Capital and the Hindu rate of growth: Wealth concentration in newly independent India 1961-1986

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Abstract

I provide estimates for the size and importance of top wealth-holders in India during the stagnant growth phase before the early 1990s liberalization. Relative to national income which famously grew at The Hindu Rate of Growth, my paper suggests a large and fast decline in the wealth of India’s Top 0.1%. Due to the effects of inflation, progressive property taxation and nationalization much of incumbent private wealth was dismantled. New wealth was made of movable assets which unlike urban and agricultural land actually recovered in value. I offer explanations of these transformative dynamics based on the attitudes of the Indian state during and prior to the reign of Indira Gandhi. The results link the composition of the rich in colonial India versus post-liberalization India with important implications for wealth inequality, the equalizing forces inherent in tax policy and the role of the state in regulating social disparities.

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1 Introduction

There has been a well known effort to understand the historical evolution of wealth and wealth inequality in developed nations. This article presents and analyzes a new database of top wealth-holders during the mixed economy phase of Indian economic history. The results that follow try to answer a very simple question - did the turbulence and political economy of newly independent India enable or disable its incumbent rich? These answers are important to understand much of what has followed subsequently. The state of contemporary wealth inequality in the world’s largest democracy must be distinguished either as a sharp break from the developments between 1950-1980 or as a continuation of the deep disparities prevalent on the eve of Indian independence.

Although much focus in development economics is placed on understanding poverty, a complete picture also needs to shed light on the top of the wealth hierarchy. Over the course of the last hundred years, India has been home to not just the poorest but also some of the wealthiest persons in the world. Their status is intimately tied to the opportunities and social structures of the prevailing economic system. When the British left, a handful of business families controlled key economic industries. They were joined by dynastic royalty who had amassed and inherited great fortunes over time due to their close ties to the colonial administration. The Hindu Rate of Growth\(^1\) that followed for two or three decades did not by any means emancipate the living standards of the majority of the population. Private wealth and its concentration should have been high because income growth was so slow in India between 1960 and 1980. Indeed following the proposed fundamental economic law of capitalism\(^2\) by Piketty (2014), we should have expected old wealth to dominate. At the same time one cannot argue that the heavy regulation and government interventions were not important for social equity. In many ways, the provisions of the Indian constitution and the influence of progressive (Western and Soviet) ideas on Indian political leaders played a critical role in development planning. The license raj was accompanied by sequence after sequence of direct tax and nationalization policies to address the pressing needs for social change.

To analyze the actual dynamics that unfolded, I combine inheritance tax returns with mortality tables of insured Indians to build a dataset of top Indian wealth-holders between 1961 and 1986. The underlying estate multiplier technique which facilitates these estimates is a standard tool used in other historical estimates of wealth in the US, UK and France. The estates of decedents provide a unique opportunity to study private wealth. Generally individuals are not required to disclose their assets except for the purposes of inheritance at death. Unfortunately the series cannot be extended further because the inheritance (or estate) tax itself was repealed after 1985 in the quest to lower the

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\(^1\)The term Hindu Rate of Growth was coined by the Indian economist Raj Krishna to contrast India’s stagnant economic performance with countries in East Asia. At similar levels of income, India and East Asia should have achieved similar growth. India did not, East Asia did. The blame is commonly attributed to archaic controls on the movement of capital and regulation of industrial policy. See Rodrik and Subramanian (2005)

\(^2\)The so-called law predicts that private wealth accumulated in the past rises relative to national income at low growth levels
direct tax burden. I argue that these are the best data on hand to understand Indian wealth due to perennial problems of tax evasion and under-reporting with other sources. The estimates from the estate multiplier closely track wealth levels at the absolute top to those disclosed in news articles about India’s wealthiest taxpayers.\(^3\) The resulting data are used to compute the wealth of the lowest possible fractiles (Top 0.1% onwards), the total tax units above the estate tax exemption limits and details on the composition of wealth. These estimates provide a unique opportunity to observe the importance and concentration of wealth in India. The underlying results are rationalized on the basis of policy and historical developments. Tax compliance and fiscal data for India raise their own problems so I stress that these results are not the bottom line but the start of such estimations. It is hoped that this study will motivate the dissemination and computerization of more administrative data in the future.

Two main findings of this paper propose that a radical transformation occurred amongst the Indian elite between 1960 and 1980. Firstly, national income easily outgrew the level of wealth held by the Top 0.1%. In 1966 the wealthiest 200,000 families controlled wealth equivalent to a few months of national income. By the mid 1980s, their wealth was equal to a few days of GDP at best. It is not just the magnitude but speed of decline that is remarkable. Over the same period the cost of being a traditional rentier went up by factor of five i.e the return on wealth necessary to finance (at least) the mean standard of living increased from 0.35% to around 1.8%. Inequality within the rich declined in the 1970s because the greatest losses in wealth were borne by the Top 0.01%. These dynamics can be traced to the nationalization (even annexation) of various private assets, inflation and confiscatory tax policies on wealth and capital gains. The observed trends amongst the wealthy elite are consistent with the findings of Banerjee and Piketty (2005) for top incomes. The second important finding concerns the transformation of top-wealth itself. Much of the real value of elite wealth was expropriated by consumer price inflation in the 1970s but by 1986 movable assets had fully recovered their real value. Not surprisingly, the proportion of wealth held in the form of land and housing fell over two decades. The reversal in the downward trend for movable assets (such as equities, cash and other financial assets) coincided with tax breaks on capital gains starting in 1978-79. In comparative terms, the size of wealth held by the Top 0.1% was similar to that in France but much lower than the US in the late 1960s. The differences are to be expected given the respective phases of development, levels of stock market capitalization and time passed since initial efforts to democratize wealth by abolishing hereditary titles.

The first major contribution is the database of top wealth-holders put together systematically for historical analysis. To my knowledge this is the first (and only) series on top wealth for India for any historical period. These estimates are comparable to the international database put together by the World Wealth and Income Database (WWID). Data on Indian wealth are very limited and while infrequent (decennial, at best) national wealth estimates were compiled by Raymond Goldsmith\(^4\) till

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\(^3\) Taxes: The Poor Rich (India Today, March 31, 1978)

\(^4\) See Goldsmith (1983)
1975, there is no consistent estimate of private wealth. This problem continues to the present where the only estimates of the wealthiest Indians (never more than the richest 400) are either put together by financial magazines like Forbes\(^5\) or research wings of investment banks like Credit Suisse. Bagchi (1974) tried to make an estimate of personal wealth, but his series was limited to one year (1969-70) and used an arbitrary capitalization factor on income tax returns so that wealth inequality was basically an exactly a replica of capital income inequality. The second contribution of this paper is that it puts into context the distributional consequences of India’s Hindu Rate of Growth. Historical literature has very rarely (if ever) discussed India’s growth performance with regard to the absolute rich. Did India achieve outstanding wealth equality in this period? By no means do I pretend to have this answer. But from the perspectives of social hierarchy and mobility structures it is deeply important to understand the metamorphoses and fates of the elite in a highly unequal democracy. Understood as a chronic drag on macroeconomic performance, the public finance literature criticizes India’s tax policy before 1985. Comprehensive political analyses of taxation in the developed world, such as Scheve and Stasavage (2016) on the other hand associate all one-time declines of the rich with similar tax codes.

Results presented in this paper offer support for the inverted Kuznets curve\(^6\) according to which the evolution of inheritance and wealth inequality follows a U shape. In 1937, Time Magazine estimated the Nizam of Hyderabad to be the world’s richest man, with his wealth dwarfing the size of revenue collected by the Colonial Government in India. In 1967 the Nizam’s estate was not even the largest in India\(^7\). In this period it also took hundreds of estates to constitute even one percent of India’s GDP although the rich included mostly princes and a couple of industrial magnates. The metamorphoses and re-emergence of the rich coincided with stock market capitalization and liberalization. Around 1996-1997 according to Forbes magazine, India’s richest two entities were business dynasties that owned the equivalent of 1% of GDP. In 2007, Forbes listed (temporarily) the industrial tycoon Mukesh Ambani to be the world’s richest man. This makes the political economy of India’s rich during 1950-1980 all the more interesting. Old rentier wealth was dismantled which is why composition of the wealthy today is unambiguously linked to market dynamism.

