

# Recent Trends in Economics Research in India: A Study on EPW Articles (2017-2021)

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# Recent Trends in Economics Research in India: A Study on EPW Articles (2017-2021)

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This paper tries to capture the recent trends and patterns in research on Economics in India. This is done by examining articles in Economic and Political Weekly (EPW). By research in economics, the researcher not only means theoretical research in the subject. The researcher tries to cover all types of quantitative and qualitative research on economic aspects that originate from India. It is interesting to understand such regional trends and patterns of research in a particular subject. Research on any subject need not always follow symmetry in terms of areas that are covered or origins of research output. Understanding such skewness in trends and patterns of research will help future researchers to understand areas that are less researched upon and help them to fill lacunae in the subject area. For that we first need to understand the trends and patterns of research output in that particular subject. Since the researcher considers himself as a student of economics, the subject he is practicing, he has chosen to study the recent trends in economics. He is less unfamiliar with the subject and therefore chosen to work on recent trends in the same.

But the problem in such an endeavor is the multiplicity and plurality of research output in any subject. Research output in economics is spread both geographically and temporally in a huge space. Since the researcher face resource and time constraints, he chosen to limit his study to past five years and to India the country in which he belong to. The researcher is less unfamiliar with the research environment in his home country than other countries. Even within India there are many sources of research output. They are diverse in quality and quantity. It is not possible for the researcher to access and analyze all of them. So he prefers to confine himself to articles in EPW for more than one reason. EPW can be considered as the most popular and accessible journal in the domain of economics in India. Since it's a weekly it has high frequency of publication. The latest four volumes of the journal are freely made available online, leading to high accessibility and readership. Authors across India publish articles on a wide variety of topics in EPW. Since the scope of the journal is not confined to any particular sub area of economics, examining the trends and patterns of economics research papers in EPW will give a wider view regarding the overall research trends. Higher journal ranking of EPW in indexes like Scopus (for details, see https://www.epw.in/journal-rank-epw Accessed on 15.11.2022) further bolsters the selection of EPW as a sample for the enquiry. The findings of the same can be fairly generalized to comment on the overall trends on economics research in India. UGC INFLIBNET platform was used to access the EPW back volumes during 2017-21 to explore his research interest. The researcher doesn't have any claim that the time horizon selected is perfect. But as his aim is to understand the recent trends in the subject, the time horizon stands justified. Also the study doesn't aim at specifically addressing the theoretical developments in economics (they become visible only in long run) but aim at understanding the general trends and patterns in research on economics in India.

It is well known that EPW publishes not only papers that discuss economic matters. But this paper only examines such papers. In the era of interdisciplinary research, it is very difficult to classify the subject matter of any paper into water tight compartments. The author with his available knowledge and experience with economics, managed to select 548 papers on economics that came in EPW during 2017-2021. All these papers contain some element of economics in them. Needless to say papers, which

according to researchers view are not 'economic' in subject matter were excluded and the issue of bounded rationality of researcher cannot be ruled out here.

By trends and patterns of research in economics, the researcher means two characteristics of research output. First one is origin characteristics. This refers to characteristics of sources of research output. Second are area characteristics. This refers to the major sub areas of economics on which research output is concentrated. Based on the information given along each EPW article, the author was able to identify the following origin characteristics of each article.

First, the researcher noted the number of authors per article to understand the extent of collaborative research. This will be referred to as 'Author No'. Second, the gender of the authors was noted. The same was checked and confirmed online. Using the same the gendered distribution of authors was studied. In case of articles with more than one author, the author whose name appears first among the authors in a particular article is noted as 'first author' and all other authors were called as 'subsequent' authors. These two types of authors are coded accordingly. In this manner, the first author of the papers and subsequent authors were traced and their characteristics were mapped. Third, the designation of the authors. Each article contains some information about designation of authors. These designations were given codes to classify the authors designation wise. Fourth, the organizations to which authors belong to were mentioned in the articles. It was also coded and classified. Freelancing authors were also given suitable codes for their designation/organization to indicate that they do not belong to any particular designation/organization. Fifth, the geographical origins of authors were also traced. This was done by means of noting down the country of origin and the state of origin (for those papers originated from India). The organization to which authors belong was used to classify the origin of authors. Note that only the country in which a particular organization is located is used to classify papers as originating from India/abroad. The countries of origin of Individual authors were not considered here. Also, the details regarding organization of authors were noted down purely based on information provided in the articles. These holds true for the identifying the states of Indian authors. In order to preserve the India specific nature of the study, papers with authors from non-Indian countries were analyzed separately. Separate codes were given for authors who belong to organizations within/outside India. Papers from outside India were examined only to make a brief comparison of origin and area characteristics of papers from India/abroad. The **mainstay of** the study is 548 papers originating from India.

