NON-TAX REVENUES OF UTTAR PRADESH: AN EFFICIENCY ANALYSIS

Prof. Arvind Mohan,

Professor,
Department of Economics,
University of Lucknow.

Kulsoom Raza,

Senior Research Fellow,
Department of Economics,
University of Lucknow.

Vivek Yadav,

Junior Research Fellow,
Department of Economics,
University of Lucknow.

Kanchan Srivastav,

Junior Research Fellow,
Department of Economics,
University of Lucknow.

Dania Mohsin,

Research scholar,
Department of Economics,
University of Lucknow.

Ankit Kumar,

Research scholar,
Department of Economics,
University of Lucknow.

ABSTRACT

This paper analyses the structure of non-tax revenue of Uttar Pradesh for a time period stretching from 1990-1991 to 2020-2021. The main focus of the paper is to understand the rate of recovery of major components of non-tax revenues, buoyancy and volatility of non- tax revenues during pre and post FRBM reform period. The empirical results of this study indicate non-tax revenues of Uttar Pradesh are buoyant indicated by the buoyancy coefficient. Furthermore, post implementation of FRBM Act non tax revenue component of resources of the state turned volatile. In terms of rate recovery among different components of non-tax revenues, Economic services outperformed other components, indicating that government spending on these services is effective

INTRODUCTION

The twofold aim of resource mobilization through state non-tax source reforms are to create a more reasonable non-tax structure as well as greater opportunities for economic growth. Growth objectives are rendered meaningless by the unsound structure of non-tax sources, which has a detrimental impact on the economy. Therefore, it is important to consider neutrality, equality and efficiency from an economic perspective, particularly as it relates to these objectives' effects on the expansion of the economy. In order to achieve these objectives, governments frequently choose to implement economically sound structure of non-tax sources.

The term "non-tax revenues" refers to payments given in exchange for anything to the government. These non-tax sources, however, fall into three categories and do not exhibit common characteristics: Sources including fines and penalties (apart from penalty for non-compliance with tax laws) are compulsory and requited payments and hence forming the first category of non tax resources (Musgrave and Musgrave 1973). The unrequited and voluntary payments make up the second source. These payments comprise grants and contributions given to the government as well as any money that is still unclaimed and held by the government. Revenue from government-owned resources, such as forests, marine environments, riparian zones, and wildlife, falls into the third category of voluntary and requited payments. Revenues from admission fees, sale of usage rights, rental payments and royalties accrued to government along with dividends and interest receipts reaped from government investments are included in this third category.

Even though the phrase "non-tax revenue" refers to all of the aforementioned components, some of the non-tax sources listed below have not been included in this study in order to limit its scope and provide a thorough examination of a few chosen services.

First, payments made to the government in the form of long-term savings plans or loans that are subscribed to and repayable by the government in the future (i.e., the payment made to the government is contingent upon future payments or the transfer of other assets) are regarded as "capital receipts" and are excluded from the government's non-tax revenue sources.

Secondly, the government's revenue received from the sale of goods and services—which are essentially commercial in nature—is likewise excluded. Third, it is noted that not all government receipts in non-tax receipts are accounted for in the consolidated fund. For example, in the education sector, only the tuition fees are credited to the treasury, despite the fact that students pay a range of fees (Tilak 1993). In the field of public health and medicine, it is also noted that several states do not include the user fees paid by out-of-state patients in the consolidated fund.

Fourth, since the primary goal of lotteries is to make money rather than to benefit the public, their income is netted out. Lottery rewards are paid out in full in several states using a large portion of lottery earnings. The state government only keeps a very little percentage of this money. This also applies to other business endeavors. For this reason, the idea of net non-tax revenue—that is, total non-tax revenue less the amount spent on these commercial activities—is used in this study.

Lastly, notional receipts—such as interest on capital works in irrigation, which is matched by contra-entry in many states (indicating notional expenditure)—are not included in the scope of this research.

The following are some of the non-tax sources that the study examined:

a. Administrative Non-Tax Receipts: Approximately three-quarters of the states' non-tax revenue come from this source. This is probably going to be the most effective and consistent way for the states to get non-tax money in the future. Over 100 departmental non-tax revenue streams are categorized into thirty headings across several states. Therefore, in an attempt to conduct a thorough analysis of all the items falling under non-tax sources, certain features from each of the three main categories of administrative receipts—general, social, and economic services—are included.

b. Social service receipts: Education, athletics, arts and culture, public health and medicine, family welfare, housing, urban development, water supply and sanitation, information and publicity, labor and employment, social security and welfare, and other social services are some of the major items that fall under this category.

c. Receipts from economic services: This class includes, among other major items, agricultural and rural programs; non-ferrous mining and metallurgical industries; roads and bridges; tourism; agriculture; animal husbandry; fisheries; forestry and wildlife; cooperation; other agricultural and rural programs; special area programs; major and medium irrigation; minor irrigation; village and small-scale industries; and other industries.