2 Data and methodology

2.1 Data on Indian wealth

Data on personal and private wealth is notoriously hard to measure since individuals are not required to report their wealth unless a direct tax is implemented. Taking a realistic census of personal assets

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5 A study of the tail of the wealthiest 400 Indians in the mid 2000s was conducted by Sinha (2006)

6 This curve is much of the basis of Thomas Piketty’s book *Capital in the 21st Century* and is the subject of many research articles such as Piketty (2011), Piketty et al. (2006), Kopczuk and Saez (2004) and Saez and Zucman (2016) and even Indian income inequality in Banerjee and Piketty (2005)

7 13th in the list of wealth tax assessment according to India Today magazine’s analysis.
is very expensive and problematic. Compared to income, there is no automatic deduction-at-source equivalent for personal property. Until recently (2016), the Indian administration levied taxes on personal wealth\textsuperscript{8} but over time this act was diluted, wealth definitions changed and its ability to catch tax evasion had been in question since the beginning.\textsuperscript{9} Without effective penalties and a low likelihood of being caught, the collection of wealth taxes has been very low historically and the percentage of tax units captured in this scheme is too low and unreliable to draw conclusions. In particular the wealth tax under lax measures to ensure compliance generates a burden on the taxpayer’s income and the effective marginal incidence generates a high effective rate of return to evasion.\textsuperscript{10} In light of these issues, although India remained one of the few countries with a wealth tax, consistent details on top wealth holders can best be gauged by estimating wealth concentration indirectly. Since claims on inheritance must be registered with administrative authorities, estate taxes are less prone to tax evasion. This feature makes the this tax an automatic information source for understanding the wealth held by very wealthy persons. For a detailed discussion on the pros and cons of estate versus wealth tax data see Appendix A.

The main data used in this paper is sourced from reports and brochures of the All India Wealth Tax, Gift Tax and Estate Duty Statistics (AIWGE), compiled by the Central Board of Direct Taxation (CBDT). In India the estate tax was levied starting 1953 and abolished in 1985.\textsuperscript{11} Hence the data coverage in this paper ends with 1986 and starts with the earliest available issue of estate records (1961). Detailed hardcopy reports of the AIWGE are available from 1966 to 1990\textsuperscript{12} but the reliability and consistency of data is limited to 1986. A second important advantage of the Estate Duty is that unlike most direct taxes in India the reach of this act extended to the agricultural sector. For interested researchers I have created a digitized database of these Estate Duty reports as a companion to this article. The concept of personal wealth is exactly reproduced from official documentation by the Indian tax authorities and details on definitions are listed in the appendix.\textsuperscript{13} Thus the net value of the estate as per administrative definitions is used to compute total and average wealth per estate. One shortcoming of not possessing detailed microdata is that while we can see the size of estates with their respective frequencies, we cannot see simultaneously the decomposition of assets by type for these estate holders. Thus all portfolio decompositions capture the entire wealthy class rather than exact fractiles such as the Top 0.1%. From 1961 to 1986, wealth can be decomposed into real estate and movable assets. Movable assets can be further decomposed into equity, dividends, gold

\textsuperscript{8}The wealth tax came into being with the Wealth Tax Act of 1957, following the recommendations of the Kaldor Committee Report of 1956. See Kaldor (1956)

\textsuperscript{9}See the discussion on evolution of Indian tax policy and the reform of central taxes in Rao and Rao (2006)

\textsuperscript{10}The optimal evasion model by Srinivasan (1973) covers these issues from a theoretical perspective with compliance decreasing as income levels (such as capital gains) rise and increasing with the probability of detection. For example in 1974-75 if we assume a reasonable rate of return to wealth then the combination of income and wealth taxes pushed the marginal incidence rates to well above 100%. See Acharya (2005)

\textsuperscript{11}The legal and technical aspects of the Estate Duty Act is discussed in detail in Appendix A.1

\textsuperscript{12}Statistics on estate taxes are reported till 1990 but only cover older cases since the tax itself was removed in 1985 and hence we cannot ascertain the comparative validity of these years

\textsuperscript{13}See Appendix A.1.1
etc starting 1966.

The Reserve Bank of India does not follow the otherwise common international practice of releasing market value household balance sheets.\footnote{The RBI has a household capital series, however these only start in 1980, lack details on land holdings and use perpetual inventory methods which are not ideal for our purpose.} Although historical estimates (infrequently and only till 1975) on national wealth were imputed by Goldsmith (1983), there is no figure to capture private or household wealth separately. Hence at no point in this paper do I present the shares of top wealth holders in private wealth, instead choosing to capture the importance of the elite by taking \textit{fractile specific} wealth to national income ratios. National income (market price GDP) and household income (for tax units) are taken from the National Account Statistics (NAS), all nominal variables being deflated by the Consumer Price Index (CPI) to allow comparison with other studies.

\section*{2.2 Estate multiplier model}
To estimate the wealth of rich Indians this paper uses the estate multiplier method, pioneered by Lampman (1962) for the United States.\footnote{In fact the origin of this method can be traced back to William Petty for England in the 1600s. As a statistician, Petty was known for using mortality rates to recreate living populations.} The assumption in this class of methods is that death selects a sample (recorded in the estate tax) which can then be used to reproduce a distribution of wealth amongst the living. Due to the fact that wealth is so difficult to measure otherwise, this model is the global benchmark to systematically study the upper tail of the wealth distribution. Various historical and long run studies of the elite in the industrial countries, such as Atkinson and Harrison (1978), Kopczuk and Saez (2004) and Piketty et al. (2006) have utilized the estate multiplier for the UK, US and France. The US Internal Revenue Service also periodically uses this technique to produce estimates of the wealthiest Americans. After constructing a dataset using the estate multiplier, I found a much larger coverage of total tax units compared to the wealth tax with the number of estates above exemption limits increasing over time as a result of inflation and population growth.

The estate multiplier inverts the probability of being a decedent, thus for any rate of mortality ($m$) an estate ($P$) represents ($\frac{1}{m}$) living wealth holders. For example if the mortality rate for adults within some age bracket is is 0.1\%, then a decedent represents $\frac{1}{0.001}$ (i.e 1000) persons for the age bracket. The sample of estates derived from estate tax returns is then multiplied to produce estimates of wealth for the living population above the exemption limits. The model in this paper uses a slightly different population control, as opposed to similar studies conducted in other countries. In India, the estates of decedents stand for tax units rather than purely individuals due to joint family complications arising from the Hindu law tradition\footnote{The Hindu Succession Act of 1956} in inheritance and classification of property. More details on the choice of population controls are made available in Appendix A.2.
The choice of mortality rates is crucial to the estate multiplier model. Population wide mortality rates, as reported in health studies may not necessarily correspond to elite classes particularly when we are studying the case of a very poor economy with very high socioeconomic and health access disparities. After nationalization, the Life Insurance Corporation (LIC) embarked on a multi year (1970-1973) study of mortality for *assured* Indians, i.e those who purchased life insurance policies. Since such people are likely to be wealthier than the average Indian, I use these mortality tables for the estate multiplier. The tables are directly reproduced from Joshi and Venkataraman (1980) who extensively review the mortality measurements of the LIC and other Indian insurance providers. By combining estate data with these mortality tables I arrive at a final estimate of wealth held by Indians who surpass the exemption limits for Estate Duties. Extensive details on the potential shortcomings of the estate multiplier method, issues involved with age and gender differentials and the construction of the Indian estate multiplier are listed in Appendix B. Figure 2 shows the wealth estimated for the period from 1961-1986 using this method. In 1961, those eligible for estate taxation held wealth around Rs 45 billion (or Rs 4500 crore) and by 1986 this figure had risen to over Rs 120 billion (Rs 12000 crore).

The resulting dataset captures between 0.3% to 0.12% of the total Indian tax units in this period. Indirectly, we are also capturing those who were actually eligible to pay wealth taxes. Thus the lowest possible time series of wealth holders is the Top 0.1%. This is already an indicator that wealth was extremely concentrated in India since so few potential estates exceeded the estate duty exemptions. Precise fractiles are calculated using Pareto interpolation. I tested and confirmed the distribution of estates for the Pareto law which is a statistical regularity for the upper tails of wealth and income distributions. Appendix C lists details on the methodology of computing top shares and related literature which uses the same interpolation technique. From this resulting series, average and total wealth are computed for the Top 0.1%, Top 0.05% and the Top 0.01%.

![Figure 2 about here.](image)

### 2.3 Dealing with the unaccounted economy

A long running thematic issue with measurement of economic data in India is the degree of tax evasion and unaccounted incomes and wealth. There is no doubt that there was (and remains till date) a significant amount of wealth, as there is income, hidden from the tax authorities. Having long been a concern of policymakers, the two black economy experts (Shankar Acharya and Arun Kumar) for this period did extensive reports to estimate the degree of unaccounted income. Since there are no long run wealth estimates, details on these are less forthcoming though Acharya (1986) did cover real estate for Delhi, Bombay and Madras. Even generously *inflating* by estimates

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17Kumar (2002) has a detailed, long study of the black economy in India and presents estimates of unaccounted incomes through the various sectors and industries. By 1990-91, he estimated the black economy to be around 35% of GDP.
with under-reporting factors from audits and interviews did not substantially alter the trends in my computations (Appendix D).

