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## Nobel Laureate Abhijit Vinayak Banerjee: A Scientometric Portrait, 1987-2019

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# Nobel Laureate Abhijit Vinayak Banerjee: A Scientometric Portrait, 1987-2019

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## **Abstract:**

Nobel Memorial Prize in economics is selected by the Royal Swedish Academy of Sciences and first awarded in the domain in 1969; the latest in 2019 was awarded to the Indian-born American economist Prof. Abhijit Vinayak Banerjee along with Esther Duflo and Michael Kremer. The present study attempted to measure and analyse the research publications of Prof. Banerjee during 1987 to 2019 based on the data available in Google Scholar database. A total of 333 documents published during this period in which 35.74 percent were published as journal articles. Till 2004 the mean relative growth rate of his publications was 0.237 and doubling time was 3.29 whereas from 2005 to 2019 the relative growth rate decreased to 0.077 and the time for doubling increased to 10.20. Esther Duflo was the most prolific co-author of the publications of Prof. Banerjee with 120 documents shared out of 333 by them. The collaboration rate of all publications was 0.89 identifies most of his publications written in collaboration. The journal he used for most of his research to publish was mainly USA based. He has produced numbers of publications which received huge citations, and during May, 2020 the h-index counted 87 according to Goggle Scholar citation counts.

**Keywords:** Abhijit Vinayak Banerjee; Nobel Laureate; Scientometrics; Relative Growth Rate; Doubling Time.

## **1. Introduction:**

The modern scientometrics largely based on the contribution of Derek J. de Solla Price and Eugene Garfield. Garfield created the Science Citation Index and established a dedicated academic journal for the field, named as 'Scientometrics' in 1978. While the other fields, like sociology were engaged to present the behavioural approaches of a scientist, scientometrics focused on the measurement of research outputs. The term 'Scientometrics' also deals with the scientific study of science and its outcomes.

A Scientist or a Nobel laureate or an expert of any field largely knew for his contribution to the field of his expertise or contribution to the society. This contribution could be made by producing scientific publications. The technique of scientometric analysis includes both the quantitative and qualitative indicators. These indicators could be very useful to study of an individual's research outcomes through which he has done so many impacts on the society.

Prof. Abhijit Vinayak Banerjee received the Nobel Memorial Prize in Economic Sciences in 2019 along with Esther Duflo and Michael Kremer. They introduced an experimental approach to 'alleviating the global poverty'. Their work basically has done on the relatively low and lower-middle income based countries where they have done the experiment to understand the small and specific problems associated with the poverty and identified the best possible cures to those problems through the field experiments which has designed very carefully and applied over more than two decades. Their field work became standard later in the field of development economics. Not only has this contribution been made by Prof. Banerjee for the field, he has also produced several other research contributions to the field. By keeping in mind the contribution he has already in the mid-way of his professional career the present study has attempted to measure and analyse the research contribution through the indicators of scientometrics study.

## **2. Abhijit Vinayak Banerjee, A Brief Biography:**

Prof. Abhijit Vinayak Banerjee was born on 21<sup>st</sup> February 1961 at Mumbai, India. The Indian-born American economist was awarded the Nobel Memorial Prize in Economic Sciences with Esther Duflo and Michael Kremer in 2019 "for their experimental approach to alleviating global poverty."<sup>1</sup>

Prof. Banerjee completed his schooling from South Point High School at Calcutta and also completed his B.Sc. in economics at the University of Calcutta in 1981, M.A. from Jawaharlal Nehru University in 1983 and awarded Ph.D. in 1988 from Harvard University, the title of his doctoral thesis was 'Essays in Information Economics'. Both his parents was also served as Professors of economics, where his father at Presidency College was then an affiliated college to University of Calcutta now Presidency University, an autonomous university of West Bengal and mother at Centre for Studies in Social Sciences, Calcutta.

In 2003, Prof. Banerjee appointed as a Ford Foundation International Professor of Economics at Massachusetts Institute of Technology (MIT). In this year he also established Abdul Latif Jameel Poverty Action Lab (J-PAL) with collaboration to Esther Duflo and Sendhil Mullainathan. He plays the role of one of the directors at J-PAL.