The six leading individual contributors to the non-tax revenue of the states are as follows. These include roads and bridges; water supply and sanitation; major and medium irrigation; minor irrigation; sports, education, art, and culture; and health, public health, and family welfare. In certain states, they make up a significant portion of the non-tax revenue's administrative component.

OBJECTIVES OF THE STUDY

The main of objectives of this research paper are as follows

1. To measure the rate of recovery of major components of non-tax revenues of Uttar Pradesh
2. To estimate the buoyancy of Non-tax revenues of Uttar Pradesh
3. To measure the volatility of non- tax revenues during pre and post FRBM reform period.

LITERATURE REVIEW

Variety of studies pertaining to non-tax revenue in the public finance literature are contributed by authors such as Bagchi (1992), Upender (2008), Mawia and Nzomoi (2013), Mohanty and Patra (2016), Dahal (2021) and (Malik et al., 2020). Upender (2008) estimated India's tax buoyancy. According to Bagchi (1992), non-tax revenue has made up a modest and decreasing portion of India's overall revenue. The Government of Orissa established the Expert Committee on Revenue Enhancement Measures (Hota Committee, 2010). This committee made an effort to calculate Odisha's potential non-tax revenue as well as the discrepancy between actual and prospective collection. From the perspective of prescribing policies, the report of this committee is crucial. They analyzed irregular growth pattern in non-tax revenue. Wide changes in income from sources such as interest, dividends, and the forest and irrigation sectors are the primary cause of such irregularities. A quick way to gauge a state's revenue success in relation to economic development is to look at its buoyancy. The committee has determined that buoyancy is not observed in non-tax supplies at the sub-national level. Because of the seasonal influence, the collection from Forest and Wild Life has the most irregularities among the non-tax items. According to their opinions, the administration of non-tax sources of revenue frequently determines the impact in practice more than the design and structure; in fact, it has been claimed that tax administration is tax policy. They have found no connection between increased revenue expenditures for the development and preservation of forests and the amount of non-tax revenue collected. The sub-national governments' non-tax revenue (NTR) as a

fiscal tool was examined by Dholakia (1998), but only in relation to those aspects and tools over which they have sufficient control. If they so choose, they can use these tools to try and reach the constrained maxima in terms of reducing both the fiscal and revenue deficits. In order to maximize non-tax revenue in the economy, Das-Gupta (1990) has called for leasing contracts to deliver public goods and services. However, the importance of non-tax revenue has been emphasized by the research undertaken by Anisworth (1984), Fraser and Kingwell (1997), Bierhanzl (1999), Kaur (2003), Purohit (2006) and Malik, et al., (2023). To offer the public benefit, they haven't, however, scientifically investigated the non-tax revenue on revenue spending in the economic sectors. According to Mohanty's (2016) assessment, the two most crucial sustainability factors for achieving high development while abiding by the FRBM (Amendment) Act of 2011 are capital productivity and tax collection efficiency. Nevertheless, to the best of our knowledge, no research has looked at how well revenue spending works or how revenue expenditure and non-tax revenue relate to one another for sub-national governments in India. Because of this, the study of determining the revenue expenditure's efficiency will be crucial in terms of policy.

METHODOLOGY OF THE STUDY

The data in this paper was obtained between 1990 and 2020 from the RBI Data Base (DBIE). The fundamental formula, or revenues spending over time, has been used to quantify the rate of recovery of the main sources of non-tax revenues: revenue from economic services, revenue from general services and social services.