There are at least three reasons why the estate multiplier approach may be the best tool to deal with unaccounted wealth. Firstly, estate tax as compared to the wealth tax is a one-time tax (at death) and hence the burden on the taxpayer (the recipients of bequest) is not annual or immediate. The motivation to under-report assets or undervalue them at least is lower. For example, assume a 30% rate of estate taxation versus a 1% wealth tax and a 30 year lifecycle (where wealth is accumulated) so that the estate tax is spread out at 1% annually. Then with positive time preference, if given a choice an individual is more likely to prefer paying estate taxes as opposed to wealth taxes. The rates of wealth taxation in India during this period were not trivial but rather confiscatory and well in excess of 10% so that reporting one’s assets for taxation became an effective lease for personal property. For those seeking to transfer assets in anticipation of death through inter-vivos gifts, the Estate Duty Act starting 1958 made it mandatory to pay taxes on transfer up to two years prior to death (in the case that gift taxes were not paid). Secondly, estate duty may cover movable assets (particularly financial assets) quite well but real estate undervaluation remains an issue. Even in this case, estates comprise the wealthiest families of India (considering the high exemption limits) so that the tax authorities were more focused on scrutinizing these taxpayers. Evading estate duty was harder for the super-rich because by its very nature it intended to break-up their estates.18

Third, the concern of black economy experts has been mostly with official underestimation of GDP and related flows such as personal income and capital gains, so that by taking a ratio of estate (or fractile) wealth to GDP I am in a sense normalizing some of the undervaluation in the numerator (wealth) with the already (officially) underestimated denominator. If the estate duty was a policy tool of comparatively reliable compliance, then this type of ratio creates an upward bias in measuring the importance of the elite. Any downfall in elite wealth relative to national income is therefore not just cognizant of asset under-reporting (if any) but reflects a trend of conceptual significance - wealth may actually be declining. These data are no doubt fragile to continuous efforts of evasion but perhaps reasonably face the challenges for the purpose at hand.

3 Results

The computations on the compiled and harmonized data lead to very interesting results which are introduced in this section. To capture the full magnitude of data I present a sequence of important series regarding thresholds to be counted amongst the rich, the importance of top wealth-holders in comparison to national and personal income, inequality within the rich themselves, the composition of wealth as well as comparisons with the US and France over the same period.

18After its implementation, articles such as Bagchi (1954) were disseminated analyzing and even promoting actuaries to take advantage of the opportunity by providing insurance cover for the tax bill incurred by the inheritors.
Top wealth-holders through the Hindu Growth era 1961-1986

Nominal thresholds to be counted amongst the Top 0.1% and Top 0.01% are presented in the Figure 3 (left panel). In 1966, the Top 0.1% comprised approximately 200,000 tax units which rose to about 308,000 tax units by 1986. The growth in inflation unadjusted thresholds\(^{19}\) for this group was approximately 2% with transitional jumps occurring in 1971 and 1981 i.e the threshold noticeably increases around these years. For the super elite (i.e the Top 0.01%) these thresholds evolved more erratically with a noticeable reduction occurring between 1973 and 1980 followed by a strong resurgence which pushed these nominal cutoffs to over Rs 500,000. The fact that these nominal thresholds declined in the 1970s for the super elite is particularly noteworthy, because such a demise is not evident for the Top 0.1% and all else being equal points to a stronger decline at the absolute top of the elite themselves.

To put the inequality represented in these thresholds in perspective, the right panel expresses wealth cutoffs as a multiple of mean tax-unit incomes. Following Atkinson (2006) those in possession of wealth exceeding 30 times mean income are defined as the rich - at a 3.3% rate of return on their wealth, such persons could sustain an average living standard as pure rentiers. In India the Top 0.1% and richer groups were well within the cutoff to be considered rich rentiers. Interpreted differently, the vertical axis measures the number of years it would take average income to be capitalized into wealth cutoffs for rich groups. In 1966, the respective time horizons were 12 and 60 decades to be part of the Top 0.1% and Top 0.01%, then fell to 3 and 10 decades by 1986. Of course these are well beyond the natural working lifecycle but even more stark when we consider that people accumulate wealth by saving a fraction of their income. As an example, suppose we allow a rather generous saving rate of 20% to the typical tax unit - this implies in 1966 all else being equal, the average family would need 60 decades to save enough to join the wealthiest 0.1%. This cutoff declined by a factor of four to around 15 decades - still unachievable over a few generations but a stark decline nevertheless.

As it turns out, nominal growth flatters the underlying patterns of wealth accumulation - inflation significantly undermined the value of assets. The left panel in Figure 4 presents the trends in average wealth levels within the Top 0.1% and Top 0.01% at 1986 prices. Over the period 1966-1986, there was strong decline in average wealth amongst the elite - so much so that in real terms the average wealth of the Top 0.01% by 1986 would have been more typical of a member of the Top 0.1% in 1966. At the beginning, average wealth in the top 0.01% was Rs 4 million but a persistent demise in the real value of their wealth over 1971-1976 reduced this to around Rs 1.5 million. In short, while the decline affected the entire 99.9th percentile of the wealth rankings, it was relatively more severe above the 99.99th percentile. The right panel calculates the ratio of mean income to the average wealth held by those in the Top 0.1%. Similar to the Atkinson measure used previously, this gives a

\(^{19}\)From Rs 110,000 in 1966 to around Rs 160,000 by 1986
synthetic interest rate on wealth required to sustain the average standard of living. In 1966, for the typical members of the Top 0.1% living standards were cheap and only required a return of 0.36%. By 1986 the equivalent rate increased fivefold to around 1.8%. The conclusion of studying these thresholds and real monetary terms is simple - the wealth of the Indian elite lost value relative to income and inflation over the Hindu growth period.

3.1.1 The importance of the wealthy elite relative to national and personal income

An important question for the study of inequality is how wealth at the top accumulates relative to growth of national income. The Hindu growth rate was after all very modest GDP growth, surpassed after liberalization policies were enacted in the early 1990s. Regardless in historical terms, this rate of growth was still superior to GDP growth in the colonial era. To be sure, the thresholds are already indicative of expected trends. Figure 5 shows the evolution of top wealth (nominal) expressed as a percentage of national income (market price, current price GDP). Between 1966 and 1971, Top 0.1% wealth was worth around 14-15% of GDP or just under two months of national income. This ratio fell to 5% by 1980 and declined even further to about 3% by 1986. For the Top 0.05% and Top 0.01% the trends are similar with the respective decline by 1986 resulting in wealth equivalent to 2% and 1% of GDP.

So far, the trends compare wealth amongst households with national income. To make comparisons with top incomes and households in general Table 1 presents shares of top wealth holders and income earners as a proportion of total household income. Note that the total household counted in these fractiles (Top 0.1%, Top 0.01%) is the same in both cases as both are a fraction of tax units (NAS), though the actual persons involved may be different. Since household income is less than GDP, elite wealth is obviously larger as a ratio of tax unit income combined with the fact that wealth tends to be more concentrated than income. Regardless, the trends in income and wealth at the top are similar. Banerjee and Piketty (2005) estimated the share of the Top 0.1% in household income to be around 3-4% in 1966 which declined to about 1.2% by 1980 and showed a resurgence starting 1984 with the adoption of capital friendly policies. At the same time, the share of the Top 0.1% (ranked by wealth) declined from 27% to 8% by 1980 and a further decline to 5% by 1986. Thus from an empirical perspective, business sector reforms were able to drive a small upward trend in top incomes (through the generation of higher salaries) but the fate of the wealthy persisted through to the late 1980s. The abolishment of the estate tax in 1985 could however have re-energized inheritance driven wealth accumulation again but without data there is little more we can say on this matter.

See Rodrik and Subramanian (2005) on the transition from Hindu growth to pro-business policies in the 1980s, in particular the adoption of policies of benefit to domestic business rather than external capital.
In these related data we confirm the 1970s as a period of perhaps reduced inequality and indeed the decline by a factor of three is similar for both the top wealth-personal income ratio and the top incomes-personal income ratio.

### 3.2 Composition of wealth

Our understanding of the exact composition of wealth within the upper tail of the distribution is limited by lack of microdata. However as mentioned previously the estate tax applied to a very small fraction of the population so that to a great extent the composition the total wealth above the exemption limits is a good first approximation for the portfolio composition of the Indian elite. The AIWGE brochures starting 1985 carry historical time series of the total estate composition extending back to 1961, thus slightly increasing the available data for these purposes.

![Figure 6 about here.](image)

In Figure 6 the composition of estates is expressed as a fraction of GDP, this time distinguished by the type of assets broadly classified into real estate (agricultural, urban) and movable wealth (equities, cash, business assets etc). The decline in the value of assets invested in land stands out. In 1961, when approximately 0.12% of total Indian tax units were eligible for estate taxation, agricultural land was worth 3-4% of GDP. By 1986 the combination of agricultural and urban properties combined fell to less than the equivalent of 2% of GDP. This was no doubt driven (at least partially) by the state-led land reforms whose effects took time to be realized and the fact that by the mid 1980s amendments to the Estate Tax Act led to exemption of agricultural land in a few more states (Appendix A.1.1). In keeping with the decline in elite wealth-national income ratio, movable wealth also significantly declined from a high equaling 18% of GDP in 1967, to just around 3.5% by 1985.

