

# Time Poverty: Dimensions, Structural Causes and Policy Strategies

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## Abstract

Time poverty—characterised by a systemic deficit of discretionary time remaining after an individual accounts for paid labour, unremunerated care duties, and essential biological maintenance—has emerged as a vital yet under-researched facet of multidimensional deprivation. This paper synthesises established theoretical frameworks, structural drivers, and the documented ramifications of temporal scarcity by drawing on a rigorous cross-examination of international institutional reports, national time-use datasets, and peer-reviewed scholarly literature. We contend that time poverty is neither a voluntary lifestyle choice nor a residual byproduct of personal ambition; rather, it is a form of structural injustice deeply rooted in institutionalised gender asymmetries, depressed market wages, regressive public infrastructure deficits, and flawed macroeconomic metrics that fail to value reproductive labour. Focusing significantly on the Indian developmental landscape, this paper examines how time poverty operates within the wider challenges of achieving inclusive growth and satisfying the United Nations Sustainable Development Goals (SDGs). Ultimately, we outline a comprehensive, multidisciplinary policy roadmap spanning macro-level labour market reforms, a structural reorganisation of the care economy, transit-oriented urban planning, and overhauled statistical governance mechanisms to systematically dismantle this pervasive yet invisible form of inequality.

**Keywords:** Time poverty, Unpaid care work, Gender inequality, Care economy, Sustainable Development Goals (SDGs).

## 1.0 Introduction

The discourse surrounding global development, human capabilities, and multidimensional deprivation has historically prioritised monetary and material metrics. While parameters like income, consumption expenditure, and asset ownership are vital indicators of economic well-being, they fail to capture an equally critical, finite, and non-transferable resource: human time. In modern economic landscapes, time poverty has emerged as a pervasive yet largely invisible facet of inequality. It refers to a systemic and involuntary deficit of discretionary time remaining after an individual has accounted for formal or informal paid market labour, unremunerated caregiving and domestic duties, and essential biological maintenance such as sleep and baseline hygiene. Unlike financial capital, which can be saved, borrowed, or augmented across a lifespan, time is bounded by the strict physiological threshold of the 24-hour day. Consequently, when an individual's mandatory labour portfolios expand to consume this entire daily window, their core human capabilities are compromised, rendering standard economic empowerment paradigms structurally unrealizable. Far from being a voluntary lifestyle choice or a residual byproduct of personal ambition and poor self-regulation, time poverty is a form of structural injustice. It thrives at the volatile intersection of skewed macroeconomic policies, depressed market wages, regressive public infrastructure deficits, and rigid socio-cultural divisions of labour. In developing and emerging market economies, the phenomenon acts as a massive drag on human capital accumulation. A severe lack of discretionary time builds a physical and psychological barrier that prevents individuals from improving their quality of life. When the simple mechanics of day-to-day survival demand extreme temporal extractions, the formal rights to educational attainment, political voice, and preventative healthcare are rendered practically hollow. Individuals trapped in this temporal bankruptcy are forced into a state of absolute unfreedom, lacking the agency to choose how their finite lives are reallocated. This temporal squeeze is profoundly gendered. Across many developing societies, deeply embedded patriarchal norms and cultural expectations dictate that women retain near-total responsibility for reproductive

work, child supervision, and household maintenance. When women enter full-time market employment, these domestic obligations are rarely redistributed, culminating in a crushing "double burden" or "second shift." In resource-poor regions, this crisis is exacerbated by acute infrastructure deficits. The absolute absence of basic public utilities like piped household water and clean cooking energy imposes a regressive "time tax" on vulnerable populations, forcing women and young girls to sacrifice their educational opportunities and rest windows to trek long distances for basic survival commodities. Ultimately, achieving inclusive development and fulfilling the United Nations Sustainable Development Goals (SDGs)—particularly regarding gender equality, public health, and decent work—remains impossible as long as traditional growth metrics treat human time as an infinite, cost-free resource. Traditional +

Product calculations suffer from an analytical blind spot, as they rely on the unvalued, unmeasured time of the poor to subsidise formal capital and state service delivery. Dismantling this invisible inequality requires shifting public policy from viewing time scarcity as a private logistical failure to addressing it as an urgent macroeconomic priority. This paper provides a comprehensive multidisciplinary framework to examine the conceptual dimensions, structural drivers, and developmental ramifications of time poverty, outlining a robust policy roadmap to restore the fundamental human right to temporal agency and rest.