Prof. Banerjee's main field of interests was on the areas such as economic development, information theory, theory of income distribution, macroeconomics etc. Before 2003 he has served many universities, such as Harvard, Princeton, MIT, Paris School of Economics as associate, and assistant or visitor professor in economics. Apart from Nobel Prof. Banerjee has received several fellowships and honorary awards from different institutions around the

world. He has associated and served several professional services and has published so many documents during his professional career and he will go on by doing the same in future also.

### **3. Literature Review:**

There are many scientometric; bibliometric studies have been attempted on eminent persons, scientists of several fields and also on Nobel laureates to measure the research productivity of individual authors. Some of these studies are as follows to understand the main focusing areas of such studies -

**Garg, K. C. and Kumar, N. (2019)** analysed research publications of Dr. Hari Chand Sharma who was a renowned agricultural scientist. A total of 595 research publications were identified during 1976 to 2016 and analysed with scientometric indicators like publication productivity, collaboration rate, collaboration coefficient, authorship pattern, channels of communication, citation analysis and so on. For identifying citation data the study based on Google Scholar database. His most number of papers was journal articles consisting 45.2% of total outputs and based on these journal articles only they found only 11 publications of single authored. The study also noted that the peak year of productivity was at the age of 58 by Dr. Sharma.

**Sinha, A. K. (2017)** has attempted to present a scientometric profile of Nobel laureate Amartya Sen based on the books published by him during the period 1960 to 2015. During this period of time he produced 43 books and among them most of his books has been written with Jean Dreze collaboratively. The study also identified that during 2000 to 2009 most of his books were written. Social problems, politics, government and financial economics were the main areas of the books authored by Bharat Ratna Amartya Sen.

**Mukherjee, B. (2013)** has studied 222 unique articles produced by Prof. Lalji Singh during 1987 to 2011. Web of Science and Scopus have been used as the source of bibliographic information and in both the databases the h-index of Prof. Singh was 30. Most of the articles of Prof. Singh appeared in foreign journals whereas only 18 in Indian journals. He produced 7-8 articles averagely in every year.

**Munnolli, S. S., Pujar, S. M. and Kademani, B. S. (2011)** have measured the publication productivity of Nobel laureate Harald zur Hausen. The study found 285 research publications including 267 journal articles during 1964 to 2009 published by Harald zur Hausen. 1986 noted peak year of publications with 16 papers. *International Journal of Cancer* was the most preferred journal of Harald zur Hausen with 48 publications.

### **4. Objective of the study:**

To study the attributes of research publications of Nobel Laureate Abhijit Vinayak Banerjee with the tools and techniques of scientometric study, for instance some of these are

publication productivity, growth of publications, authorship pattern, collaboration rates, channels of publication, citation analysis etc.

## 5. Methodology:

The present study intends to measure the research publications published by Nobel Laureate Abhijit Vinayak Banerjee during 1987 to 2019. All types of documents published during this period of time has been identified from two sources mainly, one is the updated CV from MIT's official website which has been uploaded in 20<sup>th</sup> of May 2020 and the second source was Google Scholar, accessed during May, 2020 where all his works has been listed with the citation data. By omitting the duplicate documents, 333 documents has been identified and analysed by the several indicators of scientometric analysis. The data pertaining to publications of Abhijit Vinayak Banerjee were analysed using MS-Excel.

## 6. Results and Discussions:

### 6.1 Year wise distribution of research output

Table 1 shows the distribution of all research outputs of Abhijit Vinayak Banerjee as retrieved from Google Scholar database during 1987 to 2019. During a span of 33 years of research publications a total of 333 research publications were identified at an average of approx 10 publications in each year. The first publication when he was 26 years old was found in the year of 1987, and the first three years he has published only 1 publication in each year. By the year goes the number of publications also increased and in the fourth year, i.e. in 1990 it was increased 1 to 4 publications. He has published 20 or above number of publications four times in 2004, 2007, 2012 and 2019 respectively. The peak year of publication was found at the last year of the study period when he was 33 years of publishing age, i.e. 23 in the year of 2019.