![Figure 7 about here.](image)

In the two panels of Figure 7 different assets are expressed as a fraction of total wealth eligible for estate taxation. In the left panel, under the broad classification into movable and immovable assets at least one clear trend emerges. Movable assets constituted well over half of the total assets held by rich estates, rising from around 52% to almost 75% between the years 1961 and 1986. This agrees well with the fact that in over time, the profile of elites transformed from landed rentiers to active participants in the Indian financial market. In the right panel, the largest component (around 40%) of movable assets themselves is constituted by equities in the private sector as well as dividends and cash. Government securities and physical assets made up a very small fraction of the movable portfolio within these elites.

Although the previous figures reveal the asset composition, the actual value of each asset type is less clear. That is, we have learned that a very rich Indian family was most likely to hold their wealth in the form of movable assets, but we do not yet know the values of those assets. This is

21Sharma (1994)
addressed in Figure 8 where the average values of the broad asset categories are expressed in real terms (constant prices, 1986 = 100). Urban real estate was almost throughout the most valuable form of wealth for the elite although even agricultural properties were more valuable than movable wealth. The observed decline of elite wealth, both in real terms and as a proportion of different income flows is reflected in the decline in values of each asset category. In fact, barring the spike in the value of non-agricultural property between 1969-1972\textsuperscript{22} there is a secular decline in the average value of assets invested in land. In fact the rate of decline in the value of all three asset categories was almost the same in the 1970s. These trends agree well with Goldsmith (1983) who documents the long run decline in the value of privately held land starting in the 1950s all the way to 1975 (where his series ends). In historical terms, while rates of property taxation were high and land reforms rampant there were two important developments in asset markets. Firstly, taxation of capital gains was eventually liberalized (discussed in the next section) and secondly there was a 700\% price increase of gold (per 10 grams) relative to CPI inflation between 1971 and 1986.\textsuperscript{23} To this effect, the downward trend in the value of movable wealth ceased. The overall pattern in the real value of movable assets reveals a U shaped trend starting from a high in 1972, then a series of declines until the early 1980s when the situation was reversed. By 1986, the average holding of movable assets was almost equal to its 1972 value and higher than both forms of real estate. The situation in 1966 was thus altered to a great extent over two decades - in 1966, the most valuable asset was urban real estate. In 1986, the most valuable asset comprised of a purely movable portfolio.

[Figure 8 about here.]

### 3.3 Inequality within the elite

What about the shape and scale of the distribution of wealth above the estate tax exemption limits - i.e over this period did wealth inequality within the rich increase or decrease? Answering this question will tell us whether the decline in measures of total wealth in the upper tail affected the entire elite class or was specific to some fraction of the elite. Typical to these upper tails of the wealth distribution is a power law of the kind originally proposed by Pareto (1964). It is commonly expressed in its asymptotic form by the formula:

\[
C(w) \approx \left(\frac{w}{w_0}\right)^{-\alpha}
\]

Where \(C(w)\) is the inverse cumulative distribution function (i.e the probability of some \(w^* > w\)), \(w\) is wealth and \(w_0\) is the lowest wealth level to which the Pareto formula applies - in this case, the exemption limits for filing estate taxes. Low values of \(\alpha\) suggest fatter tails, or more inequality within the upper tail. Not surprisingly, the cumulative distribution of estates in the AIWGE tables exhibited excellent fits with this law.\textsuperscript{24} For more intuitive discussion the parameter \((\alpha)\) can be transformed into

\textsuperscript{22}Driven likely by preferences for urban land over agricultural land due to the immediacy of land reforms during this period, combined with urbanization and output shock due to the 1971 Indo-Pak war

\textsuperscript{23}Prices as per RBI estimate of averages on Bombay markets

\textsuperscript{24}See Appendix C.1 for details and discussion of the Pareto law
\( \Phi = \frac{\alpha}{\alpha - 1} \) or the Inverted Pareto coefficient. This is a key property of the scale-free Pareto distribution where \( \Phi \) gives the constant ratio of the average wealth level above any threshold \( W' \). For example if \( \Phi = 2 \) then the average wealth above \( W' = \text{Rs} \ 100 \) is \text{Rs} \ 200 (i.e \( W' \ast \Phi \)) High values of \( \Phi \) (typically between 1.8 to 2.2 in rich countries) indicate a fatter tail for the distribution.

Figure 9 shows the evolution of the estimated value of \( \Phi \) for two different categories - all rich estates eligible for estate taxation and the Top 0.1%. Within-rich inequality was at its peak between 1967 and 1971 - applied to all estates above exemption limits, \( \Phi \) was around 2.9 - 3.4 and around 2.5 for the Top 0.1%. Both fell over 1972-1978 indicating that during the (real) overall decline of wealth, disparity within the elite also narrowed. Over 1979-1986, in keeping with the U shape previously observed in the average value of movable wealth there was a reversal in within-rich inequality. Inequality amongst wealthy estates began increasing reaching \( \Phi = 2.5 \) in 1984. Inequality within the Top 0.1% however never increased to its previous highs staying well below \( \Phi = 2 \). To be sure, starting 1979 the trends thus indicate that the Top 0.1% pulled away relative to others above the cutoff for estate taxation.

At the same time, the share of wealth of the Top 0.01% declined in the total estimated wealth held by the Top 0.1% (Figure 10). Thus some of the decline of wealth held by the Top 0.1% relative to GDP and personal income was driven by the Top 0.01%. Consider the group of rich represented by the Top 0.1%. In the previous discussion and figure I have shown that overall this group did better than those just below them. The richest \( \frac{1}{10}^{th} \) amongst this group are represented by the Top 0.01% but remarkably, their wealth share within the group declined secularly from 38-40% in the late 1960s to 30% by 1986. Thus a trend emerges, not immediately obvious but trivial when evaluated in conjunction with Figures 9 and 10. Between 1966, in relative terms the biggest winners within the Indian elite were the 99.9 - 99.99th percentiles i.e those who made up the Top 0.1% but not the Top 0.01%. In keeping with historical cases in other countries, the metamorphoses and modernization of wealth at the top tends to follow a related pattern - the incumbent super-elite tend to be landed (former) aristocracy and rentiers. It is this class which is most affected when wealth-income ratios decline and the new emergent elite is usually made up of modern elite whose investments tend to favor equity and closely held businesses.\(^{25}\)

\[\text{[Figure 9 about here.]}\]

\[\text{[Figure 10 about here.]}\]

### 3.4 International and temporal comparisons

Finally, let us put the evolution of elite Indian wealth in perspective over two dimensions - time and space. First we may ask - relative to national income how much do the rich in India compare with other countries? Secondly, did the decline of the Indian rich continue or was it reversed in the well documented U shaped manner observed in industrialized countries during the 20th Century?

\(^{25}\)See for example the case of ancien-regime France and old Europe
I urge the reader to keep in mind the dramatically different quasi steady-states being compared in Figure 11 for the US, France and India. In particular note that I am comparing India (a capital-poor recent colony with underdeveloped financial markets) against two industrialized countries over very distinct episodes in each nation’s economic and political history. All three countries taxed inheritance progressively over this period but India was a newly independent country trying to simultaneously industrialize its economy and tax the surplus of its elite. France and the US had undergone a much longer democratic history and their elites were now recovering from the conscription plus destruction of their wealth through\(^{26}\) tax and war related shocks between 1910-1950. The Top 0.1% wealth-to-national income ratio sheds light on the importance of the elite in each nation. The US, in any case the wealthiest nation in the world had the highest ratio of top wealth to national income. The Top 0.1% in France and India on the other hand were remarkably similar in the period between 1966-1972 with their wealth-to-national income ratio hovering around 17-20%.

To put the temporal and spatial dimensions in context, I include series on stock market capitalization expressed as a ratio of GDP. For India, data on stock market capitalization starts in 1989.\(^{27}\) As a companion to the series on top wealth-holders this puts wealth magnitudes in context. The high wealth of the Top 0.1% in the US seems reasonable given its relative stock market capitalization. The recent rise of wealth concentration in much of the rich world is usually accompanied by the long accelerating stock market capitalization - in both France and the US this is apparent.\(^{28}\) As domestic and external liberalization proceeded in India, stock market capitalization increased at a rapid pace relative to GDP - more or less the same growth observed in the US between 1989-2000 and rapidly matching France. Thus were we to hypothesize the trends pertaining to the elite in India it is likely that the so-called U shape reached its trough over 1972-1986 and then took off as taxation and private investment was deregulated in the 1990s. In fact, given the tremendous rise in stock market capitalization it seems possible that wealth concentration in India may have surpassed its pre-1970 levels in recent decades.\(^{29}\)

Indeed if we compare periods immediately after the implementation of progressive taxation, it seems the rates of decline of top wealth-to-national income ratios in India are similar to that observed in the US and France. The phenomena of progressive taxation of inheritance and incomes in the latter countries came about between 1901-1914. The elite in both countries around 1910 had massive

\(^{26}\)The concept of conscription of wealth is introduced by Scheve and Stasavage (2016) in their book studying the taxation of the rich and its political/technological dimensions over the last fifteen decades

\(^{27}\)In fact, due to the very limited percentage of population (never greater than 2-3% historically) that participates in Indian stock markets this series is a decent first approximation of the importance of the rich relative to economic growth particularly due to lack of data extending to the present.