## 1.1 Time Poverty: Concept Defined

Evaluating the multi-dimensional nature of temporal deprivation requires a comprehensive examination through distinct theoretical lenses: the mechanical deficit of clock hours, the psychological manifestation of a "time squeeze," and the deeply gendered imbalance of unremunerated care work. The following comprehensive synthesis presents 25 foundational definitions established by international development organisations, academic pioneers, and national policy reports. Each conceptualisation is structured narratively to emphasise its distinct analytical focus.

In the framework of **Bardasi and Wodon (2009)**, time poverty is identified as the objective state of working excessively long hours by absolute structural compulsion rather than personal choice. This condition arises because any reduction in total labour output would directly plunge the household below absolute monetary poverty lines. **UNDP (2015)** human development reports contend that time poverty constitutes a specific, capability-limiting deprivation. Under this perspective, individuals lack a secure baseline of continuous hours for rest and personal leisure after fulfilling the overlapping demands of market employment and unremunerated household maintenance. According to guidelines issued by the **ILO (2021)**, time poverty represents a critical occupational hazard where the joint accumulation of formal market work and informal domestic care duties—commonly termed the "double burden"—surpasses a healthy physiological threshold, directly compromising the worker's right to adequate self-care, bodily rest, and sleep. The **OECD (2021)** opines that temporal deprivation is characterised by an absolute deficit of discretionary time necessary to pursue well-being-enhancing activities. This institutional model attributes the deficit to a structural imbalance between contracted, committed, and necessary periods. In the words of **UN Women (2023)**, time poverty is fundamentally a gendered deprivation that extracts vital hours from women's lives. This institutional analysis emphasises that women's culturally enforced responsibility for unremunerated domestic reproduction serves as a primary barrier blocking their access to formal education, high-value employment, and political governance. The **UNSD (2020)** methodologically defines the time-poor as those individuals whose cumulative productive labour—aggregating market employment and non-market household production—exceeds a specific statistical ceiling, such as 60 to 80 hours per week, rendering it logistically impossible to meet basic biological and social maintenance needs. The **EC (2022)** observes that time poverty operates as a complex, multi-dimensional social phenomenon rooted in acute, prolonged temporal pressure and stress. This framework highlights that persistent time constraints degrade long-term psychological resilience and accelerate social exclusion by eroding community integration. As articulated by the **ADB (2024)**, time poverty functions as a regressive, invisible "time tax" extracted directly from low-income populations, specifically rural women. The bank links this deficit to clean utility vacuums, which force vulnerable citizens to trade multiple daily hours for basic survival tasks like walking long distances for water. The **WHO (2023)** explicitly categorises time poverty as a powerful upstream social determinant of health. The organisation notes that a severe lack of discretionary time builds a physical barrier that prevents individuals from engaging in vital health-seeking behaviours, including attending medical checkups, exercising, or securing biological sleep. The **Levy Economics Institute (2021)** measures time poverty by completely adjusting traditional monetary lines to account for internal household care deficits. This economic model demonstrates that households can appear financially stable on paper while remaining severely time-bankrupt, lacking the temporal resources required to achieve a basic living standard.

In her pioneering conceptualisation, **Vickery (1977)** posits that a household must be classified as time-poor when its members cannot satisfy baseline needs for domestic production and vital sleep, even after allocating all available hours to income-generating activities. **Goodin et al. (2008)** formulate the phenomenon through the objective lens of "Discretionary Time." They define this metric as the exact life moments remaining to an individual after completing strictly mandatory tasks across three pillars: earning a baseline living, performing personal biological maintenance, and fulfilling caregiving obligations. **Bardasi and Wodon (2006)** focus heavily on the phenomenon of "Working Long Hours by Necessity." Their framework isolates individuals who expend more than 60 to 70 hours a week across market and non-market tasks because they face absolute income poverty or are at immediate risk of financial destitution. **Burchardt (2008)** conceptualises time poverty through the foundational principle of "Temporal Agency." Under this formulation, deprivation is defined as a structural restriction on individual freedom, characterised by the lack of liberty to choose how one reallocates their limited daily hours among labour, care, and leisure. **Whillans (2019)** of Harvard Business School describes this reality as a psychological "Time Famine." Her behavioural research focuses on the chronic, subjective feeling of being overwhelmed by competing demands while lacking the hours needed to satisfy them, a state shown to lower life satisfaction across all income brackets. Under the Capability Approach formulated by **Sen (1999)**, time poverty is identified as a primary