To understand the area characteristics and to classify the papers accordingly, the JEL classification system was used. In order to complement such a study, the researcher used his own classification system and classified papers into various sub areas of economics. Details will be given subsequently.

Let us now proceed to discuss the trends and patterns regarding origin and area characteristics of research output in economics. We begin with 548 papers with Indian authors. Before proceeding further, a word about the overall approach of the paper. The paper tries to follow the approach of positive economics. It simply describes what the research trends are and not how they ought to be. Origin characteristics are discussed first.

# 1. Gender of authors

Among the authors of articles considered, 71.2% were males and remaining females.

# 2. Number of authors per article

Among the papers considered, 51.9% were written by multiple authors and remaining are single authored articles.

# 3. First authors and subsequent authors.

Among the authors considered, 57.4% are first authors and remaining are subsequent authors.

# 4. Designation of authors

Table 1 shows the designations of authors. It shows the percentage of authors having various destinations. Details regarding the nomenclature of designations are provided in Appendix 1

Table 1 – Designation of authors

Designation	Percentage of authors
Research Student	7.97
NGO Associate	2.83
Teacher	40.08
Independent Researcher	3.78
Institutional Researcher	27.60
Government Staff	5.67
Other Professionals	3.15
Retired	4.72
Non Research Student	1.15
Activist	1.36
Others	1.69

Source: Researcher's Computation

Table show that majority of authors are either teachers or institutional researchers.

# 5. Organizations to which authors belong

Table 2 shows the organizations to which authors belong. It shows the percentage of authors who belong to various organizations. Details regarding the nomenclature of designations are provided in Appendix 2.

Table 2 - Organization to which authors belong

	Percentage
Organization	of authors
Retired	3.57
College	3.46
Central	9.23
Universities	9.23
State	6.30
Universities	0.50
Research	22.67
Institutes	22.07
NGO	6.19
Independent	5.35
Researcher	5.55
Teaching	25.71
Institutes	23.71
Government	6.72
Departments	0.72
Private/Deemed	5.46
Universities	
Associations	1.05
Corporate	1.57
Other	2.72
Organizations	

Table show that majority of authors belong to Teaching Institutes followed by research institutes.

# 6. Origin of authors within India

Table 3 shows the states in which organizations to which authors belong are situated. It shows the percentage of organizations that are situated in various Indian states to which authors of papers belong to.

Table 3 - States to which authors belong

States	Percentage of authors
Delhi	31.69
Maharashtra	15.53
Karnataka	9.44
Kerala	6.4
West Bengal	6.19
Tamil Nadu	5.25
Gujarat	4.09
Telangana	3.57
Uttar Pradesh	2.1
Bihar	1.78
Odisha	1.78
Punjab	1.68
Haryana	1.36
Assam	1.26
Madhya Pradesh	1.15
Jharkhand	1.05
Other States	5.68

Table show that majority of authors are from Delhi followed by Maharashtra. But we cannot say that most of research papers in epw are from Delhi. Only one third is from Delhi and remaining is from other Indian states.

#### Area Characteristics

#### 7. Major Research Areas based on JEL codes

The researcher will now proceed to identify the major research areas in which the papers under consideration are focused upon. This is done in two ways. First, by classifying the papers using the JEL (Journal of Economic literature) codes. Second, by means of his own system of classification. The second system, even though far from perfect, is adopted because of the high level of aggregation that can come in due to use of JEL codes. When we use the JEL system it is possible to group the papers only under any of the 20 broad JEL subject categories. Such a classification may lead to loss of information regarding the actual subject matter of the papers under consideration. As an attempt (though not fully successful) to prevent the researcher tried to categorize the papers into various categories based on the researchers subject knowledge. Some sort of bias that can be alleged in that classification is patched up to an extent by JEL. Let us now look the trends/patterns regarding research areas that emerged in both the classification systems. We start with JEL system.

Table 4 classifies the papers under consideration using the JEL system of classification. It shows the percentage of papers that came under various JEL subject categories. Needless to say, the decision to include a paper into any JEL category is based on bounded rationality of the researcher. This applies to his own classification system too.

