

## What is a weekend? A view from the margins using Indian time-use data

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*Abstract: The concept of the "weekend" - a weekly recurring rest period - has been widely adopted in developing countries through colonialism and globalization of commerce. But in social contexts where incomes are low, where work often takes the form of precarious casual labour and/or household/own-account enterprise, and where female labour is mostly devoted to domestic activities, what exactly is a weekend? Who gets a weekend? Are weekends chosen by workers or employers and states? What do people do on the weekend? Are weekend non-work activities similar to non-work activities during the rest of the week or do they feature an important element of social coordination of leisure? I provide some answers to these questions using detailed time-use data from India that measure the rhythms of the work week for household members aged 6 and older and shed light on how weekends vary with respect to individual, household and regional characteristics. I also discuss some normative implications of "weekends" for leisure and gender inequality.*

"What is a weekend?" – Dowager Countess Violet, *Downton Abbey*

### **1. Introduction**

Weekends, or regular periods of respite from work every 7 days meant to promote communal religious activities or secular leisure, have a long history in the Judeo-Christian-Islamic tradition and are now widely observed throughout the world due to colonialism and international business norms.<sup>1</sup> Pre-colonial India had many different holidays, some coming in regular cycles close to weeks and others occurring weekly like regular market days or Friday services for the Muslim population, but the implementation of a regular weekly day of rest appears to have begun with Sir George Arthur, the governor of Bombay between 1842 to 1846. His day of choice - Sunday - highlights the colonial Christian origin of the holiday in India, but similar to elsewhere, weekends were also justified in practical terms to increase productivity. In India weekends were initially implemented for government work but soon spread to private firms. The Sunday rest period, which was partly or fully compensated for these workers, came to supplant some of the traditional holidays, which were gradually reduced to 8-11 additional days. By 1856 the Sunday rest period had spread beyond Bombay and was adopted for all government work in India with some exceptions like railways and essential workers and had also spread to some private firms (Doctor 2013).<sup>2</sup> However, lower status workers received only partial or no weekends, e.g. in 1856 lower grade municipal workers often received only half-day holidays and the lowest status workers (such as municipal sweepers) received none (Masselos, 1984). To a large extent, this pattern of weekends and holidays has persisted to the present day although in recent years some government workers, salaried workers, and students may enjoy a second full or partial rest day on

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<sup>1</sup> See Masselos (2000) and Yildiz (2020) for interesting discussions of the evolution of standardized times and schedules in colonial India.

<sup>2</sup> Masselos (1984) notes that it was 1891 and especially 1911 factory legislation that led to consistent weekly holidays for the 10% of Bombay's population employed in the mills.

Saturdays. India's current labour laws do not have any regulations regarding weekends but impose some daily and weekly hour limits depending on the industry that are consistent with a one day weekend assuming an 8 hour work day (1919 ILO Hours of Work (Industry) Convention, 1948 Factories Act, State level Shop and Establishment Acts, New Labour Codes).

From an economic perspective, weekends play several important roles. First, a key feature of weekends is their coordinating function in terms of both work (especially in education, industry, government and other large workplaces) and leisure (in terms of religious observance, recreation, shopping). This coordinating function has important implications for productivity but also happiness, with several studies documenting a weekend effect on happiness that appears to be mainly due to positive social effects rather than work avoidance (Young and Li, 2014 and Helliwell and Wang, 2015). Second, given that teachers are government employees and weekends have long been an important part of the weekly educational calendar, they may also affect labor supply by the household, particularly for women. Ducini and Van Effentere (2022) document that changes in France's school week in 2013 (which since 1972 had previously concentrated school on four days and had no school on Wednesday in addition to weekends) caused increases in labour supply for women, but not men, increasing the share of women reporting full-time work and reducing the gender pay gap. Third, conditional on hours worked, the distribution of work hours over the course of the week may also matter for time spent commuting (where more work days leads to more time lost in transit) and worker productivity (where effects of concentrating hours is more ambiguous, see Pencavel, 2014). Weekends also constitute an important margin for understanding differences in hours worked and labour productivity across and within countries as, together with paid holidays and length of the working day, they determine annual hours worked (Bick et al. 2018). Finally, the weekend is not a given for all workers -- many paid workers do not get typical weekends (particularly those in industries that are complementary with leisure like retail and food services or that need to function every day like healthcare and transport), while the existence and timing of weekends for self-employed workers is at their discretion. Understanding the demand for weekends by the self-employed and the implications of employer mandated weekends can help us understand the economic importance of coordination of work and leisure, the gendered implications of care for dependent children, and the potential implications of government and corporate policies that mandate weekends.

This paper documents the current state of the weekend in India using a rich, nationally representative time-use survey conducted in 2019 that sheds light on work and leisure patterns for individuals aged six and up during a 24 hour period and records the day of the week. The survey included 138,799 households and 445,287 individual days of time-use for individuals aged six and up. To the best of my knowledge, this is the first paper to undertake such a quantitative analysis of "weekends" in India or any other developing country setting with high self-employment, largely because detailed time-use data for developing countries remains scarce. While these data have certain limitations (e.g. I only observe one day per individual so cannot compare the same household or individual across different days of the week) they are rich in terms of the time-use detail and other household characteristics.

The data reveal several interesting patterns, some expected and some less so. One of the most notable findings is the continued rarity of weekends in India. Minutes of work (using the System of National Accounts definition) fall only 14% on Sunday versus Monday through Friday and there is no discernable difference between minutes worked on Saturday and Monday through Friday for either the whole population or the working population. The reduction in minutes worked that occurs on Sundays is mainly for paid work and concentrated on the "extensive margin" (i.e. some individuals get a half or full

day off, but most experience minimal reductions in minutes). Even among the subset of workers who are most expected to get a weekend, the standard weekend is far from universal. Government work falls by about half on Sundays while work for limited liability companies falls by about a third. There is a tiny decrease in paid work on Saturdays, consistent with half-day holidays for an even smaller share of government and corporate workers. The biggest effect of weekends on time-use is on schooling as school attendance and minutes in school are close to 10% lower on Saturday and over two thirds lower on Sunday.

