač Principa ekonomije. U Šerborn su se preselili 1967. i živeli do 1972. godine. Predavao je na Braun univerzitetu, Univerzitetu Masačusets a 1972. godine prihvatio je mesto u Centru za napredne studije u oblasti biheviorističkih nauka. Vernon je držao seminare i na fakultetu u Arizoni te se seli u Tukson, glavni grad Arizone. Ženi se drugom ženom - Kerol Brekner i dobija sina 1981. godine. Trenutno predaje ekonomiju i prava na Univerzitetu Džordž Mejson.

U ranim eksperimentima subjektima je nasumično dodeljivana uloga kupca ili prodavca, koji su, po prirodi stvari, različito vrednovali određeni proizvod (izrazi za vrednost su bili najmanja / najveća cena koju prodavci / kupci smeju da prihvate). Smit je ustanovljavao teorijsku ravnotežu cena, koju je prihvatao isti broj kupaca i prodavaca. Smit je, na svoje iznenađenje, otkrio da su cene dobijene u laboratorijskim uslovima bile veoma bliske teorijskim nivoima, iako su subjekti imali manje informacija od potrebnih za izračunavanje ravnotežne cene. I kasnija istraživanja su rezultirala sličnim



Daniel Kaneman prima nagradu od švedskog kralja
Daniel Kahneman receiving his Prize from His Majesty the King

often does not occur in line with the law of probability, nor is the decision-making process in line with the principles of maximization of usefulness. Professor Kahneman (most frequently in cooperation with Amos Tversky, who passed away in 1996) showed that economic entities cannot perform a comprehensive analysis of complex problems when the future consequences are uncertain. In such circumstances, they will rather rely on their experience or on a generally accepted rule." (V.Vučković)

In 1979 Kahneman and Tversky developed a prospect theory in their most famous paper, titled "Prospect Theory: An Analysis of Decisions under Risk". The theory explains the deviations from the traditional concept: aversion to reduce the consumption after the bad news about long-term income or to ask about the prices of the same product after the purchase has already been conducted, etc.

Creator of Standards for Successful Experiments in Economic Research

Vernon Smith was born in 1927 in Wichita, on the flat plains of Kansas. He spent his early childhood in the years leading to the Great Depression. His father Vernon Chessman Smith worked as a machinist, and his mother Lulu Belle Lomax was a housewife. They invested their money in a farm onto which they moved after Vernon's father lost his job in 1932. The harsh life on the farm was even more difficult with no indoor water or electricity. While they were living on the farm, Smith went to the village school. After his father got his job back in 1934, and when they lost their farm due to heavy mortgage, they moved to the city where Vernon continued his schooling. He performed well in the city school. In the ninth

grade, he began to work for the West Side Drug store, delivering prescription medicines on his bicycle to customers who called in orders. In the summer of 1943, he started working at Boeing Aircraft. This suited him because of the excellent wages, and because he could attend a summer school in parallel. He graduated from high school in 1944. Soon he stopped working for Boeing, and took a year to prepare for the university entrance exam in mathematics, physics, astronomy and literature. After that, he passed the entrance exam at Caltech University, and in mid 1945 became a student. He studied hard, but also enjoyed the lectures in chemistry, physics and other subjects, especially when delivered by some famous scientists as visiting professors. In the course of his studies, he switched to electrical engineering at the same University, where he graduated. He went to the University of Kansas to get an MA in 1952. He defended his PhD thesis in economics at Harvard in 1955.

In 1950 he married Joyce Harkleroad, and in 1951, she gave birth to twins, a boy and a girl. Four years later, their second daughter was born. In August 1955 the family moved to his first teaching post, at Purdue University, where he taught Principles of Economics. In 1967 they moved to Sherborn, where they lived until 1972. He taught at Brown University,

then at the University of Massachusetts, and in 1972 he accepted a fellowship at the Center for Advanced Study in the Behavioral Sciences. Vernon also delivered seminars at the University of Arizona, hence they moved to Tucson, the capital of Arizona. He married his second wife - Carol Breckner, who gave birth to their son in 1981. He currently



Vernon Smit prima nagradu od švedskog kralja

Vernon L. Smith receiving his Prize from His Majesty the King



Daniel Kaneman i Vernon Smit na ceremoniji dodele nagrade
Daniel Kahneman and Vernon L. Smith at the Prize Award
Ceremony

zaključkom. Uz to, uočeno je da ishod zavisi od tipa tržišta koji je eksperimentom simuliran.