Table 4 - Major areas of research: JEL System

JEL Subject	Percentage		
category	of papers		
General			
Economics	0.55		
and Teaching			
History of			
economic			
thought,	1.10		
methodology	1.10		
and heterodox			
approaches			
Mathematical			
and	0.36		
quantitative	0.50		
methods			
Micro	2.74		
Economics	2.74		
Macro			
Economics	9.12		
and Monetary	7.12		
Economics			
International	6.02		
Economics	0.02		
Financial	5.11		
Economics	J.11		
Public	6.39		
Economics	0.37		
Health,	17.15		

Education and Welfare  Labour and Demographic Economics  Law and Economics  Industrial Organization  Business administration, Business economics, marketing, accounting, personnel economics  Economic  History  Economic development, innovation, technological change and growth  Economic systems  Agricultural and natural resource economics, environmental and ecological economics  Urban, rural regional, real estate and transportation economics  Other special topics		
Labour and Demographic Economics  Law and Economics  Industrial Organization  Business administration, Business economics, marketing, accounting, personnel economics  Economic  History  Economic development, innovation, technological change and growth  Economic systems  Agricultural and natural resource economics, environmental and ecological economics  Urban, rural regional, real estate and transportation economics  Other special  1.0.22  1.0.25  4.56  1.10  1.10  1.10  1.10  1.10  1.10  1.10  1.10  1.10  1.10  1.09  4.56  6.66  6.62  6.02  6.02  6.02	Education and	
Demographic Economics  Law and Economics  Industrial Organization  Business administration, Business economics, marketing, accounting, personnel economics  Economic History  Economic development, innovation, technological change and growth  Economic systems  Agricultural and natural resource economics, environmental and ecological economics  Urban, rural regional, real estate and transportation economics  Other special  1.0.25  4.56  4.56  1.10  1.10  1.10  1.10  1.10  1.10  1.10  1.10  1.10  1.09  4.56		
Economics  Law and Economics  Industrial Organization  Business administration, Business economics, marketing, accounting, personnel economics  Economic History  Economic development, innovation, technological change and growth  Economic systems  Agricultural and natural resource economics, environmental and ecological economics  Urban, rural regional, real estate and transportation economics  Other special  0.91		10.22
Law and Economics Industrial Organization Business administration, Business economics, marketing, accounting, personnel economics Economic History Economic development, innovation, technological change and growth Economic systems Agricultural and natural resource economics, environmental and ecological economics Urban, rural regional, real estate and transportation economics Other special  4.56  4.56  1.10  1.10  1.10  1.10  1.10  1.10  1.10  1.09  4.56  0.18		10.22
Economics Industrial Organization Business administration, Business economics, marketing, accounting, personnel economics Economic History Economic development, innovation, technological change and growth Economic systems Agricultural and natural resource economics, environmental and ecological economics Urban, rural regional, real estate and transportation economics Other special  4.56  4.56  4.56  1.10  1.10  1.10  1.10  1.10  1.10  1.10  1.09  4.56  0.18	Economics	
Industrial Organization Business administration, Business economics, marketing, accounting, personnel economics Economic History Economic development, innovation, technological change and growth Economic systems Agricultural and natural resource economics, environmental and ecological economics Urban, rural regional, real estate and transportation economics Other special  4.56  4.56  4.56  1.10  1.10  1.10  1.10  1.10  1.09  4.56  6.66  6.66  6.60  6.02  6.02  6.02  6.02		0.55
Organization Business administration, Business economics, marketing, accounting, personnel economics  Economic History  Economic development, innovation, technological change and growth  Economic systems  Agricultural and natural resource economics, environmental and ecological economics  Urban, rural regional, real estate and transportation economics  Other special  0.91		
Business administration, Business economics, marketing, accounting, personnel economics  Economic History  Economic development, innovation, technological change and growth  Economic systems  Agricultural and natural resource economics, environmental and ecological economics  Urban, rural regional, real estate and transportation economics  Other special  0.18  1.10  1.10  1.10  2.117  6.66  2.1.17  6.02  6.02		4.56
administration, Business economics, marketing, accounting, personnel economics  Economic History  Economic development, innovation, technological change and growth  Economic systems  Agricultural and natural resource economics, environmental and ecological economics  Urban, rural regional, real estate and transportation economics  Other special  0.18  0.18  0.18  0.18  0.18  0.18  0.18  0.18  0.18  0.18  0.18  0.18  0.18  0.10  0.10  0.10  0.11		
Business economics, marketing, accounting, personnel economics  Economic History  Economic development, innovation, technological change and growth  Economic systems  Agricultural and natural resource economics, environmental and ecological economics  Urban, rural regional, real estate and transportation economics  Other special  0.18  0.18  0.18  0.18	2 00111000	
economics, marketing, accounting, personnel economics  Economic History  Economic development, innovation, technological change and growth  Economic systems  Agricultural and natural resource economics, environmental and ecological economics  Urban, rural regional, real estate and transportation economics  Other special 0.91	,	
marketing, accounting, personnel economics  Economic History  Economic development, innovation, technological change and growth  Economic systems  Agricultural and natural resource economics, environmental and ecological economics  Urban, rural regional, real estate and transportation economics  Other special  0.18		
accounting, personnel economics  Economic History  Economic development, innovation, technological change and growth  Economic systems  Agricultural and natural resource economics, environmental and ecological economics Urban, rural regional, real estate and transportation economics  Other special  1.10  1.10  2.117  6.02	·	0.18
personnel economics  Economic History  Economic development, innovation, technological change and growth  Economic systems  Agricultural and natural resource economics, environmental and ecological economics  Urban, rural regional, real estate and transportation economics  Other special  1.10  1.10  1.10  2.11  5.66  2.117  6.02  6.02	O.	
Economics  Economic History  Economic development, innovation, technological change and growth  Economic systems  Agricultural and natural resource economics, environmental and ecological economics Urban, rural regional, real estate and transportation economics  Other special  1.10  1.10  2.117  2.117  2.117  2.117  2.117  2.117  2.117  3.109  4.109		
Economic History Economic development, innovation, technological change and growth  Economic systems Agricultural and natural resource economics, environmental and ecological economics Urban, rural regional, real estate and transportation economics  Other special  1.10  5.66  2.117	*	
History  Economic development, innovation, technological change and growth  Economic systems  Agricultural and natural resource economics, environmental and ecological economics  Urban, rural regional, real estate and transportation economics  Other special 0.91		
Economic development, innovation, technological change and growth  Economic systems  Agricultural and natural resource economics, environmental and ecological economics  Urban, rural regional, real estate and transportation economics  Other special 0.91		1.10
development, innovation, technological change and growth  Economic systems  Agricultural and natural resource economics, environmental and ecological economics  Urban, rural regional, real estate and transportation economics  Other special 0.91	History	
innovation, technological change and growth  Economic systems  Agricultural and natural resource economics, environmental and ecological economics  Urban, rural regional, real estate and transportation economics  Other special		
technological change and growth  Economic systems  Agricultural and natural resource economics, environmental and ecological economics  Urban, rural regional, real estate and transportation economics  Other special 0.91		
technological change and growth  Economic systems  Agricultural and natural resource economics, environmental and ecological economics  Urban, rural regional, real estate and transportation economics  Other special 0.91	· · · · · · · · · · · · · · · · · · ·	5.66
growth  Economic systems  Agricultural and natural resource economics, environmental and ecological economics  Urban, rural regional, real estate and transportation economics  Other special  1.09  21.17  6.02	_	
Economic systems Agricultural and natural resource economics, environmental and ecological economics Urban, rural regional, real estate and transportation economics Other special 0.91		
Agricultural and natural resource economics, environmental and ecological economics  Urban, rural regional, real estate and transportation economics  Other special 0.91		
Agricultural and natural resource economics, environmental and ecological economics  Urban, rural regional, real estate and transportation economics  Other special		1.09
and natural resource economics, environmental and ecological economics  Urban, rural regional, real estate and transportation economics  Other special 0.91		
resource economics, environmental and ecological economics  Urban, rural regional, real estate and transportation economics  Other special		
economics, environmental and ecological economics  Urban, rural regional, real estate and transportation economics  Other special 0.91		
environmental and ecological economics  Urban, rural regional, real estate and transportation economics  Other special 0.91		
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regional, real estate and transportation economics  Other special 0.91		
estate and 6.02 transportation economics Other special 0.91		
transportation economics Other special 0.91		- 0 <b>-</b>
economics Other special 0.91		6.02
Other special 0.91		
topics		0.91
	topics	