Turning to the purpose of weekends and focusing on Sunday relative to the rest of the week, I find that Sundays are associated with modestly higher home production, substantially higher leisure, and more time spent at home, particularly for men and children who experience the largest reduction in time at work and school. The increase in leisure is concentrated on rest and social activities, and coordination of activities with other household members is substantially higher on weekends. In terms of who gets a weekend, I find that weekend changes in time-use are concentrated among salaried/regular wage employees, with self-employed and casual labourers experiencing roughly equal weekend effects on work and leisure (with somewhat larger effects for the more successful self-employed who are also employers). More educated workers are also more likely to experience “weekends.”

Interestingly, higher household consumption per capita (a proxy for income/wealth) is associated with less work on weekends for salaried and casual labour workers but has a concave relationship with weekend work for the self-employed, rising below the median income but falling at higher levels. Although self-employed persons work less on Sundays regardless of income level, at high enough income levels they appear to prefer to concentrate their leisure on weekends rather than reduce their weekday labour (which does not decline with income). Also notable is that weekends vary spatially. In districts with a higher concentration of workers in industries that tend to have weekends (computers, finance, business services, government, health and education), the average worker is more likely to experience a weekend even after controlling for their own industry, education and income. This effect is entirely driven by self-employed workers, highlighting that the social coordination role of weekends in terms of work and leisure applies across households as well as within.

I conclude by contrasting the “weekend” in India with the United States, the first country to mandate a 2-day weekend under the 1938 Fair Labor Standards act, to consider the normative implications of mandated weekends. The American Time-Use Survey is one of the largest continuous time-use surveys and the American experience of weekends may provide a glimpse of where India may be heading. The data suggest that travel for work is more of a burden in India than the United States and the benefit of a government-mandated weekend in terms of social coordination and female labour supply could be larger. Both the United States and India have experienced growing leisure equality in recent years (a flipside of the growing inequality in income and access to good jobs) but in India the better off workers who work more hours overall have access to greater weekend leisure, which appears to be more valuable.

## **2. When is the weekend?**

Table 1 presents a summary of average work patterns over the course of the week from the 2019 India Time-Use survey implemented by the National Sample Survey Organization. Work here is defined consistent with the System of National Accounts (SNA) definition – all production of goods or services for the market, and production of goods for home consumption, but excluding production of services for

home consumption (e.g. domestic work and care-giving). I include travel for work as part of work in Table 1 but return to this issue. I consider all SNA work as well as a division into work for pay (salaried work and casual labour) and not for pay (for household enterprise) and take advantage of the data on the establishment where work is carried out to construct measures of government and corporate (public/private limited company) work minutes. Note that weekends are slightly under-represented in the sample of days enumerated (perhaps reflecting the availability of weekends to government enumerators) but not by much – Sundays make up 13.23% of the sample versus 14.09% for Saturdays and a maximum of 14.62% for Wednesdays – and each day should still be representative for the year.

Panel A presents population means (representative for the entire Indian population aged 6 and older) while Panel B restricts to persons who report their usual status as workers (or in school for the last row). The latter is similar to the definition of employed or in the labour force in most countries and excludes the majority of women – it is based on whether an individual was working for the majority of the preceding 365 days. The first three columns present average daily minutes of work from Monday to Friday, Saturday and Sunday respectively. The next three columns present the “extensive margin” of work (whether a person had work minutes greater than zero) and the last three look at days with at least four hours of work.

The data reveal that Saturdays are almost identical to Monday through Friday in every respect, with a slight reduction in work minutes for government and corporate workers (consistent with a half-day break for some workers). The biggest difference is schooling but even this is quite small. Sundays are clearly distinct but the vast majority of workers do not experience a reduction in work on Sundays, even among those who are employees (paid workers). Only corporate and especially government workers are likely to experience reductions in minutes or the probability of working on Sundays, and even in this case there remains a large set of workers who work on Sundays. Overall, this pattern stands in marked contrast to the United States (later) and is somewhat surprising in light of the labour regulations in India mandating a 48 hour work week and 8 hour work days in many cases. Although the likely reason for this is that most working people in India are exempt from these regulations (as they are self-employed or work in agriculture), another explanation is that some workers take their “weekend” on a day other than Sunday, which I cannot rule out given that these data only record a single day per worker.<sup>3</sup> Because the data do not report whether a day without work is a regular rest day or not, for the rest of this analysis I treat Sunday as the “weekend” in India – given the clear decrease in school and work on Sundays and lack of difference on Saturdays for the vast majority of workers and students.

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<sup>3</sup> While it is noteworthy that many (22%) individuals who report their usual work status as “workers” do not report any work on regular weekdays, this appears more likely to reflect periods of unemployment and sickness as well as seasonal work patterns in agriculture. Based on the 1998 India Time-Use Survey pilot, which covered six states, as many as 34% of “variant days” (which are recurring deviations from the normal weekly patterns, though not necessarily weekends) occur on Monday through Friday (almost 7% per day), while 10% occur on Saturday and 56% occur on Sunday.

