



Does Cooperative Fiscal Federalism Lead To Self-Sufficiency? An Exploration of the Dependency Paradox

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ABSTRACT

In a federal structure there are two government units with obligatory powers and each individual/citizen becomes a subject to the decrees of two governments a central and a state simultaneously and therefore a very careful, meticulous and complete demarcation of powers of two governments is made. In India, federalism originates from Indian Constitution. Article 245 to 255 of the Constitution deals with distribution of legislative power through different lists (Centre, State and Concurrent). The demarcation of administrative powers is discussed under article 256 – 257 and of financial powers under article 264 – 265. The division of powers has been such that States have more expenditure responsibilities than revenue generation sources as compared to Centre. This leads to financial imbalances between the two. To correct these imbalances, the Constitution designates a part of Central's revenue to be shared with the States. This sharing was visioned to be such that in the long-run, States will become self-sufficient in implementing their socio, economic and political philosophies which may/may not be different from national government. In this context, the present study aims to examine whether the dependency paradox proves to be true in case of the fiscal federal relations between the Centre and the state of Uttar Pradesh. For the purpose of this research, three hypotheses have been tested taking different economic indicators for the State of Uttar Pradesh, for analysing its dependency on the Centre. The results conclude that though Uttar Pradesh has performed well fiscally at certain instances, yet it cannot be designated self-sufficient in terms of its dependency on the Centre thus falsifying the dependency paradox.

KEYWORDS: Dependency Paradox, CAPEX, Fiscal Parameters, Good Governance.

I. INTRODUCTION

The concept of good governance is used in common parlance to explain the effectiveness of policy implementation for general welfare of the people living in a country. Every country in the world has different systems for effective governance. Generally, large countries follow a federal system for better governance so that unity as well as diversity both could flourish. Every individual, sector, tribe, religion could achieve fullest freedom for their all-round growth, while some countries adopt unitary centralised system of governance. On this basis, countries are categorised as unitary or federal. A unitary set up is one where the sole power of governing the entire country is vested in the hands of one supreme authority, ruling the entire country. On the other hand, a federal set up is one where the power to govern is divided between different levels of government, specifically stated in the Constitution or followed by a tradition of the country.

India is a federal country, although in Constitution the term used is 'Union of States'. Formed of 28 States and 8 Union Territories at present, the powers of the government at Centre and States are clearly stated in the Constitution, yet it is also true that Centre enjoys more legislative, administrative and financial powers in comparison to States. With this unitary character, the federalism that is followed in India can be defined as one where different levels of government functions with mutual cooperation and understanding to achieve long term goals. Indian constitution makers devised a path of development for India based on the principle of cooperative federalism. Cooperative federalism implies a structure of governance where different levels of governments cooperate in policy and decision making towards a larger goal of economic development.



1.1. THE DEPENDENCY PARADOX

The Dependency Paradox relates to the Attachment theory of psychology which states

“...that healthy dependence on a reliably sensitive and responsive attachment figure is important for optimal functioning and well-being from the cradle to the grave (Bowlby, 1969/1982, 1973, 1980, 1988)”

(Brooke C. Feeney, Carnegie Mellon University)

The Dependency Paradox states the inevitability of dependence for being independent. The Dependency Paradox simply states that more closely two individuals are associated with each other, more independent they become. It especially helps the dependent to become independent. In case of Centre and States, all over the federal system of the world, States depend on Centre to perform better.

One must remember that when stylized facts are not confirmed in practice i.e., empirically the results do not match the hypothesis, scientists and economists use two words to explain such situation. First is exception but exceptions cannot be rules. The other term used is paradox where exceptions become the law such as Water Diamond Paradox. Water is very useful but is always cheaper than diamond which is useless. Similarly, one has Paradox of Thrift, Paradox of Giffens and so on. In this context, Paradox of Dependency in economic and social sciences, is explained where dependency of States (Sub-national governments) on Centre (National governments), help them to perform better in implementation of their policies and leads to their independence, even though both level of governments may have different political ideologies.

In context of Centre-State financial relations with quasi-federal structure i.e., Centre having more power (revenue in comparison to expenditure) while States having less power (revenue than expenditure) and therefore dependent, this dependency turns into independence when co-operative federalism functions i.e., the States gain autonomy and independence to perform their functions because Centre always cooperates i.e., never creates hindrances in economic, political and social choices of sub-national governments. Thus, dependency paradox has been empirically proven in most countries like U.S.A., France etc. One must remember that every federal system has more or less unitary character because of some basic important inherent considerations. Defence, or control over money and international relations are always in the

hands of the Centre for efficiency, unity and prestige of the nation.