If buoyancy equals one, then an additional one percent of GDP would result in an equal rise in tax revenue, maintaining the same ratio of taxes to GDP. However, when tax buoyancy is more than one, tax revenue rises faster than GDP, which may result in a decrease in the deficit ratio. If a country intends to seek relative financial stability and there is growing demand for public services, a tax system

with buoyancy larger than unity over time is a desirable quality. Discretionary adjustments might compensate for poor buoyancy, but they could be delayed and disproportionately large. The double log linear regression approach has been used to compute the buoyancy coefficient. The buoyancy of total non-tax revenues and its constituents has been measured using the model. General services non-tax revenue, economic services non-tax revenue, and other non-tax revenue. The model is as follows:
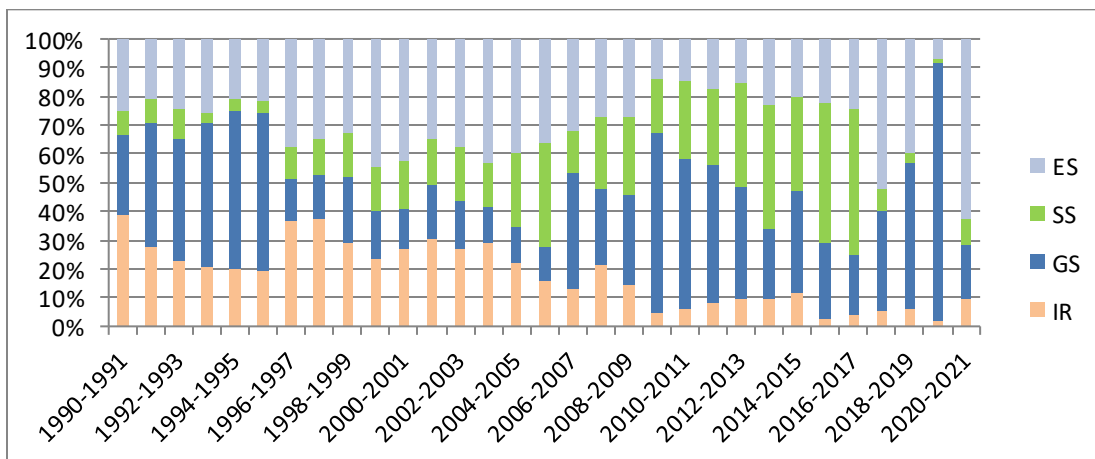
$$\ln(Y) = \beta_0 + \beta_1 \ln(X_1) + \mu \quad ....Eq.1$$

In the equation 1, ln (Y) is the log of Non Tax Revenue (NTR), $\ln(X_1)$ is the log of Gross State Domestic Product (GSDP). β_1 provides information with respect to the tax buoyancy. The estimation of the model is carried out by performing ordinary least square method (OLS). The autocorrelation is checked by Durbin-Watson test (DW-test).

To assess the stability and effectiveness of taxes is the "coefficient of variation" (CV). By dividing the mean (average of own tax revenues) by the standard deviation (of own tax revenues), one may get this measure of volatility. To determine whether or not the tax reform is harmful to the effectiveness and stability of tax collections, the coefficient of variation is utilized.

$$\text{Coefficient of Variation (CV)} = \frac{\delta \times 100}{\mu}$$

The effectiveness of the government's investment policy is gauged by the rate of recovery. There are several theories that propose a greater emphasis should be placed on raising the rate of return in order to mobilize income. The percentage of income generated after paying one rupee to the source as revenue expenditure is known as the recovery rate. The recovery rate (RR) from services is estimated in the study and given as a percentage of the revenue expenditure (RE) paid for services.

EMPIRICAL ANALYSIS

One of the components of revenue collections for the Indian states is non-tax revenue. While the percentage of each state's own non-tax revenue to the gross state domestic product (GSDP) in Indian states has fluctuated throughout time between 1.52 and 2.36%, in other nations such as Singapore, Egypt, and Iran, the percentage is close to 10%.

The primary sources of revenue for Uttar Pradesh ONTRS include interest income, profits and dividends, and recovery from general, economic, and social services. The recoveries from services provided by the government are what contribute significantly to non-tax revenues (making up around two third of the ONTR), while interest receipts, dividends, and profits are barely dependable sources to boost non-tax revenue receipts.

Figure 1: Pattern of Non-Tax Revenue Generation in Uttar Pradesh (1990-1991 to 2019-2020)

Source: RBI database

Pattern of non-tax revenues of Uttar Pradesh has been depicted in figure 1. The revenues from interests, dividends, and profits, as well as the recoveries from general, economic, and social services, are the primary components of each state's ONTRS. The recoveries from services provided by the government are a major contributor to non-tax revenues, as interest collections, dividends, and profits are not a reliable source of increase in non-tax revenue receipts. These make up over two thirds of the ONTR. Of these, the percentage of social services in relation to the states' ONTR increased over the years, whilst the share of general and economic services remained stable from 1993–94 to 2003–04.