Table 1: Average work patterns over the week, India 2019

	Minutes			Any work			Work > 4h		
	M-F	Sat.	Sun.	M-F	Sat.	Sun.	M-F	Sat.	Sun.
Panel A: All persons aged 6 and older									
Work	196	198	183	0.49	0.50	0.48	0.38	0.38	0.35
Paid work	91	92	76	0.21	0.21	0.17	0.19	0.19	0.16
Unpaid work	105	106	107	0.41	0.42	0.40	0.19	0.19	0.20
Government work	11	10	5	0.03	0.03	0.01	0.03	0.02	0.01
Corporate work	16	15	9	0.03	0.03	0.02	0.03	0.03	0.02
School	76	68	21	0.20	0.18	0.06	0.18	0.17	0.05
Panel B: Usual status workers or students (last row only)									
Work	379	378	345	0.78	0.78	0.73	0.72	0.72	0.66
Paid work	191	189	159	0.41	0.41	0.35	0.39	0.38	0.32
Unpaid work	188	189	186	0.62	0.62	0.59	0.34	0.34	0.35
Government work	22	20	11	0.05	0.05	0.02	0.05	0.04	0.02
Corporate work	35	34	21	0.07	0.07	0.05	0.07	0.06	0.04
School	308	282	95	0.79	0.76	0.29	0.76	0.72	0.23

Data from NSS India Time-Use Survey in 2019. All reported numbers are means with sample weights applied. “Work” is defined consistent with the System of National Accounts measure and excludes production of services for own consumption (e.g. household maintenance, domestic work, caregiving of own family) but includes all work related travel. “Paid work” includes regular/salaried work and casual labour but not work for the household enterprise. Government work and Corporate work are defined based on survey Block 6 column 13 (enterprise type) equal to “Government/Local Body” or “Public/private limited company.”

### 3. What is a weekend?

What do individuals do with the notable reduction in work on Sundays for some workers and most students? Table 2 presents a breakdown of time-use on all non-work activities separately for men and women (aged 15 and up) and children (aged 6 to 14) during the “week” (Monday to Saturday) and “weekend” (Sunday). Panel A reports time spent at home and time travelling for all purposes or work. Time spent at home increases notably for men, women and especially children, while travel time tends to decrease. Panel B reports time spent on domestic work which can be further subdivided into household maintenance (cooking, cleaning, laundry), care-giving, and unpaid community work/volunteering. Time spent in home production increases, particularly for men and children who do very little during the week, but women still do the vast majority of this work on Sundays, which helps account for their smaller increases in leisure. The other categories do not show much variation. Panel C reports time spent on leisure, the other main category of time (work + home production + leisure sums to 1440 minutes or the total time in the day). Leisure can be further subdivided into self-care/maintenance (which includes sleep, by far the most frequent time-use category reported) and socializing/entertainment. Leisure increases substantially on Sundays, particularly for men and children, and socializing/entertainment drives most of this increase. Panel D looks at some specific activities often associated with the weekend like sleep, rest, religious activities, socializing, shopping and watching TV.

Sleep and rest increase, especially for children, and there is a modest increase in religious activities (which would likely be bigger if not for the Muslim population which typically has services on Friday). While there is some increase in TV watching, the increase in socializing is larger for adults, which suggests that the type of leisure also changes importantly on Sundays. Between the increase in religious activities and socializing, it is clear that weekend Sundays in India play an important role in coordinated leisure, i.e. social lives – friends and family are also more likely to be free on weekends and communal activities like religious gatherings are more likely to occur.

Table 2: Average minutes on different activities during week (Monday-Saturday) versus weekend (Sunday), India 2019

	Males 15 and up		Females 15 and up		Children under 15	
	Weekday	Weekend	Weekday	Weekend	Weekday	Weekend
Panel A: Where?						
At Home	949.6	995.0	1273.7	1294.7	1028.1	1185.1
Travel	63.5	56.6	20.7	17.5	47.2	22.7
Work travel	45.7	39.3	10.4	8.4	2.1	1.3
Panel B: Domestic work						
Home production	44.4	52.6	335.8	340.6	20.0	30.9
Household Maintenance	29.5	36.4	292.3	298.2	12.8	21.1
Caregiving	11.7	12.7	41.2	40.5	6.3	8.9
Volunteering	3.2	3.5	2.3	1.9	0.9	0.9
Panel C: leisure						
Leisure	980.4	1035.7	959.6	989.6	1012.2	1202.1
Self-care and maintenance	786.3	807.8	782.5	795.9	801.1	865.8
Social/ent.	194.0	228.0	177.1	193.7	211.0	336.3
Panel D: Specific activities						
Homework	18.0	15.4	14.1	11.8	96.6	102.1
Sleep	536.9	553.2	548.7	558.7	589.3	631.5
Rest	40.6	44.8	52.7	55.4	25.1	39.1
Religious	9.9	12.8	16.3	20.0	4.4	9.5
Socializing	85.7	97.0	76.3	81.8	37.4	53.1
Watching TV	60.2	68.7	69.5	71.3	60.2	96.7
Shopping	6.9	9.4	3.7	4.6	0.5	1.8

Data from NSS India Time-Use Survey in 2019. All reported numbers are means with sample weights applied.

To further examine whether weekends play a coordinating role *within* the household, I construct an “activity coordination index” as follows: (1) I discretize the 24 hours in the day into 30 minute blocks and for each 30 minute block take the most common activity in the household and calculate the number of members aged 6 and up who are doing it (this ranges between 1 and the total number of such individuals), (2) I sum this across all 48 of the 30 minute blocks in the day, and (3) I divide this sum by the maximum possible coordination for each household (equal to 48 times the number of household members). This gives an index at the household level that varies between 1 (all household members do the same thing throughout the 24 hours) and 1/number of household members aged 6 and up. This index is notably higher on Sundays than during the rest of the week, including for more selective definitions of coordination (e.g. individuals must be doing the same activity *at home*) or different definitions of coordination (e.g. individuals must be at home at the same time, any two individuals in the household doing the same activity at the same time). Although units of this index do not have a natural

interpretation, the magnitude of the average increase in within-household coordination on Sundays relative to the rest of the week is about 0.25 standard deviations in terms of the variation in coordination *across* households. Thus weekends do appear to play an important coordinating role in terms of activities within households.<sup>4</sup> I return to the question of coordination across households later.