In this paper, relating the dependency paradox to federal fiscal relations, it has been tried to analyse whether Dependency Paradox can be empirically proved by any concrete evidence in Indian context? Does dependence of State governments on Centre for proper functioning ultimately makes them independent and self-sufficient? Present research is considering this paradox in India with special reference to Uttar Pradesh. For this study, as is mentioned above, the main presumption is that, in co-operative federalism, each State shall be able to achieve objectives at par with other States and Centre such as growth of per capita NSDP, removal of poverty and fiscal health.

1.2. BRIEF PROFILE OF UTTAR PRADESH

Uttar Pradesh is one of the largest States of India. Its population is 23 crores and stands 7th among countries when population is considered. It has always been the largest recipient of Central transfers and grants (Table I) as in all finance commissions the main criterion of transfer of funds has been population. It must be remembered that Uttarakhand has been carved out of Uttar Pradesh and so, data related to united Uttar Pradesh and new Uttar Pradesh are not comparable, yet the new Uttar Pradesh even after formation of Uttarakhand is largest in population and largest receiver of grants. Most demographic, fiscal and social features of Uttar Pradesh remain unchanged.

“.....though significant progress has been made by Uttar Pradesh and Bihar in improving social indicators, they are still the poorest performers among the GS (General States) on broader parameters of overall development. However, both the States have been relatively fiscally prudent.”

(XV Finance Commission - Volume IV – The States)

Research Question: The above statement of XV finance commission suggests that Uttar Pradesh has done great progress, no doubt but could not achieve the same success as many other States have. The research question that arises here is, has Dependency Paradox failed in case of Uttar Pradesh?



TABLE I: SHARE OF STATES IN THE CENTRE'S TAXES

State	14 th Finance Commission		15 th Finance Commission		Devolution for FY 2020-2021 (In Rs crore)
	Share out of 42%	Share in divisible pool	Share out of 41%	Share in divisible pool	
Andhra Pradesh	1.81	4.31	1.69	4.11	35,156
Arunachal Pradesh	0.58	1.38	0.72	1.76	15,051
Assam	1.39	3.31	1.28	3.13	26,776
Bihar	4.06	9.67	4.13	10.06	86,039
Chhattisgarh	1.29	3.07	1.4	3.42	29,230
Goa	0.16	0.38	0.16	0.39	3,301
Gujarat	1.3	3.1	1.39	3.4	29,059
Haryana	0.46	1.1	0.44	1.08	9,253
Himachal Pradesh	0.3	0.71	0.33	0.8	6,833
Jammu and Kashmir	0.78	1.86	-	-	-
Jharkhand	1.32	3.14	1.36	3.31	28,332
Karnataka	1.98	4.71	1.49	3.65	31,180
Kerala	1.05	2.5	0.8	1.94	16,616
Madhya Pradesh	3.17	7.55	3.23	7.89	67,439
Maharashtra	2.32	5.52	2.52	6.14	52,465
Manipur	0.26	0.62	0.29	0.72	6,140
Meghalaya	0.27	0.64	0.31	0.77	6,542
Mizoram	0.19	0.45	0.21	0.51	4,327
Nagaland	0.21	0.5	0.23	0.57	4,900
Odisha	1.95	4.64	1.9	4.63	39,586
Punjab	0.66	1.57	0.73	1.79	15,291
Rajasthan	2.31	5.5	2.45	5.98	51,131
Sikkim	0.15	0.36	0.16	0.39	3,318
Tamil Nadu	1.69	4.02	1.72	4.19	35,823
Telangana	1.02	2.43	0.87	2.13	18,241
Tripura	0.27	0.64	0.29	0.71	6,063
Uttar Pradesh	7.54	17.95	7.35	17.93	1,53,342
Uttarakhand	0.44	1.05	0.45	1.1	9,441
West Bengal	3.08	7.33	3.08	7.52	64,301
Total	42	100	41	100	8,55,176

Sources: Reports of 14th and 15th Finance Commission; PRS.

II. LITERATURE REVIEW

Before analysing the dependency paradox for Union of India and State of Uttar Pradesh, a brief review of related literature is being presented below.

Feeney C. Brooke (2007) in the article "The dependency paradox in close relationships: accepting dependence promotes independence" has tried to empirically test the dependency paradox by analysing couple member's behaviour during laboratory interactions. This six-month analysis based on hypothesized results concludes that dependence leads to independence.