**Table 1: Year wise distribution of publications and Collaboration rate**

Actual age of AV Banerjee (Born on-1961)	Year of Publication	Number of Publications under several authorships			Cumulative Total	Collaboration rate	Publishing age
		Single Authored	Multi-Authored	Total			
26	1987		1	1	1	1.00	1
27	1988		1	1	2	1.00	2
28	1989	1		1	3	0.00	3
29	1990		4	4	7	1.00	4
30	1991		3	3	10	1.00	5
31	1992	1	2	3	13	0.66	6
32	1993	2	3	5	18	0.60	7
33	1994		2	2	20	1.00	8
34	1995		1	1	21	1.00	9

35	1996	1	6	7	28	0.85	10
36	1997	1	3	4	32	0.75	11
37	1998		6	6	38	1.00	12
38	1999	2	4	6	44	0.66	13
39	2000	4	9	13	57	0.69	14
40	2001		8	8	65	1.00	15
41	2002	3	6	9	74	0.66	16
42	2003	1	10	11	85	0.90	17
43	2004	4	16	20	105	0.80	18
44	2005	2	15	17	122	0.88	19
45	2006	3	9	12	134	0.75	20
46	2007	4	16	20	154	0.80	21
47	2008	1	17	18	172	0.94	22
48	2009	1	12	13	185	0.92	23
49	2010	1	14	15	200	0.93	24
50	2011	1	17	18	218	0.94	25
51	2012		22	22	240	1.00	26
53	2013	1	7	8	248	0.87	27
54	2014		19	19	267	1.00	28
55	2015		11	11	278	1.00	29
56	2016	1	8	9	287	0.88	30
57	2017		12	12	299	1.00	31
58	2018		11	11	310	1.00	32
59	2019		23	23	333	1.00	33
<b>Total</b>		<b>35</b>	<b>298</b>	<b>333</b>			

## 6.2 Collaboration Rate

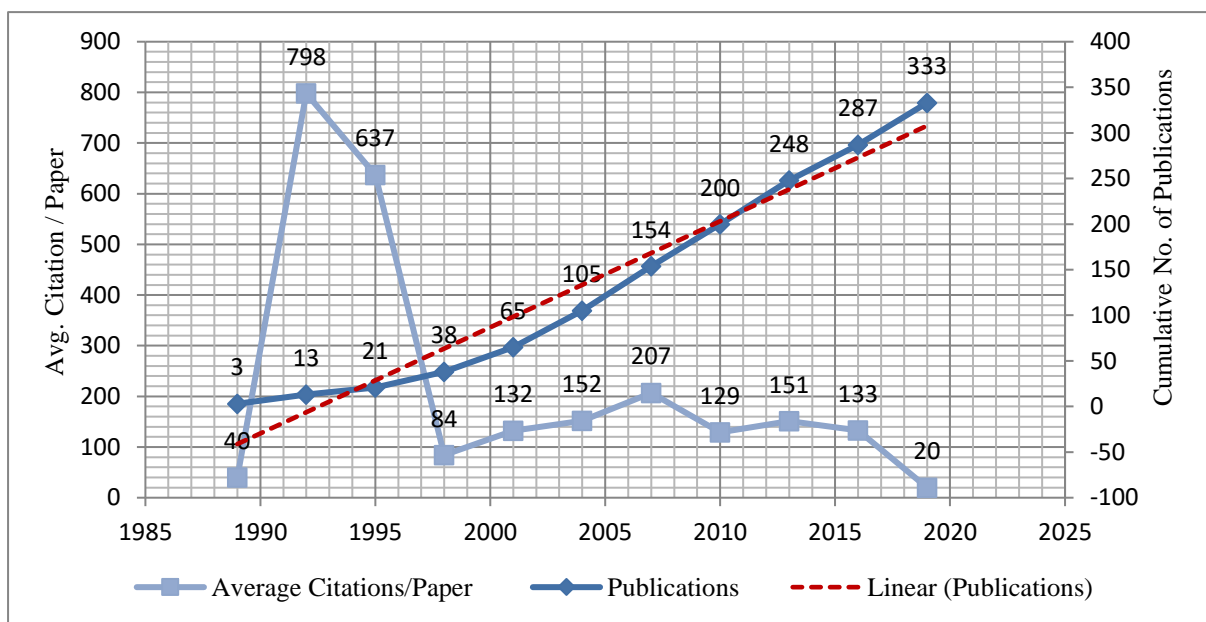
Collaboration rate is the ratio between multi authored papers and total papers published in a particular year or for a specific period of time. During the publishing career of 33 years till 2019 of Prof. Banerjee's contribution of single authored papers identified in 19 years, among these 19 years 2008 and 2011 identified as highest collaboration rate with 0.94 respectively, whereas 1993 noted lowest collaboration rate of 0.60. Table 1 also presents that Abhijit Vinayak Banerjee published most of his publications collaboratively. Only 35 (10.51%) publications out of 333 were published as single authored papers.