#### **4. Who gets or wants a weekend?**

The analysis so far highlights that many workers in India do not get a weekend, and that weekends are likely to serve a particularly valuable leisure coordination role given the types of activities that replace work and school on Sundays. Understanding which workers get weekends, and which workers want weekends, is useful to move towards a normative understanding of how weekends and the lack thereof may affect inequality and worker welfare. An obvious starting point is that many workers may not have a choice regarding the weekend – as there is no legal right to a weekend or Sunday break in India, this is dictated by employers and the labour market. Of course, workers have some freedom to choose employment arrangements and some who have access to weekends in their regular job may work on weekends by choice (either as overtime or a “side-hustle”). While we might expect workers with regular wage/salary employment to be more likely to get (and want) paid holidays, it is less obvious where casual labourers (who are paid by the hour or day) fall, or what self-employed individuals do given their control over their work schedules. While there may be incentives to take leisure on Sundays (due to leisure externalities, school closure) there may also be incentives to work on Sundays, depending on whether Sunday work is complementary to the leisure of other individuals. Sector/industry of employment is also likely to be important and will be discussed later.

Table 3 Panel A provides a breakdown of the “weekend effect” (defined as average minutes worked on Sunday versus other days of the week) for work, leisure, and time spent at home across the different usual worker status categories in the survey. Self-employed individuals can be broken up into those who work for themselves, those who are employers, and those who are essentially employees in the household enterprise, while casual labourers can be divided into those working for public works versus other employers. Regular wage/salary employees drive most of the weekend effect in the data, with an effect about 4 times as large as the effect for casual labourers. Self-employed workers also display weekend effects that can be larger (for self-employed employers) or smaller (self-employed own account) than casual labourers. The larger weekend effect for self-employed employers suggests that more successful business/farm owners are more likely to choose leisure on weekends while less successful ones have higher incentives to work on weekends, a finding we confirm later. This is consistent with the notion of “subsistence entrepreneurship” wherein most of the self-employed operate businesses out of necessity, not choice, in response to the lack of reliable and well-paying employment opportunities (Banerjee and Duflo, 2012).

Table 3 Panel B shows that education is also a powerful predictor of the “weekend effect” as individuals with post-secondary education have by far the largest weekend effect, while those with secondary or higher secondary have more modest weekend effects, and those with middle school and below have the lowest. To some degree this reflects sorting into regular wage/salary employment although these

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<sup>4</sup> Georges-Kot, Doux and Maurin (2022) show that self-employed individuals in France are more likely to take an (unpaid) day off from work when their spouse gets a day off due to national holidays that induce different breaks across years, highlighting the importance of leisure coordination externalities within the household.

education effects are also present within different work status categories.

Table 3: Difference in average minutes on weekend (Sunday) vs. week (Monday-Saturday) by type of worker, India 2019

Minutes	Work	Leisure	Home
Panel A: Usual work status			
Self-employed (own account)	-24	22	16
Self-employed (employer)	-61	58	59
Self-employed (helper in hh enterprise)	-2	13	1
Salary	-139	111	107
Casual labour public	-29	29	10
Casual labour other	-30	31	18
Panel B: Educational attainment <sup>1</sup> (usual workers only)			
Below primary	-20	19	11
Primary	-37	31	23
Middle	-31	29	22
Secondary	-64	57	53
Higher secondary	-68	64	55
Tertiary	-152	127	119

Data from NSS India Time-Use Survey in 2019. All reported numbers are means with sample weights applied. Panel B restricts the sample to usual workers (to exclude those still in school)

To further understand the potential demand and supply of labour and weekends, one can compare weekday and weekend (Sunday) labour for working individuals in households with different levels of per capita monthly expenditures. Figure 1 provides a local polynomial smoothed plot of this relationship for all workers (top left panel) and for the three broad types of workers (self-employed/household enterprise, regular/salaried workers and casual workers). For the average worker, higher household expenditure per capita is associated with more minutes of work during the week but less on the weekend, although weekend labour does not change much at the lowest levels of expenditure. This average effect across all workers is driven by two distinct patterns. Workers who are paid employees (bottom two panels) have relatively constant minutes of work during the week but declining minutes of work on weekends as household expenditures increase; for casual workers, weekend work minutes only start falling above a threshold of about 10,000 rupees per capita expenditure, which is just below the 75<sup>th</sup> percentile of the distribution. Workers in household enterprises have a strongly positive association between per capita expenditure and minutes of work during the week except at the very highest expenditure levels, and a similar association for weekend work until per capita expenditure reaches about 17,000 rupees (about the 90<sup>th</sup> percentile of household expenditure) at which point weekend work minutes start to decline. Together, these patterns suggest that low demand for Sunday leisure by the poor is likely to be an important factor and helps explain the rarity of Sunday leisure in the general population. When households have below average expenditures, both casual workers and those employed in household enterprises that have more control over their Sunday labour supply are less



willing to sacrifice income for Sunday leisure. However, when household expenditure gets high enough, these same workers clearly prefer concentrating their increase in leisure/reduction in work minutes on Sunday. This further suggests that for regular/salaried workers, who may have less control over their weekly work schedules, the observation that weekends increase with per capita expenditure likely reflects an equilibrium between the demand for weekend leisure by higher earning workers and the willingness of employers to accommodate them.