Aseema Sinha in her writing published in Forbes India, February 2, 2012 issue has discussed some solutions to improve Centre-State relations like reducing imbalance between revenue and expenditure in regional states, promoting innovations and inventions across states, creating linkage institutions between centre and states etc. The article further explains the role of multi-party system in developing a healthy centre state relationship and it also states India's model of Centre State Relation as an asymmetric one i.e., different states have different relationship with the constitution and centre.



Pravakar Sahoo and **Amrita Sarkar** in their article, “Changing Dynamics of Centre-State Financial Relations”, *Yojana* (June 2013), discuss about India’s federal structure from early 19th century to independence and later years especially the 73rd and 74th amendments of Constitution. Discussing the issues between Centre and States, this article also analyses the report of 13th and 14th finance commission and recommends that the ‘gap filling approach’ will not help in reducing disparities among states.

Amarnath H K and **Alka Singh** in their write up “Impact of Changes in Fiscal Federalism and Fourteenth Finance Commission Recommendations: Scenarios of State Autonomy and Social Sector Priorities”, NIPFP Working Paper No.257, March 2019 have analysed the change in the financial autonomy of the States after the increased devolution under the Fourteenth Finance Commission (FFC). Examining the declining prioritization of social sectors by States, this paper tries to discover the reasons behind this trend.

III. OBJECTIVES OF THE STUDY

The main objectives of the study are as follows:

- i) To study and analyse the allocation of funds to Uttar Pradesh by Centre in India.
- ii) To analyse the growth of GSDP and per capita GSDP of Uttar Pradesh.
- iii) To study the trends in CAPEX of Uttar Pradesh relative to its total expenditure and to analyse the scope of change in this trend.
- iv) To study the fiscal sustainability parameters of Uttar Pradesh and their impact on overall growth.

To analyse these objectives, the researcher has framed the following hypotheses.

IV. HYPOTHESES OF THE STUDY

4.1 Hypothesis I

H₀: The growth of GSDP and per capita GSDP of Uttar Pradesh is not significantly different from India.

H₁: The growth of GSDP and per capita GSDP of Uttar Pradesh is significantly different from India.

4.2 Hypothesis II

H₀: There has been no significant difference between the budgeted and actual capital expenditure of Uttar Pradesh since 2016-17.

H₁: There has been significant difference between the budgeted and actual capital expenditure of Uttar Pradesh since 2016-17.

4.3 Hypothesis III

H₀: The own-tax revenue of Uttar Pradesh as a percentage of total revenue of Uttar Pradesh has not increased significantly since 1990-91.

H₁: The own-tax revenue of Uttar Pradesh as a percentage of total revenue of Uttar Pradesh has increased significantly since 1990-91.

V. METHODOLOGY

The information and data for the present work have been collected from secondary data sources which are released by Uttar Pradesh Budget documents, PRS Legislative Research website, RBI reports etc. The study is descriptive and analytical. For analysis, various statistical tools have been applied.

(A) GROWTH RATE OF GSDP AND PER CAPITA GSDP

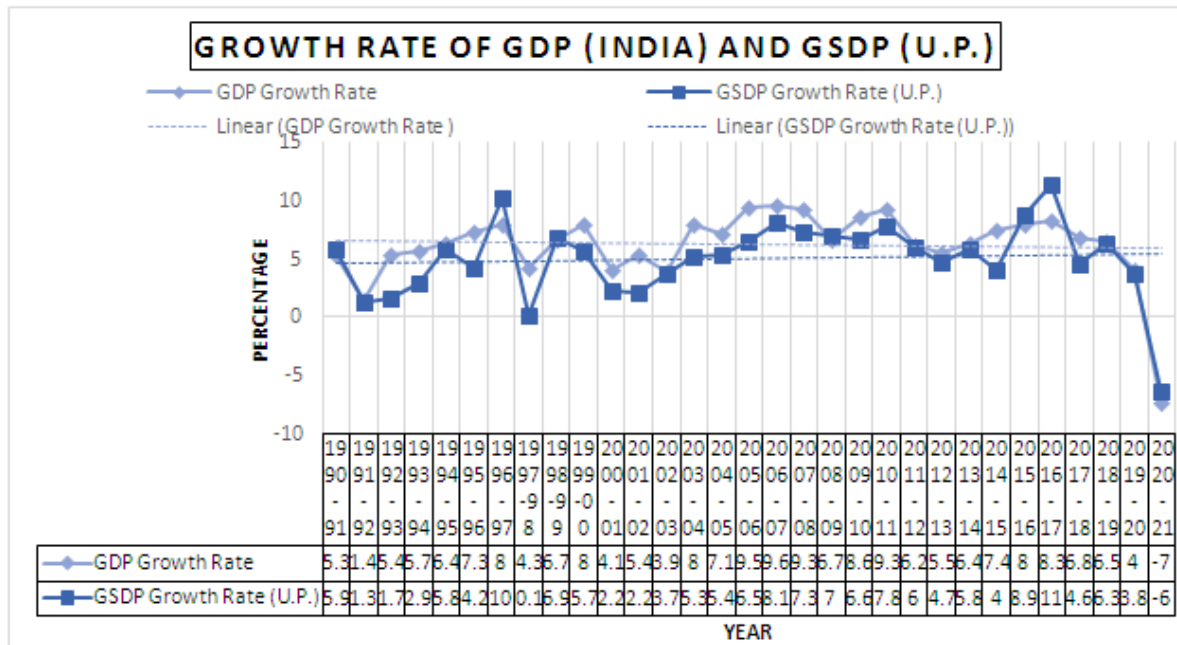
In this hypothesis, two set of information is available; one (Table I) related to the share of Uttar Pradesh in Central transfers in 14th and 15th finance commission and second related to the growth rate of GDP of India and GSDP of Uttar Pradesh since 1991. Also, for better understanding, growth of per capita GDP and per capita GSDP have also been analysed.