\(^{28}\)Of course this relationship between the stock market and wealth concentration is not surprising. Most elites who make rich lists are wealthy due to closely held businesses.

\(^{29}\)In Figure 1 see also the support for the inverted Kuznets curve or U shape through inclusion of the Forbes Rich List.
stocks of wealth relative to national income (see Table 2). In France, these relative ratios fell down to 24\% by 1950 due to the 1914-1945 war and tax related shocks. In the US there was a similar decline though less dramatic relative to Europe.\textsuperscript{30} We do not know how much wealth the rich controlled around 1953, when the estate tax was implemented in India. But given the decline seen elsewhere the trends documented for 1966-1986 seem reasonable.

[Table 2 about here.]

4 Discussion

The results of this wealth database (summarized in Table 3) suggest an important episode in the economic history of India. In a few decades, economic growth and inflation significantly surpassed the accumulation of wealth within the upper tail of the wealth ranking. This effect was particularly strongly felt by the super elite who comprised the Top 0.01\%. Put next to the similar decline in top income shares (observed over a much longer time horizon) by Banerjee-Piketty, these outcomes are not alone. Remarkably this decline in income concentration during the 1960s and 1970s was more severe than that observed in the inter-war/independence struggle period. Thus understood in combination with the past, the Hindu growth era is not just an era of poor macroeconomic performance but also a unique achievement of some progress in social equity. A full picture also requires an accompanying picture of socio-political developments but these trends can be understood using simple accounting illustrations of private wealth and inheritance. We need an understanding of three important dimensions of wealth relative to national income - the size of private wealth itself, the intergenerational transfer of old wealth (bequest) and the accumulation of new wealth.

Consider the ratio of private wealth to national income $\beta_p$, the ratio of national (the sum of public and private) wealth to national income $\beta_n$ and the fiscal flow of inheritance relative to national income $b$. The taxation of inheritance directly reduces the transmission of intergenerational wealth by expropriating $b$ and nationalization reduces $\beta_p$ with no necessary change to $\beta_n$. Following Piketty (2011) we can also relate $\beta_p$ to $b$ by considering the economic flow of inheritance to national income $b \equiv \mu \ast m \ast \beta_p$ (an accounting identity which links death and bequest). Here $\mu$ is the ratio of the average wealth of the dead versus the living and $m$ is the mortality rate. Even without an inheritance tax, the flow of inheritance is likely to be lower when nationalization appropriates private wealth. At the same time, progressive taxation of incomes can also limit accumulation of new wealth either by limiting after-tax labor incomes or by reducing the effective rate of return to invested wealth.

[Table 3 about here.]

\textsuperscript{30}Due to its geographic location the US did not face the same capital destruction as Europe in the Second World War - a point emphasized in Piketty and Zucman (2014) and Piketty (2014)
4.1 The initial levels of wealth amongst the rich

In their important work Piketty and Zucman (2014) argue that private wealth (itself more concentrated than income) tends to be high relative to national income when economic growth is low. This is one cited reasons by the authors to explain the high private wealth-national income ratio in eighteenth and nineteenth century Europe and the US. In this case why in the mid 1960s was the size of Indian wealth at the top so low compared to the pre-1910 US and France? After all, the characterization of economic growth in this period by the term *Hindu growth* is synonymous with poorer macroeconomic performance than would be expected by theories of capital accumulation and international convergence. Second, even a decade after independence, India remained a class based society with substantial feudal elements. Compared to poverty for much of the population, the most lavish lifestyles were only enjoyed by the princely classes, some business houses and large zamindars (landlords).

Understood in a broader context, low growth is still better than almost no growth. Even though GDP growth was low between 1950-1980 (about 3.5%) it was much higher than the 0.5-0.8% growth observed in the colonial period 1900-1950. The first real spurt of economic growth and the national accumulation model emphasized by Jawaharlal Nehru thus set India on a steady state path where lower private wealth-national income ratios made sense. Income was growing at a reasonable enough pace to avoid being *devoured* by past wealth. Aristocratically held private wealth on the other hand had been under scrutiny since at-least the dawn of independence in India. Colonial rule was a secure phase for feudal kingdoms where these princes had safe control over their substantial wealth. The Nizam of Hyderabad made the cover of Time Magazine as the wealthiest person on the planet in 1937 and even owned his own bank. In exchange for their cooperation in Indian integration at independence, the former princely states were given *privy purses*. As a token, the patriarchs of these states received handsome (tax-exempt) salaries and privileges to maintain their lifestyles. However, a very large part of their wealth (land and precious metals) was turned in, sometimes voluntarily other times under the threat of military action. Thus through these annexations the Indian state from the beginning was able to erase and nationalize much of the inherited aristocratic wealth symptomatic of societies in Belle Epoque Europe. Even the Privy Purse stipends were implemented with hesitancy from Nehru. In subsequent years, the pressure to modernize and overcome feudal backwardness became a symbolic tug of war between competing political forces. The economic consequences of the princely stipends were low but as an institution, the Purse stood against the increasing demand for social change. When Indira Gandhi came to power as Prime Minister in 1966, she did so with the support of the left and a pro-poor mandate. Choosing to further symbolize her progressive stance,

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31 But also turbulent debates regarding these anti-progressive features as well as social and political movements including peasant and communist rebellions
32 See the long run series for GDP and GDP growth in Maddison (1995)
33 See Patel (1986) on Nehru's commanding heights philosophy
34 This discussion of the Privy Purse and the political back and forth draws heavily from the legal and historical study in Roberts (1972)
a controversial legal battle was fought in the Supreme Court and ultimately the Privy Purse was abolished in 1971 via the 26th Amendment of the Constitution of India. The aristocracy lost its stipends and official titles, whilst now becoming liable to taxation as ordinary citizens. The effect was immensely detrimental to the remaining fortunes, which to begin with had not adapted to more modern wealth management practices. In 1978, 13 of the top 20 tax units liable for the wealth tax were former princes and their past fame meant they were not capable of evading taxes. Their past wealth also made these aristocrats liable for back taxes at confiscatory rates as far up as 130%. With their income privileges destroyed, these tax bills meant much of this wealth was nationalized or acquired by the state.

4.2 Understanding the decline of the Indian rich

To be sure, the forces of nationalization and progressive taxation are well recognized in the historical destruction of wealth concentration. In terms of economic policy the tenure of Gandhi between 1966-1977 cannot be described better than by these forces. Mrs Gandhi made it clear in her budget speeches that the equalization of wealth and incomes should be achieved using taxes as an instrument. The wealthy elite were open targets. The lower house (Lok Sabha) of the Parliament, would announce on an annual basis the top 20 wealth-holders in wealth tax assessments. By the mid 1960s, personal wealth was already aggressively taxed using wealth, gift and estate taxation. To curb speculative activities on financial markets the capital gains tax was raised to its highest historical level in 1972. The direct tax structure was so aggressively progressive at the top tax slabs that it was deemed confiscatory by public finance experts in retrospect. To directly break up aristocratic estates, the top marginal rate on estate duty was raised from 40% to 82%. Additionally, a series of redistributive land reforms and redistributions were enacted and ceilings on holdings were carried out to create social equity in rural India, one of the stated aims of the Indian Congress party which Gandhi headed. These measures were particularly successful in the states of West Bengal and Kerala and by 1970-71, the feudal arrangements of agricultural land had been revolutionized.

Gandhi’s affinity to nationalize and involve government in all spheres of economic activity only increased. Firstly, 14 private banks were nationalized into the public sector under the 1970 Banking Companies (acquisition and transfer of undertakings) Act. Now serving as public banks, the investment portfolios of these institutions were regulated in line with priority lending norms and very strong capital controls. Secondly between 1971 and 1973, private coal mines in Eastern India were nationalized and turned into Public Sector Undertakings (PSUs). The impact of this was particu-

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36See Acharya (2005) for direct tax slabs and the effective rates of taxation as well as the evolution of Indira Gandhi’s tax policies. The evolution of top marginal income tax rates are charted out in Banerjee and Piketty (2005)

37See the review of Indian land reforms, their history and impact in Sharma (1994).

38See Kumar (1981) on the nationalization of private coal under socialist rather than efficiency criteria
larly severe as mining rights for coal dynasties had been a source of ancestral wealth and streams of unregulated income in this region since before independence but henceforth became centralized state assets.