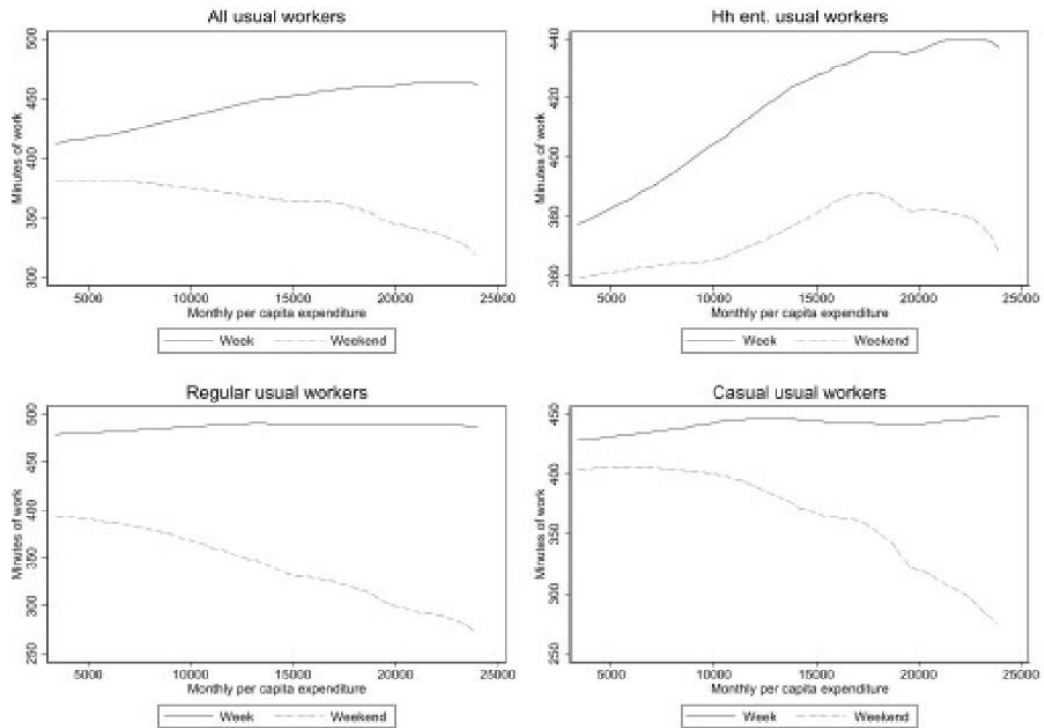


Figure 1: Work minutes during week and weekend and per capita expenditures, by worker type

Figure 2 provides a similar picture from the perspective of leisure. Usual status workers in high-income households typically have less leisure per week than those in low-income households, but have greater leisure during the weekend. Individuals whose usual status is not work (i.e. those not in the labour force, which includes the majority of women) have more leisure in high-income households throughout the week, but this effect is more pronounced on the weekend. This may reflect complementarity between leisure of individuals within the household.

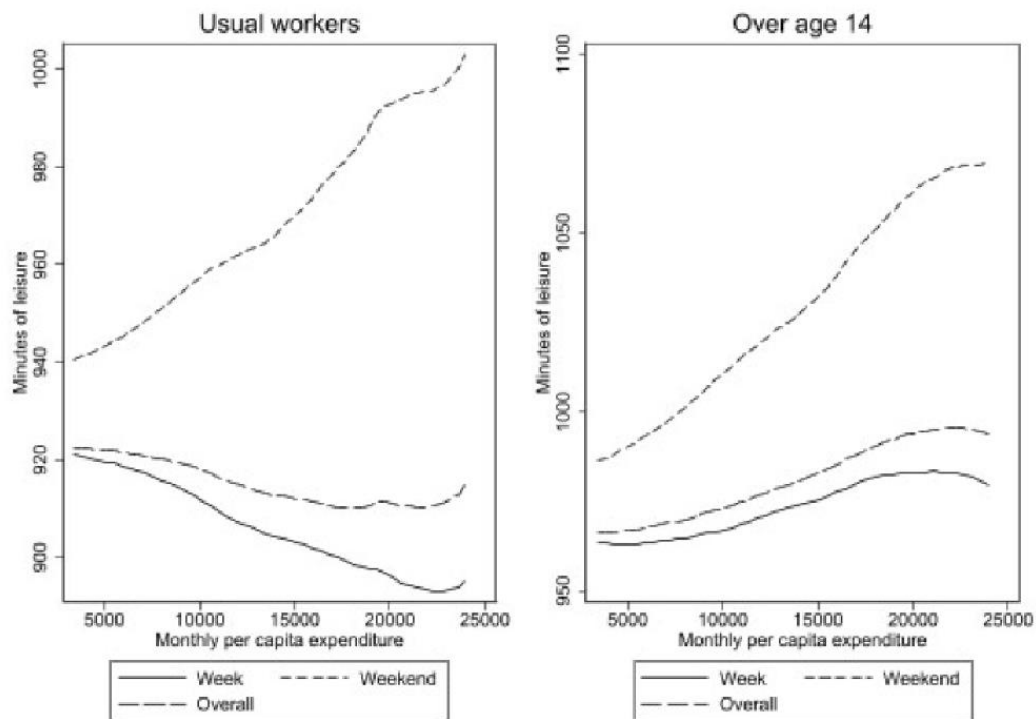


Figure 2: Leisure minutes during week and weekend and per capita expenditures

The weekend effect also varies by sector/industry, although some of the cross-industry patterns reflect the influence of factors already considered like education and usual work status. The survey records the 2-digit NIC (2007 classification) industry for each worker and I compute a “weekend effect” for each industry by calculating the difference between average work minutes on Sunday versus the rest of the week. These are plotted in Figure 3 along with the number of workers in each industry. The industries with the largest weekend effects are unsurprisingly white-collar private and public sector industries: computers (62), finance (64), office/business services (82), public administration/defense (84), education (85) and health (86). The industries with the smallest weekend effects are crop and animal production (01), which given its continued importance explains the low overall weekend effect in India, along with retail (food and beverage services (56), retail trade 47)), personal services (domestic personnel (97), other personal service activities (96)), small-scale manufacturing (tobacco (12) and apparel (14)), and construction (41).<sup>5</sup>