Table 4 shows that majority of papers belong to Agricultural/natural resource economics, environmental/ecological economics followed by Health, Education, Welfare and Labour/Demographic Economics. In other words, majority of recent research in economics in India seems to be in agricultural economics, environment economics, health economics, education, welfare economics, labour economics and demography. Around 50% of papers published are from these 3 JEL categories.

Let us now look at trends/patterns regarding research areas that emerged when the researcher classified papers based on his own classification system. These are shown in Table 5. It shows the percentage of papers that fell under different sub areas of economics as classified by the researcher.

Table 5 – Major research areas - Own Classification

	Percentage
Subject Area	of papers
Health Economics	9.85
Agriculture	8.03
Labour Economics/Relations &	
Migration	5.84
Macro/Monetary Economics	5.66
Public Finance	4.74
Poverty/Hunger/Malnutrition/Food	
Policy	4.74
Energy	4.2
Banking/Financial Inclusion	3.83
Gender	3.28
International Economics	3.1
Urban Affairs	2.74
Development Issues	2.37
Employment/Un Employment	2.19
Industry	2.01
Other areas	37.42

Table 5 show that in a cumulative sense, 50% of papers belong to first 10 areas (rows) and 66% belong to 16 areas. The researcher do not wish to do proceed further with the results as he did not get any clear trends regarding the distribution of papers into the sub areas to which papers are classified. Possibilities some overlapping also exist.