## 6.3 Growth of Publications

During 1987 to 2019, a span of 33 years of research output of Nobel laureate Abhijit Vinayak Banerjee has been measured. The whole period of time has been divided into 11 blocks of 3 years publications data in each of the blocks. To understand the pattern of growth figure 1 describes the growth of publication with cumulative total of the publications, where linear line indicates that the growth of publication was below till 2010 but then it was above the line

till the end date of the study. Among the 11 blocks of 3 years each block 7, i.e. the year in between 2005 to 2007 has noted highest number with 49 research publications. This block has also received the highest number of citations, which was accounted 10,148 citations at an average of 207 citations per publication.

A total of 53,756 citations had received by Abhijit Vinayak Banerjee’s 333 publications during the period. The average number of citations received per publication accounted 161, where only three blocks among the eleven was above the average number. 1990 to 1992 has identified as the peak years of received average citation per paper with 798 citations. The graph of average citation noted a decreasing ratio but it doesn’t prove that the publications has not impact as much as earlier publications, it could be happened cause of lack of time spent to publish of these publications, with the time it will receive more citations surely.



**Figure 1: Growth of publications and average citation pattern**

### 6.3.1 Relative Growth Rate (RGR)

The growth of publications of an individual or of an institution could be measured by calculating the relative growth rate over a period of time. The formula of relative growth rate derived from previous studies of Mahapatra, G. (1994) and Lohiya, R. K. (2016) -

$$RGR = \frac{\text{Log}_e N2 - \text{Log}_e N1}{T2 - T1}$$

Where,

RGR = Relative growth rate of publications over the specific period of time

Log<sub>e</sub> N1 = Log of the preceding number of publication

Log<sub>e</sub> N2 = Log of the following number of publication

T2 – T1 = The unit difference of period between initial and final year

### 6.3.2 Doubling Time (Dt)

Doubling time could utilized to measure the growth pattern of any field, for instance, population growth of any country could be measured by it. The doubling time in regard to measurement of publications means, the number of publications of an individual or of an institution doubles during a specific time. The doubling time closely associated with the measurement of relative growth rate. The doubling time refers to the ratio between the value of natural logarithms of 2, i.e.  $\text{Log}_e 2 = 0.693$  and the value of RGR.

Thus the formula could be represent as,

$$\text{Doubling Time (Dt)} = 0.693 / \text{RGR}$$

**Table 2: Block wise Relative Growth Rate and Doubling Time of publications**

Blocks	Year Range	Publications	Cumulative Total	Log <sub>e</sub> N1	Log <sub>e</sub> N2	Log <sub>e</sub> N2 - Log <sub>e</sub> N1	RGR= Log <sub>e</sub> N2 - Log <sub>e</sub> N1/ T2-T1	Mean RGR	Dt= 0.693/ RGR	Mean Dt	Received Citations	Avg. Citations / Publications
1	1987 - 1989	3	3	-	1.098	-	-	-	-	-	121	40
2	1990 - 1992	10	13	1.098	2.565	1.467	0.489	0.237	1.417	3.49	7978	798
3	1993 - 1995	8	21	2.565	3.044	0.479	0.160	0.237	4.331	3.49	5095	637
4	1996 - 1998	17	38	3.044	3.638	0.594	0.198	0.237	3.5	3.49	1434	84
5	1999 - 2001	27	65	3.638	4.174	0.536	0.179	0.237	3.871	3.49	3574	132
6	2002 - 2004	40	105	4.174	4.654	0.48	0.16	0.237	4.331	3.49	6100	152
7	2005 - 2007	49	154	4.654	5.037	0.383	0.128	0.237	5.414	3.49	10148	207
8	2008 - 2010	46	200	5.037	5.298	0.261	0.087	0.237	7.966	10.20	5946	129
9	2011 - 2013	48	248	5.298	5.513	0.215	0.072	0.237	9.625	10.20	7252	151
10	2014 - 2016	39	287	5.513	5.659	0.146	0.049	0.237	14.143	10.20	5198	133