"capability deprivation." This framework states that severe temporal constraints restrict human freedom, preventing individuals from achieving valuable functionings like education, political voice, and personal care. **Bittman (2002)** highlights the critical dimension of "Time Quality," defining time poverty through the systematic fragmentation of leisure. He demonstrates that even when individuals possess unallocated hours, these moments are often broken into tiny segments by child supervision or chores, turning leisure into restorative-free "time confetti". **Joergensen (2015)** theorises the phenomenon as a modern "Temporal Squeeze" born from technological acceleration. Her model outlines how digital connectivity allows professional employment demands to invade domestic environments, compressing boundary spaces and eliminating unallocated "void" time for the self.

The **GoI (2020/2024)** quantitatively outlines time poverty based on national Time Use Surveys. The official policy documents define the condition as the excessive, mandatory expenditure of over 5 to 6 hours daily on unremunerated domestic and caregiving duties, an imbalance that falls disproportionately on Indian women. The heterodox economist **Ghosh (2016)** argues that time poverty exposes the fundamental "poverty of economics itself." She maintains that standard Gross Domestic Product metrics suffer from an analytical blind spot, as they rely on the unmeasured, infinite time extractions of poor women to subsidise formal market capital and state services. **Hirway (2020)** structures the definition by framing time poverty as a direct consequence of macroeconomic infrastructure deficits in developing countries. She maintains that a public utility vacuum—specifically the absence of household water, clean energy, and transit—acts as a regressive tax that forces the poor to forfeit hours to basic physical survival. Analyses conducted across **The Economic Times (2024)** and India Inc. define time poverty as a primary structural trap that suppresses India's Female Labour Force Participation Rate (FLFPR). They frame the crisis as a paralysis where "women's labour is too valuable to leave at home, but too burdened by domesticity to enter the market". The **CMIE (2023)** isolates the problem through the metric of the "Time Gap." Their data-driven publications define time poverty as the absolute statistical divergence between men and women regarding time spent on pure leisure and social interaction, revealing deep inequalities in daily quality of life. The development academic **Somra (2021)** conceptualises time poverty as an "interlocking trap" where material and temporal deprivations reinforce each other. He defines this cycle as a state where inadequate wages compel survival-driven overwork, which in turn leaves workers with zero discretionary hours to secure the education or rest needed to command a higher income. Within the policy guidelines issued by **NITI Aayog (2023)**, time poverty is formally recognised as a critical factor that compounds multi-dimensional poverty. The national framework notes that the "deprivation of time resources" among rural mothers directly accelerates child malnutrition and school dropout rates by removing the hours needed for nutrition prep and school tracking.

## 1.2 Theoretical Syntheses of Time Poverty

The systematic study of temporal scarcity as a structural form of economic deprivation has evolved through several distinct, increasingly sophisticated analytical paradigms. The pioneering definition of time poverty was advanced by the economist Clair Vickery in her seminal paper published in **Vickery (1977)** challenged standard income-centric models by introducing a two-dimensional framework that recognised time and money as interdependent resources necessary for maintaining a baseline standard of living. Under this foundational formulation, a household is classified as objectively time-poor when it cannot meet its essential needs for household production—including cooking, cleaning, and necessary care—and basic biological sleep, even after allocating its available temporal resources to income-generating market activities. Clair Vickery's paradigm proved that an inflation of monetary income often requires a corresponding, mandatory compression of household time, meaning a family can rise above the financial poverty line while simultaneously falling into severe temporal bankruptcy. Building on this structural foundation, the social philosophers **Goodin et al. (2008)** operationalised the concept through their innovative taxonomy of "Discretionary Time," developed in their landmark volume published by Cambridge University Press. Rather than relying on a simple mechanical accounting of total work hours, their framework quantifies the residual time remaining to an individual after completing strictly necessary tasks categorised under three unavoidable pillars: market labour required to earn a baseline living, autonomous personal maintenance (such as sleeping, eating, and medical hygiene), and unremunerated care work dictated by societal or familial obligations. This capability-linked framework identifies time poverty not as a superficial lifestyle choice, but as a profound form of unfreedom—a structural deprivation of temporal agency that strips individuals of the autonomy to choose how their finite hours are spent.