<sup>5</sup> The lack of weekends in construction is somewhat ironic in light of the story in Doctor (2013) that weekend breaks in India can be originally traced to complaints by the archdeacon of Bombay in 1831 about noise from construction workers disrupting Sunday services. Note however that the noise complaints and resulting weekend break concerned public works. This highlights the hierarchy between government and private sector/casual employees that exists within industries and persists to this day.

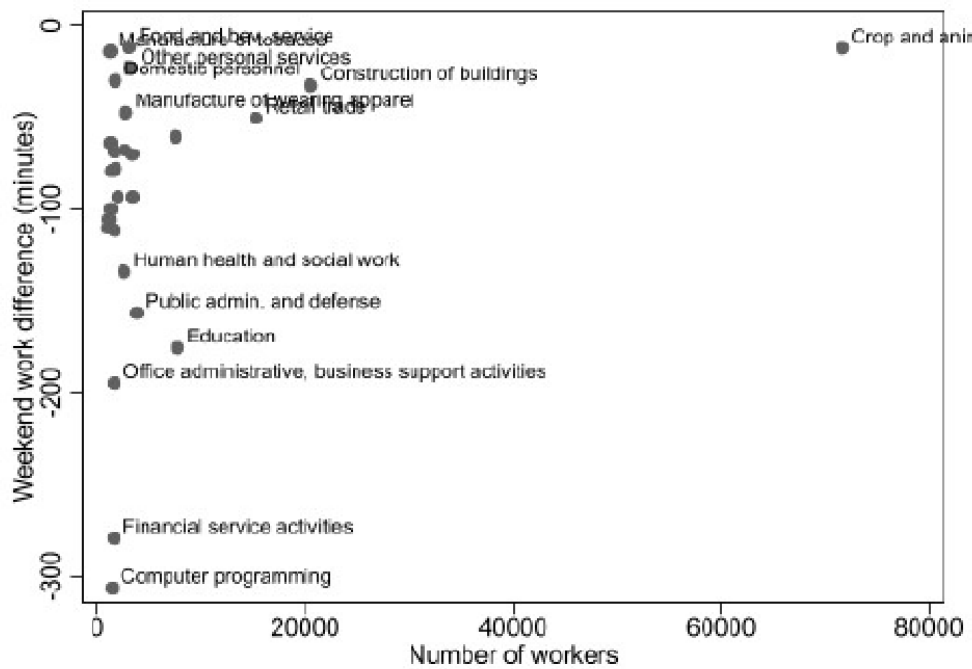


Figure 3: Industry employment (X-axis) and weekend effect (Y-axis). Weekend effect measures average industry difference between daily minutes worked on Sunday versus rest of week.

The substantial variation in “weekend effects” across industries also provides an opportunity to assess the importance of the coordinating role of weekends *across* households in the same location and the importance of worker demand for weekends (versus the importance of employers being willing to supply weekends). To do this, I consider how minutes worked on Sunday vary across workers with the *same* industry, education, and household expenditure per capita who live in different districts. Some districts have much less work on Sundays because of their industrial structure. This may increase the demand for weekends due to positive leisure externalities across households. It could also affect incentives to work, although this effect could go either way, i.e. some businesses serve people at/on the way to work rather than at home, while others are complementary with leisure and see an increase in demand on weekends. I construct a district-level “weekend” index that weights the average weekend effect for each 2-digit industry at the national level by its share of workers in a district. This generates a measure of district-level “weekend effects” that depends only on industrial structure. I then estimate a linear regression of minutes worked on Sunday that includes this district-level weekend measure along with individual and household-level controls for household size, per capita expenditure, educational attainment, gender, age, and the individual’s own 2-digit NIC industry. The results are reported in Table 4.

Table 4: Spillovers from industrial structure to Sunday work time (dependent variable), India 2019

	(1)	(2)	(3)	(4)
	All usual workers	Self-employed	Salaried	Casual
District weekend effect mean	0.309*** (0.109)	0.569*** (0.135)	0.064 (0.245)	0.030 (0.186)
Observations	25,735	12,806	5,797	7,132
Adj R-squared	0.132	0.142	0.181	0.0811

Data from NSS India Time-Use Survey in 2019. Standard errors clustered by district. “District weekend effect mean” is constructed by first constructing the average weekend effect for each 2-digit industry classification (the average difference in work time for Sunday versus other days for all workers in India) and then aggregating these industry-level weekend effects for each district using district employment shares. All regressions include 2-digit NIC dummies and controls for household size, log per capita expenditure, educational attainment dummies, gender and age.)

Table 4 reveals that district-level industrial structure has a significant association with an individual’s own demand for Sunday work conditional on their own industry, capturing potential spillovers across households. Column 1 shows that overall, an extra minute of predicted weekend leisure in a district (due to its industrial structure only) lowers the average worker’s Sunday work minutes by 0.3 minutes. Interestingly, this effect is entirely driven by the self-employed and there are minimal effects on salaried and casual workers. Since the self-employed have control over when they work, this provides further evidence that the coordinating function of weekends in terms of leisure and work have a large impact through the demand side (as opposed to local norms that affect an employer’s willingness to provide weekends). While there could be other district-level factors correlated with industrial structure that affect the Sunday work decisions of self-employed workers within a given industry, the strength of this association is suggestive of Sunday leisure spillovers across households.