11	2017 - 2019	46	333	5.659	5.808	0.149	0.050	13.86	910	20
<b>333</b>									<b>53,756</b>	<b>161</b>

Table 2 describes block wise the growth of publications in which total 33 years of publishing period divided into 11 of three years each. Out of these 11 blocks 5 of them have more than 40 publications accounted and 2005 to 2007 noted as the highest number of publications with 49. During 1990 to 1992 the relative growth rate accounted 0.489 which was highest among all other blocks. Till 2004 the mean RGR was 0.237 and the value of doubling time 3.49, whereas in the later period starting from 2005 to 2019 the mean RGR was 0.077 and the doubling time was 10.20. The value of mean RGR and Mean Doubling time were associated each other in reciprocal manner, when the relative growth rate was on the higher part means it will take less time to double the documents and when the relative growth rate was on the lower part, the time of doubling time will increase. A total of 53,756 citations accounted for 333 documents at an average of 161 citations received per documents.

Table 2 also presents the citation patterns of the documents published in each block. 2005 to 2007 noted highest number of citations for a three years period duration with 10,148 citations for 49 documents published at an average of 207 citations for each documents.

#### 6.4 Authorship pattern and most prolific authors

**Table 3: Authorship Patterns of works by Abhijit Vinayak Banerjee**

Sl. No.	Authorship Patterns	Number of publications	% of publications	Degree of collaboration
1	Single authored	35	10.5	(as suggested by Subramanyam, 1983)
2	Two-authored	117	35.14	$C = Nm/Nm+Ns$ $= 298/298+35$ $= \mathbf{0.89}$
3	Three-authored	62	18.62	
4	Four-authored	54	16.22	
5	More than four authored	65	19.52	<i>Where,</i> <i>C</i> = Degree of collaboration <i>Nm</i> = Number of multi-authored papers <i>Ns</i> = Number of single authored papers
<b>Total</b>		<b>333</b>	<b>100</b>	

Any research publication created by two or more than two authors is known to be collaborative papers. Starting from 1987 to 2019 a total of 333 publications has been identified written by Prof. Abhijit Vinayak Banerjee, out of which he wrote only 35 (10.5%) publications under single authorship. Out of the remaining 298 publications, he wrote 117 publications in two authorships, 62 in three authorships, 54 in four authorships and 65 in

more than four authorships. The most number of articles belongs to the group of two authorships with 35.14% of the total. The overall collaboration rate found 0.89 that denotes that most of the publications of Prof. Banerjee were written in collaboration (Table 3).