Finally, the wealthy elite also had to square up their assets with inflationary shocks, particularly those associated with the Global Oil Crisis of 1973 (see Figure 8, Table 3). But the effect of inflation is magnified in the case of a developing economy which implements progressive taxation of wealth and inheritance due to *bracket creep*. Figure 12 shows, the estimated tax units which were likely to bear the Estate Duty increased from a low of 0.12% in 1961 to 0.4% by 1978 and then declined as slabs and exemption limits were adjusted upwards eventually. Given the very high exemption limits and the small proportion of population (a fraction of those eligible) affected by inheritance taxation or wealth taxes, the political pressure to adjust the legislated tax codes was low. In effect, for a sustained period more private fortunes became targets for inheritance tax and the living rich moved into higher marginal wealth tax rates.

[Figure 12 about here.]

### 4.3 Deregulation and Operation Forward

The size of the wealth at the top continued to decline until 1986 when inheritance records end. However the 1980s laid the seeds for an attitudinal shift vis-a-vis the rich both in terms of taxation and deregulation of capital transactions. It was determined by the Indian administration that market friendly reforms and private investment would be necessary to facilitate higher income growth, create employment and increase living standards. After years of slow (or Hindu) growth and opposition pressure Gandhi started lifting regulations starting 1980, in what was termed *Operation Foward*. Rodrik and Subramanian (2005) trace this very attitudinal shift in the administration as the core reason for the emergence from the low rates of growth in the preceding decades. The authors (ibid) claim that liberalization of capital regulations started by Gandhi and fast-tracked by her successor Rajiv Gandhi led to a better investment climate which benefitted existing big businesses (rather than attracting international capital) laying foundations for private sector growth. Fiscal planning also re-evaluated the (low) revenue generation of anti-rich taxes. Wealth and income tax rate reductions started with the budgets of the late 1970s but by 1978 (through the Finance Bill of 1977) the administration had relaxed taxes on capital gains entirely as long as the proceeds of asset sales were invested in certain securities. In light of these developments it is no surprise that within the rich, the average value (real, 1986 prices) of wealth stored in movable property (itself mostly financial assets) recovered. By 1985 the fiscal pressure facing the rich had come to a full stop - estate duty was abolished and the wealth tax was fully diluted to the point of irrelevance. To a great extent the policies of the 1960s and 1970s succeeded in clearing the stage for a new class of rich to emerge, eliminating old wealth. New wealth could capitalize on low taxes and business driven economic dynamism that came after 1986. Gandhi and Walton (2012) show that a decade later, the rich list compiled by *Forbes* magazine would be populated by self-made entrepreneurs and business houses.
5 Conclusion

My conclusions are brief. Between 1961 and 1986 India’s notorious macroeconomic plight undermined a progressive effort to reduce the size and importance of the incumbent rich. Low economic growth (at the very least better than no growth) was accompanied by a sharp reduction of the real value of wealth held by the Top 0.1%. Both the magnitude and speed of decline were large. The backdrop for this decline was itself rooted in the integration of India when the government quickly took steps to abolish inherited wealth amongst the super rich royalty. One may be forgiven for thinking that in a capital-scarce economy, the incumbent wealthy had much to gain from lending to the market. Instead inflation, progressive taxation and nationalization that characterized the late 1960s and 1970s punished the outdated rentier class and expropriated much existing wealth. The incompatibility of social structures of the past with India’s freshly minted constitution gave mileage to such political action. To a great extent, conscripting the rich by taxation or by nationalization has many parallels. The size of wealth controlled by India’s rich by 1980 was dwarfed by similar classes in countries like France and the US. But careful comparison suggests that the immediate aftermath of political turbulence, democratization and universal suffrage in rich nations was not dissimilar.

Taking Piketty (2014) seriously, it would be imprudent to assume that in the long run inequality of wealth or income has one historical direction. The rapid rise of stock market capitalization, the emergence of new billionaires and trends in income inequality suggest that India’s rich maybe becoming important again, perhaps more than in the past. In 1966, it took thousands of estates to build a net worth equivalent to 10% of GDP. In 2012 (based on Forbes’ estimates) the 46 richest Indians could make this figure (9.9%). Were we to imagine the likely scenario that wealth inequality has been rising in recent times, then the analysis of this paper suggests that India too experienced Piketty’s famous U curve which suppressed old wealth. The transformative wealth dynamics of the 1960s and 1970s are crucial to understanding how the elite class, once populated by inherited wealth, is now made up by heroes of private enterprise.
References


Appendices

A Data sources

Comprehensive and consistent estimates of wealth for India are scarce and no micro-data were computerized prior to 1991-92. The various rounds of the National Sample Survey Organization (NSSO) do publish an asset survey every decade, but the shortcomings of topcoded surveys combined with non-response at the top makes these inappropriate to capture the super rich. In fact the core idea of this survey is to capture levels of debt amongst the impoverished masses. The primary datasource used throughout this paper is the *All India Wealth tax, Gift tax and Estate duty statistics*, published by the Indian Tax authorities on an annual basis. These reports compile and preprocess data from the Central Board of Direct Taxation (CBDT) for their various wealth taxation schemes.

Unlike many rich countries, the Indian administration had instituted a wealth tax (Wealth Tax Act of 1957) which acted as a wealth census of tax units such as Individuals, Hindu Undivided Families (HUF) and even Companies. In keeping with a stance on progressive taxation, originating from the Kaldor Committee Report, marginal rates were extremely high and tax evasion became a frequent problem. Ironically, the case for the wealth tax was itself proposed by Kaldor (1959) to overcome tax evasion in expenditure taxes. Acharya (2005) summarizes a history of the effectively confiscatory rates of direct taxation through to VP Singh’s 1985-87 reforms. Rao and Rao (2006) make a case for the high effective return on direct tax evasion, due to low detection probabilities. A fundamental problem with recurring wealth taxation is that although it is levied on capital assets, its payment will need to come from income (unless the asset is sold during the tax year). In many cases it may be possible to pay such taxes out of capital income, rents etc. But for persons holding unproductive assets such as vacant and unused land or inventory, tax payment may need to be come from wage income. In such circumstances, effective taxation of income may become exceedingly high and provide incentives to evade declaration of total assets. Further, a number of loopholes existed with regard to the demarcation of ancestral property between joint families and individuals. Thus the coverage of tax units was low to begin with and the statistics are either not reliable or too scant to cover a significant number of tax units. These factors in combination with the changing norms on wealth tax exemption levels and differing classification of wealth through to 1992 (when this Act was heavily diluted) made it suboptimal for systematic analysis of personal wealth levels.

A.1 Estate data

The Estate Duty Act of 1953 was instituted to levy a tax on the estate of high net worth decedents and it stayed in place until 1985 when an act of Parliament was created to dissolve it. Unlike other direct taxes, the Estate Duty Act applied to Agricultural and Non-Agricultural estates. The main advantage of using this measure over other tax acts is that while still liable to tax evasion, registration of property proceeds amongst the inheriting party would be necessary. Especially amongst the wealthy who may
want to leave bequests, the receiving party whether by legal wills or other instruments would need to report the estate. Given the size of bequests and the possibly contested number of claimants, this created a need to legitimize the contents and value of the estate. Newspaper reports in this era frequently highlighted the competition between heirs and family members to lay claim to these estates, especially amongst the formerly princely class.

One way of avoiding a taxation on inheritance would be the transfer of assets as gifts, though the administration had put in place an inter-vivos gift tax starting 1958 to check such activities. Even by itself, all gifts made up to two years prior to the death of the estate-owner were liable under the Estate Duty Act. In the case of financial instruments and real estate, there is no simple way to evade estate duty and paper trails. Certain items such as cash (not in banks), furniture, art etc can be transferred without registration and this remains a shortcoming of both this paper and the efficacy of the Estate Duty Act itself. The latter point is beyond the scope of this paper.

Data used in this paper relies on the assessments within this Act, as reported in the All India Wealth Tax, Gift Tax and Estate Duty Statistics brochures. The periodic coverage range from 1961-1986, excluding 1974 when there was no publication. For the specified period, we have time series on total estates, estate valuation and details regarding the breakdown of the estate by categories (movable, immovable property). Although estate duty statistics were produced until 1990, the validity of this data after 1986 (last applicable year of the Estate Duty Act) is circumspect. A noticeable and expected drop in total estates follows from 1987 onwards, with the likelihood that these statistics cater to previously incomplete cases.

For the years 1966-1986 (excluding 1974) there is detailed tabulation of estates under various tax brackets including total size of the estate, number of assessments and tax unit category (Joint Hindu family and Others). The aggregated time series on estates start from 1961 (with 1962-1965 missing) but for this year, we do not have detailed tabulation statistics and only a breakdown of average estate values in agricultural property, non agricultural property and movable wealth.