Testing Hypothesis I

The presumption of this hypothesis was that Centre provides sufficient funds and grants to states so that states grow at least at the rate at which Centre grows because in cooperative federalism, Centre and State grow hand-in-hand. Table I depicts that nearly 20% of total Centre’s fund are disbursed to Uttar Pradesh. If Centre grows, it has more funds to distribute to the states and therefore the states can spend more overall as well as on CAPEX and start growing rapidly although there can be a time lag i.e., state’s growth follows growth of the Centre. But in the case of Uttar Pradesh this hypothesis is rejected.



FIGURE 1: GROWTH RATE OF GDP AND GSDP (UTTAR PRADESH)



Source: Computed from Data of Central Statistical Organisation

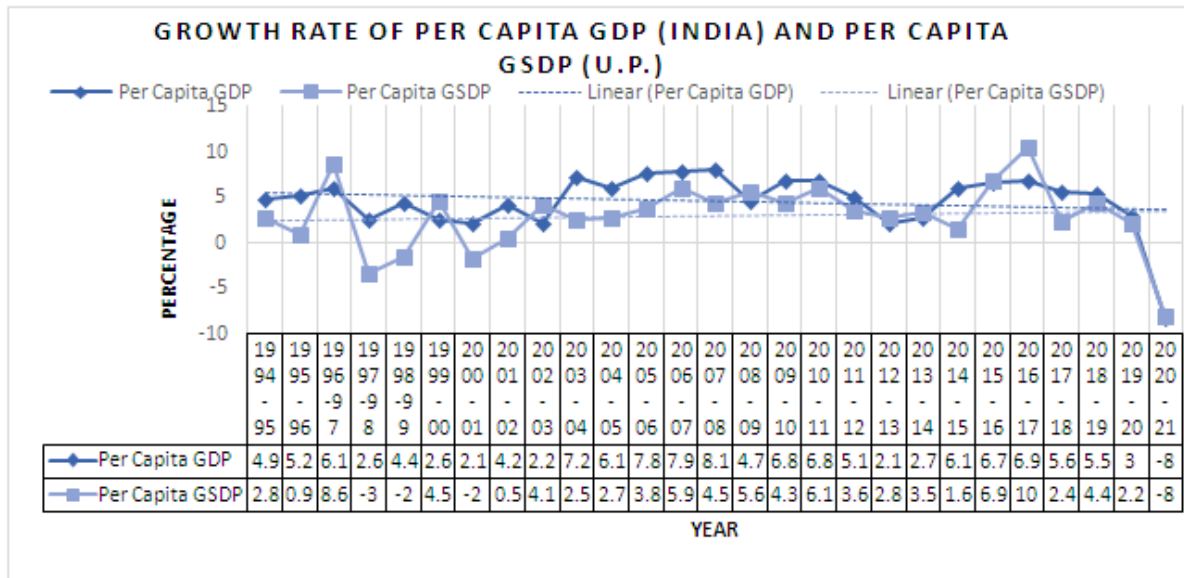
RESULT:

t-Test: Paired Two Sample for Means

	GDP Growth Rate	GSDP Growth Rate (U.P.)
Mean	6.188387097	5.029354839
Variance	9.798807312	10.89440624
Observations	31	31
Pearson Correlation	0.851110277	
Hypothesized Mean Difference	0	
df	30	
t Stat	3.661811529	
P(T<=t) one-tail	0.000479139	
t Critical one-tail	1.697260887	
P(T<=t) two-tail	0.000958277	
t Critical two-tail	2.042272456	