It is difficult to say how much of this effect is due to positive leisure externalities or reduced work incentives on weekends, particularly since even within an industry the weekend effect on work incentives may be quite heterogeneous. For example, some restaurants and transportation serve workers in central business/factory districts, but others serve recreational/leisure demands that would be higher on weekends.<sup>6</sup>) Since weekends tend to involve more time spent at home, both of these effects are likely to play a role.<sup>7</sup>

<sup>6</sup> For example, Table 2 indicates that shopping time increases on Sundays for the average Indian household.

<sup>7</sup> The within-household effect documented by Georges-Kot, Doux and Maurin (2022) in France is unlikely to generate this pattern given that a majority of women in India are not usual workers and are excluded from this sample. I also verify that the effects in Table 4 are robust when controlling for a spouse’s 2-digit NIC industry.

## 5. Why weekends matter

The analysis so far suggests that the fact that most Indian workers do not experience a “weekend” may simply reflect low demand for weekends at low levels of expenditure. In terms of a standard labour supply model, weekend leisure may have a particularly high income elasticity, such that it dominates any substitution effects (i.e. the incentive to supply more labour when individuals have a higher hourly wage). Workers in household enterprises are free to set their own schedules and most of them prefer to keep work hours fairly constant throughout the week. Only the most well-off workers and those in areas where most other workers also have Sunday leisure choose to lower their labour supply on Sundays. At the same time, the analysis makes it clear that leisure is more valuable to households on Sunday than on other days of the week – it increases coordination of activities within the household as well as associated leisure activities like socializing and religious practice.<sup>8</sup> The social and labour market equilibrium prioritizes reduced work on Sundays versus other days of the week for workers who can afford to work less. This further suggests leisure inequality in India is not as straightforward as it might seem at first glance – although the most well-off workers tend to work more minutes and consume less leisure over the course of the year, the leisure that they do consume is disproportionately on weekends and is thus likely to be more valuable.

Given this context, is there a rationale for policy intervention? As mentioned earlier, current labour laws in India do not mandate a weekend for any worker but instead seek to cap total weekly or daily hours, giving employers the flexibility of requiring that their workers show up every day.<sup>9</sup> At the same time, the new Labour codes seem to push in the direction of increasing flexibility to concentrate work on a few days – where previous legislation limited daily work hours to 8-10 per day under the Factory, Mines and Shop and Establishment acts (with limited higher-paying overtime permitted cases in some cases), the New Labour Codes maintain the 48 hour weekly limit (excluding overtime) but extend the daily work limit to 12 hours to allow for a four day work week. While this flexibility may be beneficial to some employees and employers, is there a case to be made for more rigidity, i.e. a mandated weekly rest day, as is the case in many other countries? The analysis here suggests that as the Indian economy continues to grow, demand for Sunday leisure is likely to grow. Household enterprises can fulfill this demand without government assistance, which may partly obviate the need for policy action, but for casual labourers and salaried workers the existence of weekends is a result of negotiations and legislation. The potential for spillovers in “weekend effects” across households suggests that there could be multiple equilibria, and policy could play an important coordinating role in pushing towards a standard one day weekend equilibrium.

Although this paper does not aim to offer a quantitative framework for addressing the normative question of mandated weekends in India or elsewhere, there are two consequential impacts of mandated weekends that are worth considering – effects on commuting times and women’s labour supply – and it is useful to contrast the Indian experience of weekends with the United States, which has a rich history of time use surveys and was the first country to enact a 40 hour, five-day workweek under the 1938 Fair Labor Standards Act.

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<sup>8</sup> See also Craig and Brown (2014), Kuriyama, Shoji and Tsuge (2020), Georges-Kot, Doux and Maurin (2022),

<sup>9</sup> This contrasts with other developing countries like China, which imposed a two-day weekend for some (mostly public sector employees) in 1995 (Fan, Ling and Tang 2018).

Table 5 presents data from the American Time Use Survey in 2008 and provides a picture of how inhabitants of the world's wealthiest nations experience the weekend. Both Saturday and Sunday have significant drops in work minutes and the likelihood of working, and there are much larger increases in leisure than are observed in India for both men and women. There is also a much larger increase in religious activity and television, which is interesting because it highlights that weekends in the United States may also serve to coordinate leisure and build social capital through weekly religious practice, but that this is not guaranteed. Almost a third of the extra leisure minutes on weekends are devoted to watching television, which may involve social aspects but is typically considered to be less social than some of the other leisure activities in the survey.

Work related travel in the United States provides one rationale for weekends, given that the average American man spends almost 30 minutes of their time commuting on an average Monday to Friday and the average working man (equivalent to usual status of work in the Indian context) spends 38 minutes commuting. This time is not usually counted as part of work hours although I include it in my definition of work for both the United States and India to be comparable and highlight the full burden of weekly work patterns. The average Indian man spends 45 minutes a day commuting from Monday to Saturday (Table 2) and the average working man (usual status work) spends 54 minutes. This represents 14% of total work time and is fairly similar across types of workers (ranging from 12% for self-employed workers to 16% for salaried workers). Because workers are not paid for time in transit, employers potentially put greater costs on employees by requiring that they work every day. Commute times provide one explanation for why individuals with more income or bargaining power may prefer leisure concentrated on weekends versus shorter work days. The extra time Indian workers spend commuting – between their longer daily commute and much lower likelihood of having a weekend – adds up to a substantial cost. If Indian workers could remove one day from their commute and make up for the work (but not travel) time the rest of the week, they would enjoy almost an extra hour of leisure per week.