A.1.1 Concepts, classifications and definitions

The Indian tax authorities compute a principle (net) estate value after deductions on gross estate. I have used exact definitions of principal estate value for my definitions of wealth. As per the Estate Duty Act (1953) the definition of property of the decedents comprise any property (movable and immovable) which can be used for sale or further investments. Various legislative amendments between 1958 and 1984 were passed to exempt agricultural lands situated in specific territories. Agricultural lands in the states of Jammu & Kashmir and West Bengal have been exempt from estate duty since 1954. The Estate Duty (amendment) Act of 1984 exempted agricultural land in Andhra Pradesh, Karnataka and Manipur as well.
Since rebates and other schemes may offer some leeway to the total estate, all estimates in this paper are pre-tax. The unit classification of estates is done on the basis of one of two tax categories - Joint Hindu Family or Other Kind. I use in this paper, the consolidated sum across these two tax units for all categories of property classifications and this acts as my tax unit for the estate multiplier. The preprocessed tables in the estate duty reports list the composition of estates into movable and immovable (agricultural, non agricultural) properties with total estates listed under each category. Since we do not have a simultaneous breakdown of estates by size, frequency and composition, these breakdowns are used to simply compute average values of properties by type. This paper has presented an Estate Composition-GDP ratio which sums up the various property types and uses the nominal GDP measure as a denominator. Were detailed breakdowns available, a further decomposition of the top few fractiles could have been made listing the changes (if any) in asset composition going up the wealth ranking.

A further decomposition of movable wealth is also available with movable wealth split into nine categories and listed as either domestic or foreign. After consolidating the location of these assets, I have compressed these categories into five for simplicity. The definitions are as follows:

1. Government securities: Same classification
2. Equity, dividends, stocks, cash etc: Summation of Stocks, Shares & Debentures with Cash (including fixed deposits), Life Insurance Proceeds and Slice of the assets of controlled companies.
3. Business assets: Business assets (including share in partnership and goodwill)
4. Gold, Jewelry etc: Summation of Precious stones, jewelry & Works of Art and Household goods, vehicles, furniture etc.

A.2 Data on aggregates, population and inflation

- Data on historical GDP series (annual estimate, current prices) for India have been extracted from the Reserve Bank of India (RBI) database on the Indian economy (dbie.rbi.org.in) which is itself sourced from the Central Statistics Office (CSO). I use Gross Domestic Product at Market Prices for the entire period 1961-1986.

- As a control unit for total population, I have directly used -Number of tax units- from the World Wealth and Income Database (WWID). The same population unit is utilized in Banerjee and Piketty (2005) to compute top income shares. In the case of estates, since Indian tax authorities classify estates under two tax units (Joint Hindu Family and Others), this control total is the most appropriate denominator to compute population shares of the rich.

- To measure constant price GDP and other flows, the RBI also lists various GDP deflators. However to make consistent comparisons, all nominal flows have been deflated by the Consumer Price Index (CPI) historical series also sourced from WWID for 1986 (i.e 1986 = 100).
• Asset prices for Gold and Silver are sourced from the RBI with historical series on average prices (annual, Mumbai market) from 1971 to 1986. Gold is measured in Rupees per 10 gm and Silver in Rupees per kg.


• Stock Market Capitalization data for India, US and France were downloaded from the Federal Reserve of St Louis website (http://fred.stlouisfed.org)

• Forbes rich list data is publicly available on the website of Forbes magazine and expressed as a ratio of GDP for India in Gandhi and Walton (2012).

B Estate multiplier

Estate duty statistics represent the most detailed data to estimate the size and distribution of the wealthy in India during this period. While British studies in the early 20th century initiated the method, the first time series using this method can be traced to Lampman (1962), who made estimates of top wealth holders in the US. The core idea of the estate multiplier model is that estates of decedents represent a random draw of the living population. Once estate statistics are compiled, the next step is to use the estate multiplier technique and create a representative sample of the living. Due to exemption limits, estate returns capture predominantly the wealthy and hence death selects a sample of rich, living people. For stratified data, if the mortality rate within any socio-economic group is \( m_i \) then each estate \( P_i \) represents wealth for \( P_i m_i^{-1} \) individuals where \( m_i^{-1} \) is the estate multiplier. One important distinction between the model used here and those in other studies is that each estate stands for \( m^{-1} \) tax units rather than individuals (see discussion on population controls in Appendix A.2)

A slight disadvantage in the Indian case is that there are no available micro-data at the estate level, which give details on gender and age for the decedents. This practice is more common in administrative records of developed countries with a history of reliable data. Instead, as discussed, the Indian direct tax authority (CBDT) preprocesses its assessments into wealth brackets and separately reports a breakdown of total wealth into categories such as movable and immovable wealth. Should age and gender data become available in the future, then even more precise estimates maybe possible. For the purposes of this paper, all estates use the same multiplier (i.e \( m_i = m \)) with appropriate attention given to measuring mortality consistently across the population.

The estate multiplier is not without shortcomings - mostly related to whether decedents represent a random draw of the population. An excellent discussion and conceptual resolution of these issues (including relevant literature) is contained in the appendix for Kopczuk and Saez (2004). To put it
briefly, decedents may draw down their wealth in expectation of death or may even incur expenses related to illness as they age. If estate holders are aware of their looming mortality then their wealth accumulation patterns would also be different, particularly in the context of lifecycle or bequest savings by the living. One way we have already overcome some of these limitations is that the value of estates used in this paper corresponds to the principal value of the estate (discussed previously). Hence adjustments have already been made for various death-related expenses such as funeral costs, debts and costs associated with realization of property. In the context of India, we can also assign very high relative importance to tax evasion. Registration of property and financial assets in the inheritance process are not as easily avoidable and hence we may point to the pre-discussed superiority of estate data over other potential sources of personal wealth. The incentive to transfer assets as gifts was also kept in check through the gift tax for the entire period covered in this paper. From the estate multiplier model, the population I construct can cover less than 1% of the total tax units (I only report shares starting from the top 0.1%) - wealth accumulation patterns therefore are not universal to the Indian population but only within the elite.

B.1 Mortality tables

Since much of India lived in poverty and disparity was (and still is) very high throughout the period of study, mortality rates for the population would not be representative of the elite classes. One of the frequent concerns of the estate multiplier being biased are that the wealthy have access to better healthcare and lower mortality rates. For this reason, I construct mortality tables using baseline estimates of Indian assured lives Joshi and Venkataraman (1980). This series itself uses an actuarial study by the Life Insurance Corporation of India (LIC) for the 1970-73 period. Since only rich and employed persons would be able purchase insurance, these tables represents a more appropriate mortality indicator for top wealth holders. Due to the lack of age specific data on decedents in the estate sample, I use the male adult population for India through 1961-1986 as weights for the LIC (1970-73) mortality table to compute a time series for mortality rates of wealthy Indians. If microdata on estates was available with the (age of decedents listed) then a more precise multiplier could in principle be constructed. The strategy under data constraints is to assign the distribution of males by age as a proxy for the probability distribution of decedents’ ages. The adult male population (age 20 onwards) series is sourced from the World Bank’s Health, Nutrition and Population Statistics. Age brackets are further compressed between ages 30-80 to avoid skewing the series towards the young (very low mortality rates) and adjusting for the fact that it takes time to accumulate wealth. The aged (above 80, high mortality rates) would be most likely to transfer or de-accumulate wealth in anticipation of death hence their accumulation behavior and wealth may be less representative than living wealth holders.

There are at least two ways that the mortality rate itself may cause a bias in the the estimations of wealth. Firstly, it may be the case that decedents in the estate tabulations are densely packed within a specific age bracket (such as say 60-65). In this case, the estate multiplier overestimates
wealth because \( m \) is too low (the young are counted) and hence the multiplier \( m^{-1} \) is biased upward. Secondly, mortality rates may evolve over time and not remain constant. Although I use time series from the adult male population as weights, the underlying mortality table is always the same. This concern can be mitigated with the overall consensus that mortality rates change over very long periods and the last major transition, as per Joshi and Venkataraman (1980), had already happened many decades prior to their study.

B.1.1 Gender

Mortality tables for assured Indians tended to use only Hindu males in their estimations, going back to various studies conducted by the Oriental Insurance group in British India. Although primogeniture was made obsolete by the Hindu Succession Act of 1956, it is well known that Indian women in general tend to face disadvantages in inheritance, regardless of their order of succession. This act limited direct inheritance rights of daughters to the father’s separate property while sons had rights over all property, including assets under control of the Joint Hindu Family - particular to which is land. Some states amended this act starting in 1986, but its role in a de-facto male primogeniture cannot be understated and specifically for our period of study. In fact, early reports of the Estate Duty statistics have an estate rebate for money earmarked for marriage of female relative. The limited to non-existent role of women in inheritance proceeds or control of family wealth is addressed in Dyson and Moore (1983) and more extensively studied in Deininger et al. (2013). The latter study found the existence of biases against female inheritance even after significant amendments to the Hindu Succession Act. Based on these, at least crudely it may be hypothesized that wealth holders are more likely to be male (or at least male patriarchs in the tax unit) hence I use only male age-specific distributions for decedents.