FIGURE 2: GROWTH RATE OF PER CAPITA GDP AND PER CAPITA GSDP (UTTAR PRADESH)



Source: Computed from Data of Central Statistical Organisation

RESULT:

t-Test: Paired Two Sample for Means

	Per Capita GDP	Per Capita GSDP
Mean	4.625185185	2.958888889
Variance	10.19867977	13.78401026
Observations	27	27
Pearson Correlation	0.715385255	
Hypothesized Mean Difference	0	
df	26	
t Stat	3.268194372	
P(T<=t) one-tail	0.001520408	
t Critical one-tail	1.70561792	
P(T<=t) two-tail	0.003040816	
t Critical two-tail	2.055529439	

Since P value is less than 0.05 in both the cases, we reject the null hypothesis i.e., the growth of GSDP and per capita GSDP is not significantly different from India.

In the whole period, the average growth of the Centre is more than 5% and therefore, the Centre’s pool is rising and the funds to Uttar Pradesh have also been growing rapidly. But Uttar Pradesh is around 3%. This fact is also proved by the per capita GSDP. In almost 30 years, the per capita GDP of Centre has increased by more than 400% while that of U.P. by only 237%. Hence the

difference of per capita income has widened. Another important fact is that, out of 29 years there have been only four years where Uttar Pradesh’s GSDP has grown faster than that of the Centre i.e., 1995–96, 2007–08, 2015–16 and 2016–17. It cannot be called a mere coincidence that in all these years the growth of country was affected by external depressive factors or internal policy decisions such as financial recession in 1995–96, 2007–08, demonetisation in 2016–17 and financial crisis in 2015–16 suggesting that the impact of national policies is less on Uttar Pradesh’s growth because of

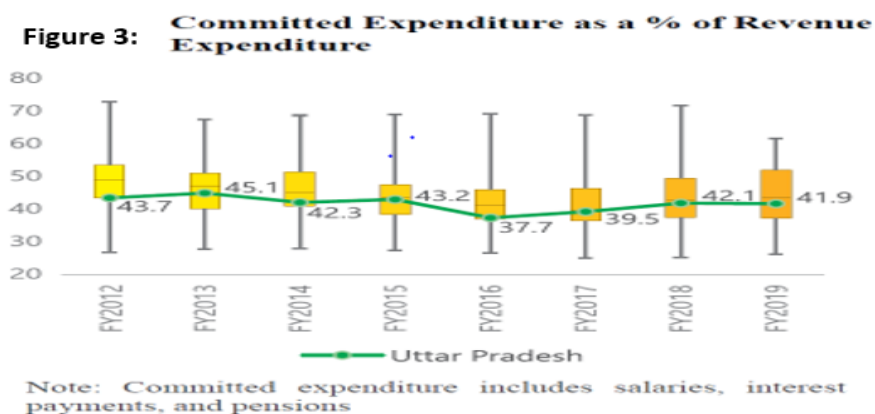


committed devolution of funds from Centre to Uttar Pradesh. One important fact that also emerges from the table and the graph presented is, the difference in growth of Centre and State GSDP and per capita GSDP is diminishing, more so in the second decade of the 21st century. It is not easy to determine what is the major cause of this phenomenon. But if one follows traditional theorists like Myrdal, Folke Gilbert etc. (stating that the advantages of all kinds of investment spread faster where institutional and infrastructural support (road, transport, electricity) is available and this also results in back wash of those places where these basics are missing), one can imagine that since 1991 government of India changed its policies from inward looking to that of globalisation and privatisation which led to increase in FDI flows but Uttar Pradesh did not receive much of the FDI flow and private investment because it lacked infrastructure especially electricity, transport etc. Southern and western states took the advantage

of the situation. But government of Uttar Pradesh has lately started inviting FDI and increased Central flows has led Uttar Pradesh to reduce the gap of growth of GSDP of Uttar Pradesh and that of the nation which proves that in long-run in cooperative federalism states follow the growth pattern of the Centre but with a time lag. But this time lag cannot be predetermined and can be different for different states. In the long run states become independent.

(B) CAPEX OF UTTAR PRADESH

Over the years, the State of Uttar Pradesh has not seen any significant improvement in the Capex to GSDP ratio. Capital expenditure is important for the long run growth of any state as it promotes infrastructural growth. Comparing the proportion of committed expenditure to revenue expenditure on the other hand, there has been some reduction in it since 2012 (Figure 3).