**The Intersection of Material and Temporal Scarcity:** The institutional integration of time into development economics was formalised by the World Bank through the contributions of **Bardasi and Wodon (2009)**. Writing in the World Bank's Policy Research Working Paper Series, they defined time poverty specifically as the condition of working long hours not by personal preference or ambition, but out of sheer economic necessity. In their model, an individual faces a dual structural constraint: they are trapped in excessive total labour hours (aggregating formal market employment and informal household survival tasks like fetching water or wood), and they possess no choice to do otherwise, because any reduction in their labour supply would immediately drop their household below the absolute monetary poverty threshold. Elena Bardasi and Quentin Wodon utilised empirical time-diary data to demonstrate that this structural overlap is heavily gendered, falling disproportionately on women who must perform a gruelling "double shift" across market and non-market domains. The matrix of time and income intersections reveals two structurally distinct socioeconomic realities. On one hand, individuals who experience a combination of high income and low time are classified as "money rich, time poor," a condition that typically reflects a voluntary lifestyle choice where leisure hours are willingly traded for heightened financial compensation. On the other hand, the combination of low income and low time traps individuals in an "interlocking trap" characterised by inescapable survival overwork. Within this vulnerable segment, severe financial deprivation directly compels extreme labour allocations across market and non-market tasks, triggering a compounding cycle of long-term economic and capability deprivation. This convergence of income deficits and temporal exhaustion represents what the Indian development economist **Somra (2021)** calls the "interlocking trap." His field research in agrarian communities mapped the cyclical relationship between financial distress and temporal exhaustion, proving that insufficient family income compels adults to work

extreme, low-paying piece-rate hours in informal markets. Because these hours are so long and physically draining, they completely deny the household the discretionary time, vitality, and mental focus required to pursue education, learn new vocational skills, or access preventative healthcare, thereby locking the family into long-term multidimensional poverty.

**Subjective Pressures and Multi-Dimensional Governance:** From a macroeconomic policy perspective, **OECD (2021)** frames time poverty as possessing too little discretionary time to engage in activities that directly enhance physical, emotional, and social well-being. The institutional framework developed by OECD economists segments the 24-hour day into contracted, committed, necessary, and discretionary allocations. They define time poverty as a structural imbalance where contracted market work and committed domestic chores systematically expand to cannibalise discretionary spaces, creating long-term welfare deficits that undermine national productivity and gender equality agendas. Approaching the crisis from a behavioural economics lens, Ashley Whillans of Harvard Business School describes this phenomenon as the "Time Famine"—the acute, subjective psychological feeling of having too many competing tasks and not enough hours to fulfil them (**Whillans, 2019**). In a collaborative longitudinal field study published in *Scientific Reports*, **Whillans and West (2022)** provided empirical evidence that time poverty among the working poor can be targetedly alleviated. Their pre-registered experiment proved that providing direct, time-saving vouchers (for tasks like laundry or prepared meals) significantly reduced chronic cortisol levels, lowered relationship conflict, and generated substantial gains in subjective well-being and mental health, demonstrating that "buying time" acts as an effective anti-poverty intervention.

**Integrated Measurement and Structural Redistribution:** The most rigorous empirical measurement framework developed to integrate these parallel dimensions is the Levy Institute Measure of Time and Income Poverty (LIMTIP), designed by structural economists including **Antonopoulos et al. (2017)**. The Levy Institute model recognises that traditional income-poverty metrics are fundamentally flawed because they assume households have infinite, free internal labour available to perform essential domestic reproduction. The Levy Institute Measure of Time and Income Poverty framework adjusts traditional monetary poverty thresholds downward by calculating the hidden "time deficits" faced by working households. When a family's mandatory work and care hours exceed available time resources, they incur a temporal deficit; the framework recalculates the monetary cost required to buy back those missing hours through market substitutes, revealing that many families classified as financially self-sufficient are actually temporally bankrupt. As the development economist **Rodgers (2022)**, writing in the *SSRN Electronic Journal*, summarises, time poverty is conceptually distinct from income poverty, operates as a primary transmission channel for systemic gender inequalities, and demands policy instruments calibrated to temporal rather than purely financial redistribution. Traditional welfare systems that focus solely on cash transfers frequently worsen time poverty by mandating extensive conditional compliance behaviours—such as attending regular administrative meetings or travelling to distant health clinics—thereby stealing hours from the very populations they aim to liberate. Inclusive development strategies must therefore internalise these expert paradigms, treating time sufficiency as a core constitutional right and designing public infrastructures that systematically reduce and redistribute the unremunerated temporal burdens of society.