#### **Inter Year Changes in Research Trends**

Till now, we were trying to understand the research trends by using all the articles published in the 5 years under consideration. The change in research trends between successive years is not traced so far. Are there any short term changes in patterns of research output within the time period considered by the author? Table 6 tries to understand the extent of change in select origin and area characteristics over the 5 years under consideration. It shows the year-wise research trends regarding select origin and area characteristics during 2017-2021. First three rows show the percentage of female authors, male authors and first authors. Fourth row show the year-wise change in percentage of papers (in brackets) authored by single author, two authors and more than 2 authors (>2). For example entry in the column corresponding to year 2017 show that in 2017, 56.4% papers are single authored. 31.6% of papers are authored by two authors. Remaining is co authored by more than two. Entries in other years in row 4 can be interpreted in the same manner. Row 5 shows the year wise changes in major designation of authors. It shows the

designation of authors who contribute majority of articles with percentage of articles published in brackets. For ex: in 2017, majority of articles are contributed by teachers (who contributed 34.9% of articles) and by institutional researchers who contribute 29.6% of articles. Remaining articles are contributed by authors with other designations. Entries in other years can be interpreted similarly. Row 6 show the year wise changes in major organizations to which authors belong. It show the organizations to which majority of authors of articles belong with percentage of articles in brackets. For ex: in 2017, majority of articles are by authors who belong to research institutes. They contribute 26.3% of articles. This was followed by other organizations. Entries in other years can be interpreted similarly. Row 7 show the year wise changes in major states from which papers are originating. The percentage of papers from these states is given in brackets. For ex: the row show that in 2017 majority of papers (32.3%) originated from organizations situated in Delhi. This was followed by Maharashtra (15.6%) and remaining by other states. Entries in other columns can be interpreted similarly. Row 8 show the year wise change in major subject area in which articles were published. This was shown by the percentage of articles that belonged to major JEL groups. First column in this row show that in 2017, majority of papers belong to JEL areas agricultural/environmental/resource economics, health/education/welfare and macro/monetary economics. Remaining articles belong to other JEL groups. The percentages of articles that belong to these groups are given in brackets. Other year entries can be interpreted similarly.

Table 6 - Change in research trends over years

Year	2017	2018	2019	2020	2021
Female					
Authors					
(%)	24.2	28.5	31.2	35.3	24.9
Male					
Authors	75.0	71.5	<b>60.0</b>	64.7	75.1
(%)	75.8	71.5	68.8	64.7	75.1
First					
Authors	63.4	59.7	53.2	54	57.5
(%)		39.7	33.2		31.3
	- (), -	1 (40.5) 2 (26)	1 (42.2) 2 (27.0)	( )/	1 (40) 2 (24 ()
No. of	(31.6)	1 (49.5), 2 (36)		(40.7),	1 (49), 2 (34.6),
Authors	>2(12)	>2(14.5)	>2(18.9)	>2(16.1)	>2(16.4)
	Teachers			Teachers	
	(34.9)	Teachers (40.9),		(40),	Teachers (43.1),
Major	Institutional	Institutional	Teachers (41.2),	Institutional	Institutional
Designation	researchers	researchers	Institutional	researchers	researchers
s of authors	(29.6)	(17.2)	researchers (31.6)	(32)	(27.1)
	Research			Teaching	
	Institutes			Institutes	
	(26.3),	Teaching		(34),	Teaching
Major	Teaching	Institutes (29),	Research Institutes	Research	Institutes (28.7),
Organizatio	Institutes	Research	(27.6), Teaching	Institutes	Research
ns	(19.9),	Institutes (14.5)	Institutes (20.4)	(21.3),	Institutes (21.5)
Major	Delhi (32.3),	Delhi (33.3),		Delhi (31.3),	Delhi (27.6),
States	Maharashtra	Maharashtra	Delhi (33.6),	Karnataka	Maharashtra
	(15.6),	(16.1),	Maharashtra (19)	(12.7),	(12.7)

	Agricultural/				
	Resource/En				
	vironmental	Agricultural/Res	Health/Education/	Industrial	Agricultural/Res
	economics	ource/Environme	Welfare (21.8),	organization	ource/Environm
	(20.3),	ntal economics	Agricultural/Reso	(20.7),	ental economics
	Health/Educ	(21.6),	urce/Environment	Health/Educa	(32.7)
Major	ation/Welfar	Health/Education	al economics	tion/Welfare	Labour/Demogr
Areas (JEL)	e (19.5)	/Welfare (15.3)	(17.3)	(18.3)	aphy (10.6)