Source: XV Finance Commission - Volume IV – The States

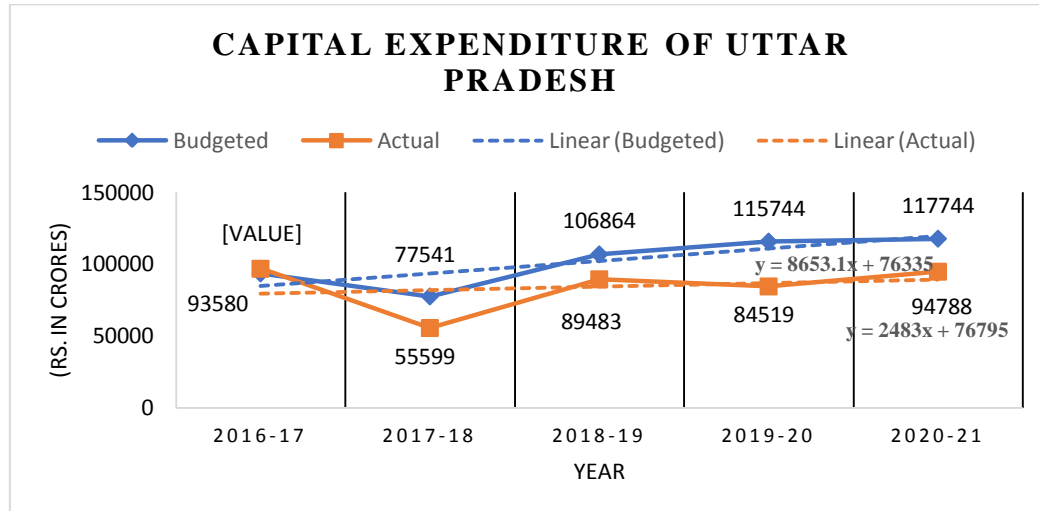
As per Uttar Pradesh's budget 2021-22, capital outlay for 2021-22 is estimated to be Rs 1,13,768 crore, showing an annual increment of 38% over 2019-20. The revised estimate for capital outlay in 2020-21 is Rs 68,254 crore which is 16%

lower than the budget estimate. On one hand, U.P. government is increasing the expected capital expenditure for the coming year, and on the other hand, it has not been able to spend to the level of its own predictions (Figure 4).



Testing Hypothesis II

FIGURE 4: BUDGETED AND ACTUAL CAPITAL EXPENDITURE OF UTTAR PRADESH



Source: Computed from state budget documents

RESULT:

t-Test: Paired Two Sample for Means

	Budgeted	Actual
Mean	102294.6	84244.4
Variance	282283675.8	279429406.8
Observations	5	5
Pearson Correlation	0.703121522	
Hypothesized Mean Difference	0	
df	4	
t Stat	3.125458628	
P(T<=t) one-tail	0.017669902	
t Critical one-tail	2.131846786	
P(T<=t) two-tail	0.035339804	
t Critical two-tail	2.776445105	

One has to remember, that every state has to spend resources for infrastructural growth which is the key of any future development. Investment in infrastructure can be done both by public sector (government) and private sector. Since 1991, India has encouraged private sector and foreign investors to invest in infrastructure but as mentioned earlier, private and foreign investment depend upon the level of existing infrastructure and returns on infrastructure which in turn depends upon the demand of infrastructure. In case of Uttar Pradesh, it is evident that CAPEX has been very less by public

sector (government of Uttar Pradesh) and there has been great shortage of power. Even KAVAL towns (between 1991-2010), were supplied 16 hours of power while smaller towns and villages were supplied power between 8 to 10 hours. Road infrastructure was also not in good shape, so private and foreign investors shied away from investment. Moreover, State government's CAPEX remained below 40% of total expenditure for almost all the plan periods up to 2010, despite Centre's transfers to various projects. This research tried to analyse the reality of CAPEX post 2016 because now the