## 6.5 Most prolific Authors

**Table 4: Authors with most collaboration**

Sl. No.	Co-authors Name	Journal Articles	Other Documents	Total	Sl. No.	Co-authors Name	Journal Articles	Other Documents	Total
1	E Duflo	40	80	120	25	R Somanathan	3	3	6
2	R Hanna	8	14	22	26	E Breza	-	6	6
3	BA Olken	8	12	20	27	L Iyer	3	2	5
4	R Glennerster	4	11	15	28	R Chattopadhyay	-	5	5
5	P Aghion	7	6	13	29	J Lafortune	-	5	5
6	M Ghatak	6	6	12	30	N Singh	-	5	5
7	AG Chandrasekhar	3	7	10	31	R Arora	3	1	4
8	V Alatas	4	6	10	32	BD Solomon	3	1	4
9	S Sumarto	3	7	10	33	MS Saluja	3	1	4
10	R Banerji	-	10	10	34	J Shapiro	2	2	4
11	C Kinnan	-	9	9	35	T Piketty	3	1	4
12	S Cole	2	6	8	36	M Wai-Poi	-	4	4
13	P Bacchetta	4	4	8	37	M Kremer	-	4	4
14	R Pande	-	8	8	38	R Purnamasari	-	4	4
15	AF Newman	6	1	7	39	J Tobias	2	1	3
16	R Hornbeck	2	5	7	40	D Fudenberg	2	1	3
17	JW Weibull	-	7	7	41	D Mookherjee	-	3	3
18	D Karlan	-	6	6	42	U Becker	2	1	3
19	MO Jackson	2	4	6	43	T Fernandes	2	1	3
20	A Deaton	4	2	6	44	AS Guha	2	1	3
21	S Mullainathan	3	3	6	45	K Basu	2	0	2
22	J Kyle	3	3	6	46	MD Chaudhuri	2	0	2
23	P Bardhan	2	4	6	47	S Barnhardt	2	0	2
24	K Munshi	3	3	6					

Table 4 shows the list of co-authors who have written two or more than two documents with collaboration to Prof. Abhijit Vinayak Banerjee till 2019. There are 47 authors listed with two publications at least. The most number of publications as co-author of Prof. Banerjee counted 140, i.e. Esther Duflo with whom he jointly received the Nobel for Economic Sciences in 2019, whereas only 4 publications (sl. no. 37 in table 4) accounted for the other recipient of Nobel Prize jointly with them, i.e. Michael Kremer. Out of 333 total documents the percentage share of documents by E Duflo was 42.04% among which most of the cases Prof. Banerjee found in the first position of authors in the works done by them. Out of total 119 journal articles E Duflo also topped in the co-authors list with 40 publications. R Hanna and BA Olken were the other top co-authors of research papers published by Prof. Abhijit

Vinayak Banerjee during the time. There were more than 100 other authors also who shares 1 document as co-author of Prof. Banerjee.

## 6.6 Document Types Published by Abhijit Vinayak Banerjee

Abhijit Vinayak Banerjee has published 333 documents in his 33 years of professional career till 2019. Among these all documents the most published by him were Journal Articles with 119 papers (35.74%) followed by Books/ Book Chapters 88, Working papers 46, and Conference papers 18. He has also published different types of other documents also, for instance these were some technical reports, debates, lab findings, evaluation reports etc. Out of 333 documents 35 were not identified from the database.

**Table 5: Document types**

Sl. No.	Types of Documents	Number of publications	%
1	Journal Articles	119	35.74
2	Books/ Book chapters	88	26.43
3	Conference/Seminar papers	18	5.41
4	Working papers	46	13.81
5	Others	27	8.11
6	Not identified	35	10.5
<b>Total</b>		<b>333</b>	<b>100</b>

## 6.7 Channels of Communication

119 journal articles were identified out of total 333 documents during 1987 to 2019 published by Abhijit Vinayak Banerjee. These 119 articles published in more than 50 different journal titles. Among all these journal titles 16 were listed (Table 6) who has 2 or more articles. The most preferred journals by Abhijit Vinayak Banerjee were *The American Economic Review* with 12 articles, followed by *The Quarterly Journal of Economics* and *The Journal of Political Economy* with 9 and 8 publications respectively. The publishers of these top channels of communication for publication of journal articles by Prof. Banerjee were mostly preferred from USA with 10 publishers, whereas 3 of UK, 2 of India and 1 from Netherlands.

**Table 6: Top channels of communication preferred by Abhijit Vinayak Banerjee**

Sl. No.	Journal Name	Country	Published by	No of Articles
1	<i>American Economic Review</i>	USA	American Economic Association	12
2	<i>The Quarterly Journal of Economics</i>	UK	Oxford University Press	9
3	<i>The Journal of Political Economy</i>	USA	University of Chicago	8
4	<i>Journal of Economic Perspectives</i>	USA	American Economic Association	7
5	<i>The Review of Economic Studies</i>	UK	Oxford University	7