Najveći broj njegovih eksperimenata bavio se aukcijom, na kojima se tradicionalno obavlja trgovina berzanskim proizvodima, kao i akcijama i ostalim finansijskim instrumentima. Smit je testirao nekoliko teorijskih pretpostavki u vezi sa očekivanim rezultatima aukcija. U određenim slučajevima dobijeni su očekivani rezultati: prodavac na aukciji može očekivati iste prihode od engleskog tipa aukcije (prihvata se najveća ponuđena cena u nadmetanju kupaca) i aukcija sa zapečaćenom ponudom kod koje najbolji ponuđač plaća drugu najveću cenu. Ipak, određene pretpostavke su eksperimentom oborene: holandska aukcija (cena se sukcesivno smanjuje dok je kupac na prihvati) ne daje iste rezultate kao aukcija sa zapečaćenom ponudom kod koje prodavac prihvata najbolju

ponudu. Eksperimenti su takođe pokazali da engleska aukcija i zapečaćena ponuda sa drugom najvećom cenom rezultuju najvećom prosečnom prodajnom cenom, sledi zapečaćena ponuda sa najboljom ponudom i, na kraju, holandska aukcija.

Smit je inicirao laboratorijske eksperimente gde se unapred simuliraju alternativni aukcioni mehanizmi za privatizaciju prirodnih monopola (naročito telekomunikacionih sistema). Eksperimenti u ovim oblastima su naročito korisni, jer, kada su u pitanju kompleksni sistemi, zaključivanje o ishodima samo na bazi teorijskih koncepata nedovoljno je i neprecizno. Smit je rukovodio eksperimentima vrednovanja različitih načina organizacije tržišta energenata u Australiji i na Novom Zelandu, a rezultati eksperimenata su imali značajnu ulogu u implementaciji konkretnog tržišnog ambijenta.

Nedostatke eksperimenata Smit objašnjava činjenicom da uticaji za ispitanike nisu isti kao u realnim životnim situacijama. Zato razvija metode u kojima se motivi ispitanika usmeravaju ka povećanju verovatnoće da rezultati eksperimenata budu bliski realnim tržišnim pojavama. Smit je ustanovio metodološke standarde za sprovođenje uspešnih eksperimenata u ekonomskim istraživanjima. Tako je među prvima začeo novi pravac i do danas ostao vodeći istraživač u ovoj oblasti.

Svetlana Pantelić
Specijalista za marketing i informisanje UBS

teaches economics and law at the George Mason University.

In his early experiments, the subjects were randomly assigned the roles of a buyer or seller, who, naturally, valued certain products differently (expressions of value were in the form of the lowest/highest price that the sellers/buyers were allowed to accept). Smith wanted to establish the theoretical equilibrium of prices, which was accepted by the same number of buyers and sellers. At his own surprise, Smith discovered that the prices obtained in laboratory conditions were rather close to the theoretical levels, although the subjects had less information than necessary for calculating the price equilibrium. His later investigations also resulted in the same conclusion. In addition, it was observed that the outcome depends on the type of market simulated in the experiment.

The majority of his experiments dealt with auctions, which traditionally involve the trade of stock exchange products, along with shares and other financial instruments. Smith tested several theoretical assumptions concerning the expected results of auctions. In certain cases, he got the expected results: the seller at the auction may expect the same profit from the English auction (the highest bid price is accepted by the bidding buyers) and sealed-bid second-price auction in which the best bidder pays the second-highest price. However, certain assumptions were denied by this experiment: Dutch auction (the price is being successively lowered until the buyer accepts it) does not yield the same results as the sealed-bid first-

price auction in which the seller accepts the best offer. Experiments also showed that English auction and sealed-bid second-price auction result in the highest average selling price, followed by sealed-bid first-price auction, and, finally, Dutch auction.

Smith initiated laboratory experiments where alternative auction mechanisms for privatization of natural monopolies (in particular, telecommunication systems) are simulated in advance. Experiments in this field are particularly useful, because when it comes to complex systems it is insufficient and inaccurate to draw conclusions about outcomes solely on the basis of theoretical concepts. Smith managed the experiments concerning the valuation of different ways of organization of energy markets in Australia and New Zealand, with the experiment results playing a significant role in the implementation of a concrete market environment. Smith explained the drawbacks of his experiments by referring to the fact that the influences on respondents were not the same as in real-life situations. Therefore, he developed the methods in which the motives of his respondents were directed towards the increase in probability of experiment results getting closer to the real-life market phenomena. Smith established the methodological standards for conducting successful experiments in economic research. Thus, he pioneered the new direction and has, till the present day, remained the leading researcher in this field.

Literatura / References

1. Vladimir Vučković: Daniel Kahneman i Vernon L. Smith, Ekonomisti nobelovci 1990-2003.
2. www.nobelprize.org
3. Ekonomisti Nobelovci 1990-2003. Centar za izdavačku delatnost Ekonomskog fakulteta u Beogradu, redaktor dr Branislav Pelević