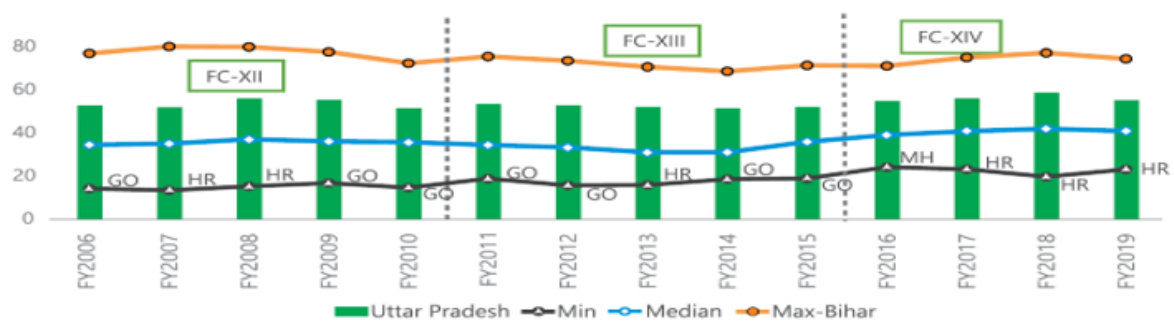


government of Uttar Pradesh, for fulfilling the ambitions of large number of people in its jurisdiction, decided to invite foreign investment in big way. It was presumed that Uttar Pradesh government would enhance capital expenditure at fast pace and budgeted and actual CAPEX would be quite high so that necessary infrastructure is created for foreign capital. But the available data demonstrates that CAPEX has not increased at the budgeted level even in this period and remained between 41% to 43% for the whole period of 2016–20. The greater concern is that every year the actual expenditure has been quite lower than the budgeted expenditure. The null hypothesis is rejected since the P value is less than 0.05, which suggests that despite government promise, the actual CAPEX remained lower than even the budgeted. It

demonstrates the fact, that even resources kept for capital expenditure are spent on revenue expenditure and the distance between them is increasing for the period in consideration. It also demonstrates that the state government of Uttar Pradesh at least has not been able to enhance its share in CAPEX as a percentage of total expenditure which could affect its power to attract foreign investment/private investment which in turn will result in slow increase in GDP and GSDP thus, negating the dependency paradox. So, the government needs to ensure that the budgeted CAPEX is invested and if possible, is enhanced by reducing revenue expenditure. At present period of Covid pandemic, this may look impossible but Covid will not last forever and the government of Uttar Pradesh needs to increase the CAPEX for long-term benefits.

(C) CENTRAL TRANSFERS AND SHARE OF OWN-TAX REVENUE IN TOTAL REVENUE OF U.P.

Figure 5 Central Transfer {Tax Devolution & Grants-in-aid (FC and Non-FC)} as % of TRR