With respect to general services, revenue as a percentage of states' ONTR has exhibited a fluctuating trend over time, registering a compound annual growth rate of 3.9%. In addition, its percentage of ONTR climbed from 30.6% in 1991–1992 to 40.3% in 2008–2009. The revenue from general services has been expanding at the fastest pace annually.

Compared to the other categories, economic services contributed the least but expanded at the fastest pace. Additionally, it was

income-buoyanthe economic services component of states' ONTR increased from 20.64% in 1991–1992 to 36.6% in 2005–2006. Post 2005-2006 tis component of ONTR followed a downward trend and decreased continuously and reached a low of 7.02% in 2019-2020.

Share of social services increased from 8.72% in 1991-1992 to 35.81% in 2005-2006. Following a decline phase, this component of ONTR picked the pace up again from 36.23% in 2012-2013 to 50.63% in 2016-2017. Urban development, water supply and sanitation, education, sports, arts and culture, and medical, public health, and family welfare were the main components of social services that generated the most revenue in early years. Education, sports, and arts and culture took the lead in revenue during recent years.

As a result, the examination of the states' ONTR shows that these do not constitute a fiscally important portion of the states' income and that their growth is not keeping up with that of other revenue-generating components. The possibility exists for non-tax revenue streams to become a sizable source of funding. Adopting and enforcing clear policy choices is desperately needed.

Table 1: Buoyancy of non-tax revenues

Variable	Beta	Std. Error	t-Stat	p-value	R-Squared
Non-Tax Revenue Economic Services	1.09	0.049	22.14	0.00	94
Non-Tax Revenue Social Services	1.33	0.148	8.93	0.00	73
Non-Tax Revenue General Services	1.25	0.164	7.61	0.00	65
Own Non-Tax Revenue	1.15	0.071	16.14	0.00	89
Total Non-Tax Revenue	1.13	0.060	18.74	0.00	92

Source: Own Calculation

Own non tax buoyancy has been estimated by the use of the commonly recognized and applied double log model. Mobilization of resources by the state, often impeded by the large deficits, becomes increasingly critical especially after the implementation of GST and recommendations of financial commissions. Poor buoyancy is characterized as a slower rise in net transfer revenue

(NTR) in comparison to the state gross domestic product, and it is shown by a buoyancy coefficient value of less than one. Tax revenues are said to be buoyant if the value of coefficient happens to be greater than one.

ONTR of Uttar Pradesh has a tax buoyancy of 1.15 indicating a sufficiently buoyant source of revenue. The highest coefficient of buoyancy among

the components of NTR is attained by revenues from social services (1.33), suggesting that enough efforts have been taken to raise the revenue from social services. When it comes to buoyancy coefficients greater than 1, the NTR from general services has the second-highest value (1.25). This shows that enough has been done to raise general service revenue in order to offset the rise in the base, or SGDP. The NTR from economic services has the lowest buoyancy coefficient (1.09) among the types of NTR sources.

Thus, it follows that non-tax revenues (NTRs) are buoyant. A careful examination of the different non-tax revenue sources, suggests that the non-tax revenue from social services has the highest buoyancy and least from economic services. This result is contradictory with theoretical explanations that contend that the government should be mobilizing larger portion of revenues most from the economic services it provides.

RATE OF RECOVERY OF NON-TAX REVENUES

Increasing the rate of return in order to mobilize revenues has been suggested by several theories. The non-tax revenue recovery rate expressed as a percentage of the related revenue expenditure as been computed from RBI annual publications.

With ROR of 11.39% in 1991-1992, general services had the highest ROR, as seen in graph 2. This means that for every rupee spent on general services, the same source of non-tax revenue yielded a recovery of 11 paisa. From 1996-1997, the ROR fluctuated to lowest (1.46) in the entire study period in 2003-2004. As a result, the ROR for general services seems to be on the decline. The ROR from economic services is the most stable component among three. It rose from 8.25 in 1991-1992 to all time high (22) in 2006-2007. ROR from social services was the lowest until 2005-2006 thereafter it followed an upward trend, pandemic years being exception.