From rows 1, 2 it is clear that majority of articles were authored by males. Till 2020, the number of female authors increased and then decreased. Table 6 shows that percentage of female authors increased up to 2020 and declined. This might be due to exclusion of articles that are written on COVID19 related topics (details regarding the same are given in another section). So we must reasonably assume that the number of female authors is on a rise in India. Rows 3, 4 shows that over the years there is a general increase in collaborative authorship. The percentage of first authors has generally shown a decline over the years. Even though this figure increased marginally in 2021, the actual figure is likely to be lower due to exclusion of articles on covid related topics. Row 4 show that the percentage of articles with two or more than two authors is a more clear indicator of the trend unveiled using row 3. This figure increased steadily till 2020 and declined marginally in 2021 (43.6% in 2017, 50.5% in 2018, 56.8% in 2019/2020 and 51% in 2021). This again might be due to exclusion of covid related articles. Thus rows 3, 4 indicate that co authorship is increasing amongst research output in India. From row 5 it is clear that majority of authors are either teachers or institutional researchers. The dominance of authors from these two designations (measured by the percentage of articles written by them) is generally on the rise during the past 5 years. (64.5% (2017), 58.1% (2018), 72.8% (2019), 72% (2020), 70.2% (2021)). These two groups of authors presently contribute 70% of total articles published in 2021. As stated for other aspects, the slight decline in 2021 can be due to covid exclusion. From row 6 it is clear that teaching/research institutes continue to be the major organizations to which authors belong to. Generally speaking, the combined share of these two groups of organizations in total number of articles published is around 50%. (46.2% (2017), 43.5 (2018), 48 (2019), 55.3 (2020), 50.2 (2021)). Row 7 show that Delhi continue to remain as the major origin of papers during the past 5 years. Barring 2020, the second position is held by Maharashtra. In all the years, around 30% of papers originated from authors who worked in Institutions located in Delhi. Row 8 show that generally, during the past 5 years, the subject area of papers published did not changed much. Majority of papers were published in JEL areas of health/education/welfare and agricultural/environment/resource economics. Over the years, these two areas constitute around 30-40% of papers published. Thus barring macro level improvement in gender characteristic of authors, it is obvious that there is not much difference in the overall inter year trends of the origin and area characteristics during the past 5 years.

# Interaction between origin characteristics

This section tries to understand the interaction among various origin characteristics. Let us begin with gender. How gender interacts with various origin characteristics is shown in Table 7. It tries to see if there is any difference in designation, organization, state of origin and percentage of first authors among male and female authors.

**Table 7 - Gender and origin characteristics** 

	% of First authors	Designation (%)	Organization (%)	States (%)
Male	54.40	Institutional researcher (43.90), Teachers (24.60), others (31.50)	Teaching institutes (27.70), Research institutes (20.80), others (51.50)	Delhi (28.90), Maharashtra (13.70), Karnataka (9.10) others (48.30)
Female	Institutional researchers (35), Teachers (30.70) others		Research institutes (27.4), Teaching institutes (20.8) others (51.80)	Delhi (38.70), Maharashtra (17.90), Karnataka (10.20) others (33.20)

First column show the percentage of first authors among female and male authors. It is clear that there is not much difference in this regard. While 54.4% of male authors are first authors, the corresponding percentage is marginally higher for female authors. Second column shows the designation of majority of male/female authors. The percentage of authors having those designation(s) is given in brackets. For ex: first entry in column 2 show that majority of male authors (43.9%) are institutional researchers followed by teachers (24.6%). From column 2 it is clear that designation held by majority of male/female authors are same. Third column show the organization to which majority of male/female authors belong to. Entries in this column can be interpreted in same way as column 2. Column 3 shows that majority of male and female authors belong to research/teaching institutes. Fourth column show the states to which male/female authors belong to. Entries can be interpreted similar to columns 2, 3. Column 4 shows that majority of male and female authors are from Delhi followed by Maharashtra. Table 7 prove that there are not much gender wise differences regarding percentage of first authors, designations or organizations of authors and states from which papers originated.

Table 8 tries to see if there is considerable difference among origin characteristics of first and subsequent authors. It shows the designation, organization and originating states of first/subsequent authors. This table can be interpreted in manner similar to previous table.