The analysis of commute times also highlights another important aspect of weekends, which is their effect on women's labour supply. In the United States, like India, women tend to travel less far for work than men – conditional on working, American women spend 12 fewer minutes per day commuting, while Indian women spend almost 19 fewer minutes per day commuting. This may partly reflect greater childcare and domestic work commitments that also serve to limit women's labour market opportunities, as well as other constraints like social norms on female mobility. The fact that the biggest weekend effect in India is for school-aged children highlights another potential impact of weekends on female labour supply. While the average weekend effect is similar for working men and women in India, in households with young children (under age 10) the weekend effect is about 9 minutes (21%) smaller for women, and this gender difference is even larger for self-employed workers (18 minutes) and salaried workers (28 minutes). These numbers likely represent a lower bound on the limitations placed by school weekends on female labour supply given that many women may not pursue work as their "usual status" because of limited childcare available on weekends. This weekend-related supply-side constraint on women's labour extends the childcare burden placed on women into the school-aged years and could be partly mitigated by a policy restricting male labour on weekends. The United States exhibits a similar pattern to India – male workers decrease minutes of work by more than female

workers on weekends – but the decline in weekend work is so much larger for both genders that the need for weekend childcare is less likely to be a constraint on women’s labour supply.<sup>10</sup>

Table 5: Average minutes during week and weekend, United States 2008

	Males 18 and up			Females 18 and up		
	M-F	Sat.	Sun.	M-F	Sat.	Sun.
Panel A: Full sample						
Work	373.46	124.11	96.94	259.03	83.90	64.21
Any work	0.69	0.33	0.28	0.54	0.25	0.22
Leisure	915.40	1090.50	1157.75	917.19	1045.18	1110.49
TV	169.76	213.36	237.96	146.94	165.46	183.56
Religious	3.88	4.39	28.77	5.42	6.53	36.74
Work travel	29.25	9.65	6.44	16.09	4.70	3.00
Panel B: Employed workers only						
Minutes work and school	485.66	157.79	127.42	410.51	128.95	103.45
Any work or school	0.88	0.40	0.36	0.83	0.38	0.33
Minutes leisure	827.89	1047.31	1111.35	817.13	1000.84	1062.88
TV	127.06	189.23	216.69	106.27	145.83	158.09
Religion	3.41	4.06	26.66	3.98	4.55	31.88
Work travel	38.28	12.42	8.62	26.18	7.40	4.99

Data from American Time-Use Survey in 2008. All reported numbers are means with sample weights applied. Panel B restricts the sample to the employed.

Ultimately India is far from the point that a two-day weekend is realistic for most workers given that even a one-day weekend is relatively rare. When the United States introduced the two day weekend in 1938 its GDP per capita in today’s terms was about \$9,000 US dollars, whereas India in 2022 has a GDP per capita of about \$2,300. However, there are many plausible justifications for revisiting the question of weekends in Indian economic policy and labour law, some of which have already been discussed (commute times, women’s labour supply, the greater value of leisure on weekends due to social coordination) and some of which are beyond the scope of this essay (environmental concerns, congestion externalities). One last justification for revisiting this question is the lack of “good jobs” in India and the decline in labour force participation and work hours for both men and women, a phenomenon that affects both rural and urban areas (Li, 2023). Part of the impetus for the US Fair Labour Act of 1938 was the very high rate of unemployment in the United States at the time. In 1938 the US was still emerging from the Great Depression and President Hoover had earlier articulated the desire to minimize layoffs by reducing hours more broadly. India’s inability to generate substantial labour-intensive paid employment opportunities may provide another justification for mandating weekends or further limiting work hours, as this could potentially lead to a more egalitarian distribution of desirable

<sup>10</sup> Yildiz (2020) notes that women working in Bombay factories around 1890 also requested standard schedules with regular weekend holidays, but the Bombay Chamber of Commerce and Bombay Millowners’ Associations petitioned instead for three flexible holidays each month to reflect menstrual cycles on the grounds that this would be convenient for them even though the women factory workers themselves rejected this notion.

work. If forcing some workers to work less does not spread the available work across more individuals, it could alternatively lead to wage increases.

The topic of “weekends” remains understudied in the social sciences, particularly given the growing interest in questions around work from home/work flexibility due to technological advances and the Coronavirus pandemic, as well as ongoing debates about shorter workweeks/longer weekends motivated by lifestyle, gender equality, and environmental concerns (Ferragioni and Colombo, 2023). From the perspective of developing countries, the topic is even more understudied, partly due to the lack of data that could be used to study variation in work and leisure during the week. My analysis here is just a first step towards rectifying this deficit. Going forward, there are at least three promising areas for future research. First, a global perspective integrating the growing number of time-use surveys from lower and middle income countries would shed light on when we might typically expect to see transitions from zero to one or two day weekends and reveal which cultural or structural features of economies matter besides income. Second, data that allow for an analysis of work/leisure patterns for the same individuals/households on multiple days would be useful in disentangling some of the mechanisms and intra-household interactions that occur. It would also reveal whether non-standard (e.g. non-Sunday in India) rest days are important for some workers or not. India conducted a time-use survey in 1998 for six states that potentially records normal and weekend days for the same individual that could be used for this purpose, although most time-use surveys appear to lack this feature. Third, a quantitative framework integrating labour productivity, commute times, and the value of coordination in work and leisure would be useful in framing the policy debate and providing insight into whether there are mechanisms through which mandated weekends could be welfare improving.

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