Figure 2: Rate of Recovery of Non-Tax Revenue Components
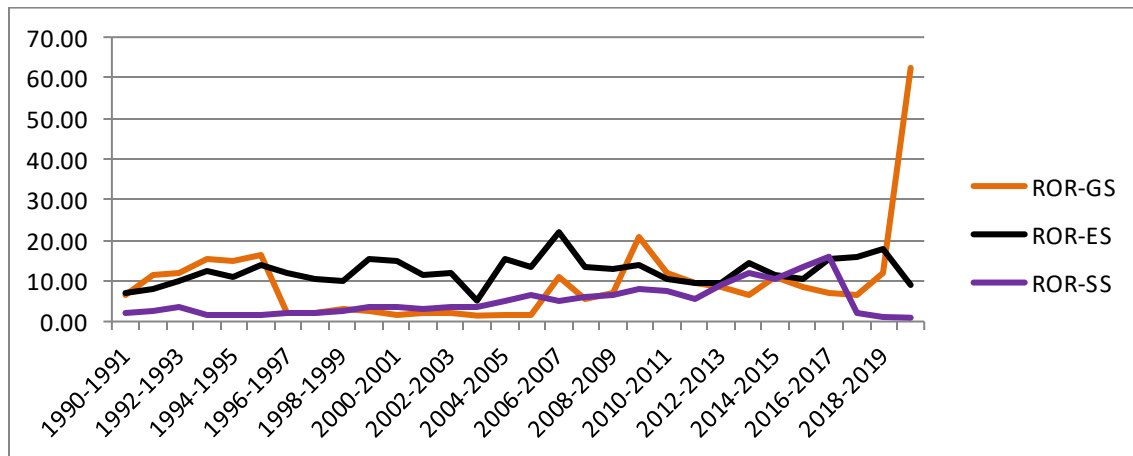
Source: Own Calculation

Theoretically, the economic services should have the highest rate of return (ROR), followed by the social and general services. Except for few initial years and 2009-2010 economic services had the highest rate followed by general and social services. Economic services outperformed other components, indicating that government spending on these

services is effective. Social services had the lowest income potential and the lowest ROR, having not climbed 5% on an average during the research period.

VOLATILITY OF TAX AND NON TAX REVENUES

The stability of the source or form of revenue makes it easier to achieve the set policy objectives and establish stability in the entire resource stream.

From the government's perspective, NTR stability is ideal since it makes it easier to create plausible projections for borrowing and spending for the following year. The consistency and variability of the SGDP and NTR are estimated using the coefficient of variance.

Table 2: Volatility of Tax and Non-Tax Revenue

Variable	Mean	Std Deviation	Co-efficient of Variation
	Pre-FRBMA Period		
Own Tax Revenue	7379.8	3514.6	47.6
Non-Tax Revenue	1665.5	48.194	27.51
	Post- FRBMA Period		
Own Tax Revenue	600011.5	37138.1	61.88
Non Tax Revenue	18295.15	18935.84	103.5

Source: Own Calculation

Table 1 presents estimates of the volatility of tax revenues and non-tax revenues for the time period ranging from 1990-1991 to 2019-2020. This time period is further divided into two groups first being pre FRBMA period and the other being post FRBMA period. Own tax revenues were the more volatile during the pre-FRBM era, with coefficients of variation of 0.476 and NTR being relatively less volatile.

Post adoption of rules pertaining to fiscal discipline i.e. the implementation of FRBMA, both the income streams of Uttar Pradesh turned volatile. Coefficient of variation for OTR is 0.618 while that for NTR is 0.1035, indicating NTR as income stream being more volatile for the state.

CONCLUSION

In order to meet the growing burden of revenue expenditures, which are mostly utilized for general, social, and economic services, there is an urgent need to increase revenues. The non-tax revenues of Uttar Pradesh have a buoyancy coefficient of 1.13, indicating that they are buoyant. After examining the different kinds of non-tax revenue, it was discovered that the revenue from social sources, which is estimated to have the highest level of buoyancy of 1.33 followed by general services (1.25) and least buoyant source of NTR is economic services having a buoyancy coefficient of 1.09.

The revenues mobilized in Uttar Pradesh from NTR exhibit fluctuating pattern. General services were dominant until 1995-1996. Approximately half of the revenue was derived from economic services from 1996-1997 to 2006-2007, since then its share has grown overtime. As a result, it is necessary to raise the proportion of general service and interest revenue receipts. In comparison to the other three income streams, the revenue share from social services is rather small, although it may be justified from the perspective of social equality.

In a nutshell non-tax revenue source do not constitute a fiscally important source for the state budget, and their growth is not keeping up with that of other RR components. If appropriate consideration is given to the price of the services, non-tax revenue may be a significant source of budgetary revenues for the state administration. Its significance is already becoming apparent in light of the need to bridge state budget deficits and the

significant financial demands associated with updating and modernizing essential infrastructure.

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