Table 8 - Origin of First and subsequent authors

	Designation	Organization	
	(%)	(%)	State (%)
	Teachers		
	(43.10),	Teaching	
	Institutional	Institutes (25),	
	researchers	Research	
First (23.90), others		institutes (20.3)	Delhi (31.6), Maharashtra
authors	authors (33)		(16.1) others (52.3)
	Teachers (36),		
	Institutional		
	researchers		
Subsequent	(32.5), others	institutes (25.9)	Delhi (31.8), Maharashtra
authors	(31.5)	others (47.5)	(13.3) others (54.9)

Column 1 show the designations held by majority of first and subsequent authors with percentage of authors given in brackets. For example first entry in column 1 shows that majority of first and subsequent authors are teachers followed by institutional researchers. Column 2 shows the organizations to which majority of first/subsequent authors belong. Interpretation is similar to previous table. From column 2 it is clear that majority of first/subsequent authors belong to teaching institutes followed by research institutes. Column 3 tries to see if originating states of first/subsequent authors are different or not. Interpretation of entries is similar. Column 3 shows that majority of first/subsequent authors belong to Delhi followed by Maharashtra. Thus table 8 clearly proves that there is not much difference in designation, organization and originating states between first and subsequent authors.

#### Research Trends: India vs. Abroad

Till now, the researcher was examining research trends based on 548 articles with authors from India. But EPW contains articles written by authors belonging to organizations within and outside India. The mainstay of this study is trends and patterns in former and not latter. However, a brief comparison of trends and patterns between authors who belong to organizations within and outside India is attempted here by means of table 9. First four columns show the percentage of male/female authors and first/subsequent authors among authors from India/abroad. Other columns compare research trends in the manner similar to previous table. For ex: column 5 compares the designation of majority of authors in India/abroad with percentage of authors in brackets. Column 7 compares organizations of majority of authors in India/abroad in the manner similar to previous table. Column 8 compare the major JEL areas on which papers from India/abroad are focused, in a manner similar to previous table. While making such a comparison, we have to note that number of articles by authors from abroad is very much less (73) compared to number of articles by Indian authors (548). The researcher is just trying to make a comparison using available information.

Table 9 - Research Trends: India and Outside

Co unt ry	Male Autho rs (%)	Femal e Autho rs (%)	First Author (%)	Subsequent Authors (%)	Designation	Organization	JEL Area
In dia	71.25	28.75	57.40	42.60	Teachers (40.08), Institutional researchers (27.60), others (32.33)	Teaching institutes (25.71), Research Institutes (22.67), others (51)	17 (21.17) ,9 (17.15) Others (61.68)
Ot her	68.53	31.47	51.75	48.25	Teachers (41.30), Institutional researchers (32.20), others (26.5)	Universities (64.30), , Research Institutes (11.90), others (23.8)	9 (21.90),17 (19.20) others (58.9)

Column 1, 2 shows that the percentage of female authors is marginally higher among authors from outside India. Column 3, 4 shows that the percentage of first authors is marginally lower among authors from outside India, indicating a marginally higher prevalence of co authorship among them. Columns 5 show that majority of authors in India & abroad are teachers, followed by institutional researchers. Around 70% of authors belong to these two designations. Thus, designation of majority of authors from India/abroad is same. But their organizations are different. Column 6 shows that majority authors in India belong to teaching/research institutes. Whereas majority of authors (64.3%) from abroad belong to universities. Column 7 show that the area of research is more or less same among authors from India/Abroad. Majority of papers authored by both authors from India/abroad belong to JEL categories Agricultural/Resource/Environmental economics and Health/Education/Welfare. Percentage given in bracket show that around 40% of papers belongs to these two categories. Thus, research trends remain more or less same among Indian/foreign authors. However there are minor difference in extent of female/collaborative authorship and organizational characteristics among them.

#### **COVID19 and Research Trends**

When we talk about research trends under consideration, we cannot ignore the effect of COVID19 pandemic. Since the period of study covers the pandemic era, it is worth examining the effects of pandemic on research output in India. The pandemic lead to publication of a substantial number of papers in EPW on COVID related topics. But since a large number of research papers appeared on covid related topics, the author wish to examine this aspect separately. Else the large number of paper on a single area can skew the trends and patterns that are being studied. Among COVID19 related papers, the author identified 91 papers published in 2020 and 49 papers published in 2021 as related to economic dimensions of COVID19. When combined with total number of papers under consideration in these years, they constituted 49.72% of total papers in economics in 2020. Corresponding figure for 2021 is 30.24%.

Thus it is clear that covid considerably influenced academic discourse in economics in India. But the interest in covid declined considerably now, indicated by the fact that number of papers in this area reduced to nearly half in 2021.