For lack of better and more detailed data, the combination of estate data with male age-specific weighted mortality serves as the benchmark estimate. For comparison I have also tested a constant multiplier for the LIC table, using weights only from the 1970 age-specific distribution of males and find no significant divergence (see figure). The final number of rich Indians (i.e those above the estate tax exemption limit) is as follows:

\[
\text{no. of estates} \times \frac{1}{\sum w.m} \tag{2}
\]

Where \( \sum w.m \) is the weighted mortality index. To calculate total wealth is straightforward once the total number of (living) estates is computed and average wealth per estate is known.

C Top shares

The estate multiplier gives an estimate of the size of the rich population and their total wealth. However we still need to examine the shape of the wealth distribution. First we need to calculate
the population share of the rich, obtained by dividing the multiplied estates with the total number of tax units. The time series of multiplied estates captures roughly 0.3-0.1% of the total number of tax units for the period 1961-1986. In itself this tells us a lot about wealth concentration that exemptions could only be crossed by such a small set of persons in the population.

Unfortunately there is no regular series on total personal wealth in India, which could have served as a control total for wealth shares. The CSO started maintain a household capital series sourced from the NSSO asset and liability studies but starting only in 1981. This data is collected from the perspective of studying rural indebtedness. The WWID also does not maintain a database on personal and private wealth for India. The best we can do with the data on hand is to compute the total and average wealth of various fractiles such as the top 0.1%, 0.05% and so on. Using the shape of the wealth distribution within estates also allows an estimate of wealth concentration amongst the rich, captured in our data.

C.1 Pareto law

Since the various preprocessed brackets in the estate duty statistics do not coincide with precise fractiles, I use a standard Pareto interpolation to estimate the wealth of the Top 0.1%, Top 0.05% and the Top 0.01%. The methodology is common in similar studies such as Atkinson and Harrison (1978), Banerjee and Piketty (2005), Kopczuk and Saez (2004) and Piketty et al. (2006) and goes back to the tradition of Simon Kuznets’ studies of top incomes in the United States during the middle of the 20th Century.

It is a well known statistical regularity across space and time, that the top tail of wealth and income distributions tends to follow a Pareto distribution. The key property of this distribution can be summarized via the survival function (or inverse CDF) \( C(w) \propto w^{-\alpha} \), where \( \alpha \) is the Pareto exponent. The corresponding moments of the distribution exist if \( \alpha \) is greater than the moment, so for example the mean will exist if \( \alpha > 1 \). A corollary of the Pareto formula is the exact proportionality between average wealth above any threshold \( w \) so that: \( \frac{\bar{w}(w)}{w} = \frac{\alpha}{\alpha - 1} \). The graphical signature of this distribution is a downward sloping straight line when the cumulative probability is measured against wealth thresholds on the log-log scale.

Graphical plots on the double logarithmic scale confirm that the shape of the Indian estate distribution does indeed follow a Pareto law throughout this period with fits agreeing very well with the CDF formula: \( \log C(w) \propto -\alpha \log w \).

C.2 Interpolation

For computing the threshold and average wealth of top groups, first the rich are computed as cumulative shares of total tax units and organized within the preprocessed brackets. To estimate thresholds for precise fractiles \( p_i \) I pick a cumulative frequency and wealth \( f_i, w_i \) such that \( f_i \) is greater than
\( p_i \) (eg 0.0012 for the Top 0.01%). Then the estimated Pareto coefficient for the bracket is

\[
\hat{\alpha} = \log \frac{f_i}{f_n} \log \frac{w_n}{w_i}
\]

where \( f_n \) and \( w_n \) are the frequency and wealth size for the highest bracket. Using this, the next step is to compute a parameter \( y \) such that

\[
y = w_if_i^{1/\hat{\alpha}}.
\]

For any precise fractile \( p_i \) then the threshold is simply \( \frac{w_i}{y} \). So for example, in the case of the Top 0.1% the threshold is \( \frac{w_{0.001}}{\hat{\alpha}} \).

Once the threshold is known, average income for the fractile is quite simple. Using the proportionality, \( \frac{\bar{w}}{w} = \frac{\hat{\alpha}}{\hat{\alpha} - 1} \). The RHS term \( \frac{\hat{\alpha}}{\hat{\alpha} - 1} \) is the so-called inverted Pareto coefficient, whose higher (lower) values imply a fatter (thinner) tail. Once average wealth per fractile is known, total wealth is simply the average times the total number of tax units in that fractile. Using these computations, I have constructed real and nominal series for average and total wealth of the Top 0.1%, Top 0.05% and Top 0.01% from 1966 to 1986 in nominal and real terms. The real series uses CPI for deflation at 1986 prices.

[Table 5 about here.]

D Undervaluation in real estate and counterfactual exercises

Both transacting parties (buyer, seller) in real estate have an incentive to undervalue real estate properties under little to no fear of being caught. This has been a long standing issue in India and in particular the real estate sector frequently goes through speculative bubbles driven by undeclared capital gains. The buyer in these circumstances registers their property at a low value (paying the remainder of the full value in cash) and the seller makes a capital gain hidden from the reach of tax authorities. A full discussion of these issues including sources of unreported capital gains in the Indian context along with the various measures and administrative interventions for the period of study can be found in chapter 7 of Acharya (1986). This chapter is the best possible case study of urban Indian real estate markets on these matters.

In the simplest example, consider a one good model of accumulation with a fixed asset (such as real estate) and hence no savings. Suppose the market value of the asset is 

\[ k_t = (1 + \delta_t)L, \]

where \( L \) is the value of the asset disclosed to authorities and \( \delta_t \) is the additional undervaluation factor.\(^{39}\)

Further suppose there is no growth in the disclosed price over a period of time and there is positive economic growth \( n \). In such a scenario, at equilibrium (\( \check{k} = n > 0 \)) accumulation is entirely absorbed by unreported capital gains from which naturally no revenue is collected. Thus parallel to the actual economy, hidden wealth arises from undocumented capital gains but there is no accumulation on paper, to avail itself to tax authorities. This was a frequent concern of Indian policy makers and various laws were passed to acquire properties when there was evidence of significant undervaluation.

\(^{39}\)This basically means the additional black or unreported value
As a counterfactual exercise, I assume that the entire non agricultural real estate component of elite wealth is undervalued. In chapter 7 of Acharya (1986), the authors did a case study of Delhi’s real estate market using broker level data and audit cases of the income tax department. From the sample they estimated sales on the black market as a proportion of the actual declared value. Similar cases were studied for Bombay and Madras but with small samples and unreliable data (according to the authors). Using these values for Delhi I construct an under-reporting factor $1 + \delta$ where $\delta = \frac{\text{Undeclared value}}{\text{Declared value}}$ for the years 1979-1983 (the years the authors study). This factor is constructed for both samples (brokers and income tax audit cases) For 1983-1986 I take geometric means of the previous periods. Hereafter the next step is to simply multiply the total estimate of non-agricultural immovable properties with these factors and build ratios against GDP. Accordingly, Measure 1 and Measure 2 correspond to the broker sample and income tax audits respectively. Although data is only used for Delhi firstly this is only a demonstrative exercise and secondly many urban elites could be expected to live in Delhi and so the factors are not entirely unrealistic of all India.

[Table 6 about here.]

Figure 14 shows the results of inflating the value of urban real estate scaled to the estate multiplier with undervaluation factors, both in nominal terms and expressed as a stock-flow ratio relative to GDP.

[Figure 14 about here.]
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<th>Top 0.1% (income)</th>
<th>Top 0.01% (income)</th>
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<table>
<thead>
<tr>
<th>Year</th>
<th>Top 0.1% (France)</th>
<th>Top 0.1% (US)</th>
<th>Year</th>
<th>Top 0.1% (India)</th>
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<tbody>
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<td>173.86</td>
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<td>1920</td>
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<tr>
<th>Period</th>
<th>GDP (real)</th>
<th>Household income (real)</th>
<th>Top 0.1% (real)</th>
<th>Top 0.01% (real)</th>
<th>CPI inflation</th>
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<td>1 1966-1972</td>
<td>4.58%</td>
<td>3.72%</td>
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<td>2 1973-1979</td>
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<td>3 1980-1985</td>
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<td>9.83%</td>
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Table 3: Real growth rates of income and wealth through 1966-1986. All real values computed using CPI inflation (1986=100). Source: Author’s computations and NAS data (Appendix A.2)
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<tr>
<th>Age</th>
<th>LIC mortality table (1970-73)</th>
<th>1970 population weighted age mortality</th>
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<td>1</td>
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Table 4: Mortality tables for assured Indian lives using Joshi and Venkataraman (1980) and respective weights per age category using Health, Nutrition and Population Statistics (World Bank)
<table>
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<tr>
<th>Year</th>
<th>Number of Estates</th>
<th>Value of Estates (Rs 000)</th>
<th>Average Estate Value (Rs 000)</th>
<th>Estate multiplier</th>
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Table 5: Aggregate statistics compiled from pre-processed Estate Duty tabulations 1961-1986. All monetary values are in current prices. Source: All India Wealth Tax, Gift Tax and Estate Duty Statistics
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Table 6: Undervaluation factors sourced from estimates in chapter 7 of Acharya (1986)