			Press	
6	<i>Economic &amp; Political Weekly</i>	India	Sameeksha Trust	7
7	<i>Annual Review of Economics</i>	USA	Annual Reviews	4
8	<i>Journal of Economic Literature</i>	USA	American Economic Association	4
9	<i>Journal of Development Economics</i>	Netherlands	Elsevier	3
10	<i>European Economic Review</i>	USA	Elsevier	3
11	<i>Journal of Monetary Economics</i>	USA	Elsevier	3
12	<i>Journal of the European Economic Association</i>	UK	Wiley-Blackwell	3
13	<i>Games and Economic Behavior</i>	USA	Elsevier	3
14	<i>Science</i>	USA	American Association for the Advancement of Science	3
15	<i>IIMB management review</i>	India	Indian Institute of Management Bangalore	2
16	<i>American Economic Journal: Applied Economics</i>	USA	American Economic Association	2
17	Others	-	-	45
<b>Total</b>				<b>119</b>

## 6.8 Productive publications by Abhijit Vinayak Banerjee

Table 7 presents 10 most cited works according to Google Scholar citation counts of Prof. Banerjee which all have more than 900 citations each since its publication. The most number of citations received by the work ‘A simple model of herd behavior’ which was a single authored contribution from Prof. Banerjee and the documents published in *The Quarterly Journal of Economics* in 1992. The article received 7457 citations till the time of data collection for this study which was in May, 2020. ‘Occupational choice and the process of development’ and ‘Poor economics: A radical rethinking of the way to fight global poverty’ were the other two top titles received 3579 and 3454 citations respectively.

**Table 7: Most productive publications**

Sl. No.	Work Details	Citations Received
1	Banerjee, A. V. (1992). A simple model of herd behavior. <i>The Quarterly Journal of Economics</i> , 107(3), 797-817.	7457
2	Banerjee, A. V. & Newman, A. F. (1993). Occupational choice and the process of development. <i>Journal of Political Economy</i> , 101(2), 274-298.	3579
3	Banerjee, A. V. & Duflo, E. (2011). Poor economics: A radical rethinking of the way to fight global poverty. New York: Public Affairs.	3154
4	Banerjee, A. V. et al. (2015). The miracle of microfinance? Evidence from a randomized evaluation. <i>American Economic Journal: Applied Economics</i> , 7(1), 22-53.	1981

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5	Banerjee, A. V. & Duflo, E. (2007). The economic lives of the poor. <i>Journal of Economic Perspectives</i> , 21(1), 141-168.	1897
6	Banerjee, A. V. & Duflo, E. (2003). Inequality and growth: What can the data say? <i>Journal of Economic Growth</i> , 8(3), 267-299.	1456
7	Banerjee, A. V. et al. (2007). Remedying education: Evidence from two randomized experiments in India. <i>The Quarterly Journal of Economics</i> , 122(3), 1235-1264.	1389
8	Banerjee, A. V. & Iyer, L. (2005). History, institutions, and economic performance: The legacy of colonial land tenure systems in India. <i>American Economic Review</i> , 95(4), 1190-1213.	1327
9	Banerjee, A. V. & Duflo, E. (2005). Growth theory through the lens of development economics. <i>Handbook of Economic Growth</i> , 1, 473-552.	1212
10	Banerjee, A. V. et al. (2013). The diffusion of microfinance. <i>Science</i> , 341 (6144).	976

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## Conclusion

The first publication of Abhijit Vinayak Banerjee was found at the age of 26 in 1987 and till 2019 he has published 333 documents in which most of them were journal articles. According to Google Scholar citation data many of his publications have received huge citations and at the time of data collection for this study his h-index was 87 (May, 2020).

The mean relative growth rate till 2004 was high but compared to that the rate has been decreased then and that is why the time for doubling of publications was also increased at later time of the study period. Prof. Banerjee has published most of his documents with collaboration to other authors, only 35 documents published as single authored. Among the documents types most of the documents were identified journal articles and the journals having most number of articles were American based journals. In *American Economic Review* the most number of articles were published. E Duflo, R Hanna and BA Olken were the most prolific co-authors of Prof. Banerjee's publications. The study concludes that the work done by Prof. Abhijit Vinayak Banerjee for which he received the Nobel Memorial Prize in 2019 has not only important for the development of the society, all his research works are equally important for the society and its development and also for the domain that he represents.

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