Source: XV Finance Commission - Volume IV – The States



Hypothesis III

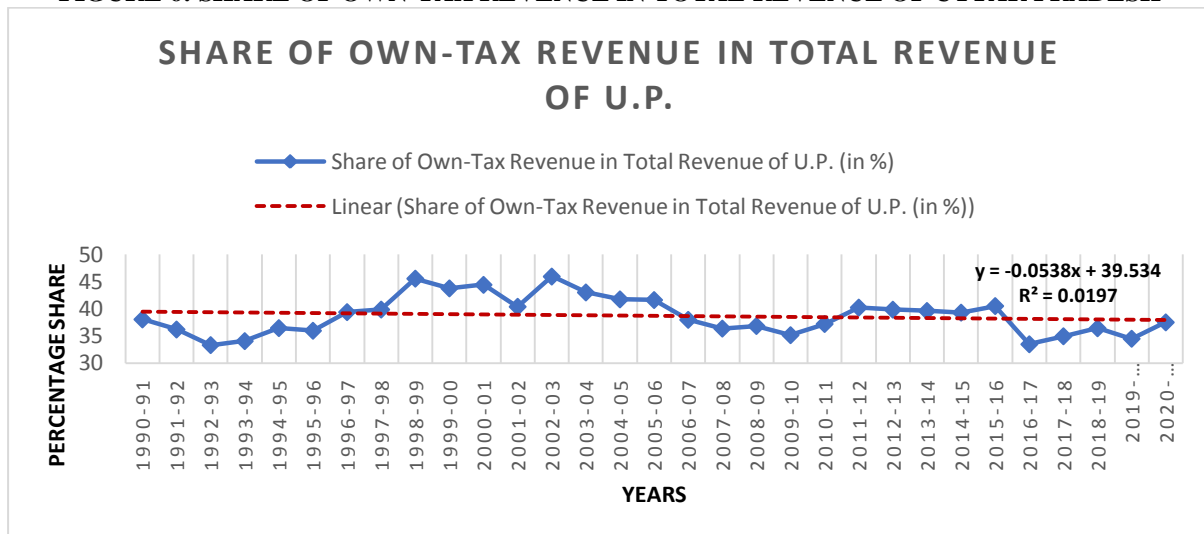
TABLE 2: SHARE OF OWN-TAX REVENUE IN TOTAL REVENUE OF UTTAR PRADESH

Year	Share of Own-Tax Revenue in Total Revenue of U.P. (in %)
1990-91	38.02601653
1991-92	36.17698193
1992-93	33.31569058
1993-94	34.04382999
1994-95	36.43631895
1995-96	35.95086759
1996-97	39.36720493
1997-98	39.83812064
1998-99	45.51551354
1999-00	43.73085612
2000-01	44.37564917
2001-02	40.3548571
2002-03	45.90026523
2003-04	42.98632308
2004-05	41.70937735
2005-06	41.58842192
2006-07	37.95409601
2007-08	36.34644276
2008-09	36.82350146
2009-10	35.13759563
2010-11	37.19068324
2011-12	40.20029082
2012-13	39.82070675
2013-14	39.58059314
2014-15	39.27689565
2015-16	40.47985004
2016-17	33.46606318
2017-18	34.93600303
2018-19	36.40308699
2019-20 (R.E.)	34.48066758
2020-21 (B.E.)	37.48818267

Source: Computed from Budget Documents of U.P.



FIGURE 6: SHARE OF OWN-TAX REVENUE IN TOTAL REVENUE OF UTTAR PRADESH



Source: Computed

RESULT:

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
Share of Own Tax Revenue in Total Revenue of UP	31	38.5806	3.63111	.65217

One-Sample Test

	Test Value = 66					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Share of Own Tax Revenue in Total Revenue of UP	-42.044	30	.000	-27.41935	-28.7513	-26.0875

The third hypothesis of this research is based on the presumption of paradox of dependence i.e., in the long run, cooperative federalism makes the dependent, independent to pursue its own socio-economic policies. By the term independence of a government, it means that it can make policy for the persons under its jurisdiction and has resources to fulfil its promises. The state governments of India have two sources of income (1) self-generated (2) grants and funds from the Centre. Since 1990-91, the State's share has a declining trend. It has been assumed as well as empirically tested by large number of economists including R.J. Chelliah, M.V. Gupta and others that States need 65% of total expenditure of Centre and State together to fulfil their duties assigned by the Constitution. If out of

this, States earn at least 50% of their expenditure, it can be presumed that they could go for independent socio-economic policies. In India, many states do generate 50% or more of total resources e.g., Gujarat, Maharashtra, Telangana, Goa etc. But in case of Uttar Pradesh, own resources to total expenditure have been very low (Table 2, Figure 6) in all. Looking at Uttar Pradesh's share of own-tax revenue since 1991 i.e., regimes of tax structure like pre-VAT, VAT and GST, one finds that the ratio has remained between 38% to 45%. But the great cause of worry is that the share of 45% was achieved in 1997-98 i.e., pre-VAT period and declined to 42% by 2005 when VAT was implemented. It only once touched 40% in 2011-12 and further declined especially since GST was implemented and has



come down to 34%. Uttar Pradesh, instead of improving its own-tax revenue since 1990–91, has been doing the opposite. It is true that fiscal deficit has been less than 2% for the entire period and there have been revenue surpluses. But it does not mean that fiscal sustainability is a proxy for economic growth. In all socio-economic indicators, like health, education, power, transport, Uttar Pradesh is lacking behind most of the states. Even in HDI, Uttar Pradesh ranks low, suggesting it needs more resources to spend but does not generate enough i.e., it does not seem to become independent as per expectations of the policy. Null hypothesis is thus rejected since one sample test provides P value of less than 0.05. Although the test has been conducted with 66% of own-tax revenue which may be a bit exaggerated, but the fact remains that Uttar Pradesh and Bihar remain backward although they do get lion's share in central devolution of funds. But to become independent, there is an urgent need of enhancing own-tax revenue.

VI. CONCLUSION

The research article began with the abstract concept of 'Paradox of Dependence' which is hardly testable. It is quite impossible to define independence for a subnational government in a federal structure as complex as that of India. All states in India are quite different in size, population, infrastructure, geographical terrain, language, culture and festivities as well as problems they face. In a democratic country, people vote with their feet i.e., they can move to any state where facilities are better. In this respect, one does not need many evidences. Most migration takes place from Uttar Pradesh, Bihar, Jharkhand and Chhattisgarh simply suggesting that till date Uttar Pradesh certainly lacks behind in providing basic amenities of health, education and employment and thus Paradox of Dependence is not justifiable in case of Uttar Pradesh at first sight.

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