### 1.3 Mapping Time Poverty from Global Goals to National Surveys

**Hyde et al. (2020)** demonstrate that time poverty constitutes a primary obstacle to the realisation of women's human rights, physical health, and long-term sustainable development. They demonstrate that severe time deficits function as a binding, unrecognised constraint on the achievement of multiple United Nations Sustainable Development Goals (SDGs), particularly those concerning gender equality (SDG 5), good health and well-being (SDG 3), and decent work and economic growth (SDG 8). When an individual's entire 24-hour day is entirely consumed by the basic mechanics of survival, the formal rights to education, political participation, and legal protection are rendered practically hollow. In the context of emerging economies like India, this temporal imbalance is not merely a theoretical concern but a stark, statistically documented reality. The Government of India, through the **GoI (2020)**, published its landmark Time Use Survey (TUS), which provided the first comprehensive national accounting of how citizens allocate their temporal capital. The survey documents that Indian women expend an average of 299 minutes per day on unremunerated domestic and caregiving activities, whereas men dedicate a mere 97 minutes to these tasks. This deep disparity structurally immobilises women, cutting into the hours required for higher educational attainment; Formal market wage labour; Essential biological rest and psychological recuperation; Civic engagement and local community governance.

**The Political Economy of Invisible Labour:** As the heterodox economist **Ghosh (2016)**, writing in *METU Studies in Development*, argues powerfully, time poverty represents 'the poverty of economics itself.' This formulation critiques mainstream economic theory and standard national accounting systems, which systematically fail to recognise or assign value to the indispensable reproductive labour that directly subsidises both the formal corporate economy and state service delivery. By treating the time of women as an infinite, cost-free shock absorber, traditional gross domestic product (GDP) metrics present a distorted view of national wealth, hiding the severe temporal exhaustion that makes market production possible. More recently, the development economist **Hirway (2020)**, in her foundational volume *Mainstreaming Unpaid Work*, published by Oxford University Press, demonstrates that time poverty in the Global South is heavily driven by deep infrastructure deficits. The absolute absence of piped household water, clean cooking energy, and localised grid networks imposes catastrophic temporal penalties on poor rural women. He frames this resource vacuum as an invisible, regressive 'time tax' levied directly upon poverty itself. Rural citizens are forced to trade their finite lifespans for basic survival commodities, performing manual tasks that have long been automated by public infrastructure in developed economies. The structural allocation of an individual's finite 24-hour day can be understood through four distinct, competing temporal blocks: **contracted time** (dedicated to formal paid market labour), **committed time** (consumed by unremunerated care and domestic work), **necessary time** (required for biological maintenance such as sleep and baseline hygiene), and **discretionary time** (reserved for leisure, self-care, and education). Within this framework, the continuous expansion of contracted and committed

requirements creates a severe "double burden" squeeze. Because biological necessary time has a hard physiological floor that cannot be infinitely compressed, this structural collision forces a progressive cannibalisation of the remaining hours, culminating in the complete elimination of discretionary time for the time-poor population.

**Media Contextualization and the Indian Workforce Crisis:** National and international print media have played a critical role in bringing these academic formulations into mainstream public policy debates. Leading national journals, such as *Economic and Political Weekly* and *Frontline*, have periodically drawn attention to this phenomenon within the Indian agrarian and urban landscapes. Investigative essays by labour analysts have consistently highlighted that India's Female Labour Force Participation (FLFP) rates—which remain stubbornly among the lowest in Asia—cannot be explained away as a mere cultural preference for domesticity. Rather, as detailed in recent collaborative reports by **Chaudhary and Verick (2024)**, this economic stagnation is a direct outcome of a crushing, non-negotiable burden of unpaid domestic work that denies women the baseline temporal resources necessary to enter or remain in market employment. This media critique is mirrored across major national business dailies and news magazines. Investigative cover stories in **India Today (2026)** have profiled the urban manifestation of this crisis, charting how corporate fast-tracking and digital connectivity have extended the boundaries of the workplace into the home, creating a 24-hour expectation of availability that collides with traditional household expectations. Similarly, financial analyses in **Swaminathan (2024)** and **Drag (2025)** have framed time poverty as a severe structural friction that undermines macroeconomic efficiency, demonstrating that inadequate public care systems and congested urban transport corridors transform productive human capital into exhausted, time-bankrupt commuters. From an environmental and resource perspective, international analyses in **The Economist (2025)** and national investigative tracking in **Down to Earth (2024)** have connected temporal scarcity to accelerating climate vulnerability, proving that groundwater depletion and ecological degradation force families to walk exponentially further each year to secure basic fuel and water, stripping them of what little discretionary time they possess.