#### Conclusion

The paper was an attempt to trace the recent trends/patterns in economics research in India using articles published in epw during 2017-21. As indicated earlier, the paper broadly follows a positivist approach. So the author wishes to conclude by summarizing the major findings of the paper. The study shows that majority of authors of articles are males. About half of the papers are single authored ones. More than half of the authors are first authors. Majority of authors are teachers/institutional researchers and belong to teaching/research institutes. Though they are coming from across India, majority are from Delhi, followed by Maharashtra. Most of the articles are published in the areas of agricultural/environment/resource economics, health/education/welfare and labour/demographic economics. When looking at the change in research trends over years, it was found that except the increase in percentage of female authors, other origin and area characteristics more or less remain unchanged. Origin and organizational characteristics of authors remain same, when disaggregated with respect to major designations of authors. Gender does not influence first authorship and designation of authors. There is not much difference in origin characteristics of first and subsequent authors. Except the considerable difference in organizational characteristics and slight difference in gender of authors, the origin and area characteristics remain more or less same in articles coming from India/abroad. COVID19 considerably influenced academic discourse in economics in India.

#### Limitations of the study

The paper is solely based on information from articles published in print edition of epw. The digital portfolio of epw including engage were not considered as they were not available in all years under consideration. When the author decides that any paper belongs to a particular sub area of economics, that decision is based on the bounded knowledge and rationality of the author. This is particularly a limitation for interdisciplinary papers. EPW not only publishes papers in subject domain of economics. So when deciding a particular paper fall under domain of economics or not, the problem of bounded rationality and biases of researcher may crept in. The decision regarding including any paper into a sub area of economics is taken based on the bird's eye view of that paper by the researcher. Another limitation is the exclusions made by the researcher. The researcher wish to limit the study to papers that were not generated by any external stimuli. So he have excluded papers that were outcomes of any funded projects, research degree (M.Phil/Ph.D), responses to earlier published works, responses to events like budgets and those presented earlier in seminars/conferences. In addition, papers published as a part of special issues or review issues of epw, papers authored by insiders (like those who belong to EPWRF) and reprints/modified versions of papers previously published elsewhere where also excluded from the study. The author referred 621 EPW articles. As it is not feasible to include all of them in references, they are not included in references.

# Appendix 1 - Meaning of Destination categories

Research Student – Means someone who is pursuing a research degree (like M.Phil or Ph.D). Non Research student is someone enrolled in an educational institution but do not pursue any research degree. NGO associate is some who is associated with a Non Governmental Organization (NGO) but not an academician by profession. Teacher is a person who teaches in any educational institution. Independent researcher is a researcher who is not associated with any organization. Institutional researcher is someone who undertakes research alone as a profession in an organization. He is neither a teacher nor a student. Government Staff is someone who works in governmental department/agency but do not take up teaching or research. Other professional is someone who takes up any occupation other than the ones mentioned above. Retired is someone who officially retired from any jobs. Politicians and representatives include existing people's representatives in various tiers of government and members of political parties. Activist is someone who is actively involved in public affairs but do not have any political affiliation. International bureaucrat is someone who works in international intergovernmental organizations having branches in India/abroad. Journalist is someone who takes up journalism as a profession in any media organization. The designations of those authors who contributed less than one percent of papers came up are included in category of 'others'.

# Appendix 2 - Meaning of organization categories

Teaching Institutes are higher education institutions other than colleges/universities who offer some teaching programs. They can take up research but are not totally devoted to research. College is any governmental/privately funded higher educational institution other than teaching institutes. Central University is established by Central Government of India by an act of Indian Parliament. State University is established by the respective state governments of India. Private universities are universities which are not funded by government or its agencies. Deemed universities are also grouped in this category. When entering data of universities outside India, these three categories are merged into one and entered as Foreign Universities. Research Institutes are government (central or state) funded institutions that are exclusively devoted to research pursuit. They do not take up any teaching or training. Non Governmental Organization (NGO) is an organization which is not part of government. NGO can be a research oriented one. Retired are those authors who were previously associated with some organization, but are currently officially retired. The organization of those authors who were key stakeholders in association of people (who belong to some social, occupational or any other types of group) is entered as association. International organization refers to intergovernmental organizations like United Nations (UN). Authors who work in Indian branches of these organizations were considered to understand India specific trends and patterns. Media refer to all types of media including print, mass, electronic and online media. Corporate refers to authors who work in corporate companies. Industry refers to authors who are part of any industry, but are not working in a corporate company. Government department refer to government departments or organizations funded by Central/State governments; but do not belong to government funded institutions mentioned so far. Organizations from which less than one percent of papers came up are included in category of 'other' organizations.

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