**Institutional Reports and Scholarly Genesis:** The institutional realisation that time is a core development metric has been systematically built through a sequence of global development reports. The **World Bank (2012)** explicitly recognised time poverty as a primary mechanism through which gender inequalities are locked in across generations, noting that time-starved mothers are frequently forced to pull their eldest daughters out of school to absorb secondary domestic care responsibilities. This structural perspective is supported by specialised agency documentation, including the *Care Work and Care Jobs* report by the **ILO (2021)** and human development policy papers issued by the **UNDP (2015)**, both of which call for a complete overhaul of social protection systems to account for the overlapping demands of market labour and human reproduction. In the United States, formal labour assessments issued in reports from the **US Department of Labour (2022)** have verified that temporal scarcity directly lowers worker productivity and increases long-term healthcare expenditures due to stress-related chronic illnesses. Regionally, the **ADB (2024)** gender division assessments and agrarian studies by **FAO (2023)** have verified that agricultural modernisation programs often inadvertently increase women's time poverty by demanding intensive labour for cash-crop cultivation without reducing their baseline domestic care obligations. Cumulatively, these diverse perspectives demonstrate that time poverty is not an isolated private logistical challenge but a structural systemic crisis that requires a comprehensive, multi-sectoral policy response.

## 1.4 The Aetiology and Causation of Time Poverty

**Infrastructure Deficits and the 'Time Tax' on the Poor:** The manifestation of time poverty across diverse socio-economic landscapes is driven by an interlocking matrix of structural, infrastructural, economic, and cultural forces. Rather than stemming from individual time-management inefficiencies, temporal deprivation is produced by systemic deficits in public provisioning, exploitative labour market mechanisms, and rigid socio-cultural divisions of labour. This section deconstructs these structural drivers into three primary analytical domains. In developing and emerging economies, the most immediate and visible driver of objective time poverty is the acute deficit in basic public infrastructure. The development economist **Hirway (2020)**, in her comprehensive study *Mainstreaming Unpaid Work* published by Oxford University Press, documents that rural Indian women routinely expend between two and four hours daily merely performing rudimentary survival tasks, such as collecting potable water and foraging for biomass fuels. These gruelling hours represent a massive temporal drain that could otherwise be allocated to physiological rest, formal education, skill acquisition, or remunerated market work. The **ADB (2024)**, in its regional gender and infrastructure assessments, conceptualises this mandatory labour expenditure as a regressive "time tax" uniquely borne by the poorest strata of society. Under this institutional framework, structural underprovisioning by the state effectively substitutes the unremunerated physical labour and finite lifespans of marginalised citizens for basic public utilities. This systemic crisis has been extensively tracked by investigative print journalism in India. **Rajalakshmi (2023)** has documented how India's rural infrastructure crisis—particularly severe water scarcity, which is increasingly exacerbated by climate change—continues to generate chronic time poverty that falls disproportionately upon marginalised Dalit and Adivasi women. These women are pushed to the absolute periphery of spatial and temporal autonomy, frequently forced to sacrifice sleep and bodily safety to navigate far-flung resource corridors. The cascading architecture of infrastructural deprivation operates as a linear, destructive cycle that systematically locks down human potential. The process initiates with a critical public infrastructure deficit, creating a severe utility vacuum in basic services like piped water and electricity. This structural failure directly forces individuals into mandatory manual labour, such as travelling long distances for routine water and biomass fuel collection. Consequently, this intensive physical requirement leads to an extreme extraction of non-market care time from the household, which ultimately results in the complete deprivation of discretionary and rest hours for the affected individual. Beyond rural ecosystems, the **World Bank (2022)** and the **OECD** identify rapid, unplanned urban congestion and fractured public transit networks as major drivers of urban time poverty. Low-wage workers in hyper-dense metropolitan centres such as Mumbai, Delhi, and Chennai are forced to endure multi-hour, multi-modal commutes that consume a massive share of their non-working hours (**OECD, 2021**). This urban spatial friction acts as a hidden tax on human capital, transforming what should be restorative personal time into exhausted, unproductive transit time (**World Bank, 2022**). From an

environmental policy perspective, **Narain (2024)** has reported extensively on how localised environmental degradation—such as drying water tables and systemic deforestation—is intensifying the temporal burdens of rural women, an empirical observation that aligns precisely with global documentation issued by the **UNEP (2023)** regarding the toxic intersection of ecological crises and structural gender inequality.

**Gendered Norms and the Double Burden:** The most pervasive and deep-seated cross-cutting finding across the entire multidisciplinary literature is that time poverty is profoundly, systematically gendered. As the labour analysts Rita Chaudhary and Sher Verick demonstrate in their specialised report for the International Labour Organisation, deeply embedded patriarchal social norms and cultural expectations in India assign domestic maintenance and caregiving responsibilities almost exclusively to women. Consequently, even when women break through labour market barriers and enter full-time, formal market employment, they continue to retain near-total structural responsibility for unremunerated household work (**Chaudhary and Verick, 2024**). This phenomenon constitutes what social sociologists and the International Labour Organisation term the "double burden" or the exhausting "second shift" (**ILO, 2021**). This deep institutional asymmetry is quantitatively verified by the national Time Use Survey published by **GoI (2020)**. The survey exposes a profound temporal gap: Indian women perform nearly triple the volume of unpaid care and domestic labour compared to men, directly translating into the systemic suppression of India's Female Labour Force Participation Rate (FLFPR), which remains among the lowest in the Asia-Pacific region. This economic stagnation is framed as a structural crisis by **Swaminathan (2024)**, who describes the phenomenon as a trap wherein "women's labour is too valuable to leave at home, but too burdened by domesticity to enter the market." Under these structural conditions, women are caught in a logistical paralysis. Major national print media, including **The Hindu (2024)** and **The Indian Express (2025)**, have periodically editorialised on this persistent macroeconomic paradox. Their editorial boards emphasise that public policy interventions must pivot away from merely exhorting women to enter the market economy through formal employment quotas and instead focus heavily on building public infrastructures that directly reduce and redistribute women's unpaid domestic time burdens. Without liberating these locked hours, standard economic empowerment paradigms will remain structurally unrealizable.

**Labour Market Structures and Economic Compulsion:** The architecture of modern labour markets represents a second powerful engine of temporal deprivation. When statutory minimum wages fall significantly below regional living costs, individuals are structurally compelled to engage in excessive market work simply to guarantee baseline household survival. Under these conditions, workers are forced to supplement their inadequate primary earnings through mandatory overtime, secondary informal employment, or exploitative piece-rate gig arrangements—each of which actively generates severe, objective time poverty. As the behavioural researchers **Whillans and West (2022)**, writing in *Scientific Reports*, demonstrate empirically, income poverty and time poverty operate in a mutually reinforcing, destructive feedback loop. Insufficient wages generate survival-driven overwork, which systematically drains workers of the physical stamina and discretionary hours required to pursue upskilling, education, or geographic mobility, thereby locking them into low-wage traps. The structural architecture of labour-market marginalisation functions as an unbroken, self-reinforcing trap that systematically caps economic mobility. The process initiates with a profound financial deficit driven by inadequate living wages, which fail to meet baseline household subsistence costs within a standard workweek. To bridge this fiscal gap, workers are forced into survival-driven overwork, which requires them to take on extreme overtime or manage multiple informal jobs simultaneously. This intense labour inflation leads directly to absolute temporal deprivation, plunging the individual into a state of severe time poverty where every available hour is exhausted by survival tasks. Consequently, this temporal vacuum leaves the worker with zero discretionary hours for upskilling, vocational education, or personal development. Lacking the necessary hours to build higher human capital, the worker ultimately faces permanent structural stagnation within low-value labour pools, reinforcing the initial wage deficit across generations. The International Labour Organisation, in its definitive global report *Care Work and Care Jobs for the Future of Decent Work*, identifies the rapid rise of the digital platform economy as a novel, highly predatory structural driver of time poverty. Platform-based algorithms impose unpredictable schedules and substantial uncompensated "waiting time" on workers (**ILO, 2021**). This labour-market shift has been closely analysed by the national financial press in India. **The Economic Times (2024)**, **Rajadhyaksha (2025)**, and **The Financial Express (2024)** have published extensive economic expos documenting how India's rapidly expanding gig workforce faces these scheduling insecurities precisely. Delivery professionals and logistics drivers on app-based platforms routinely spend multiple non-compensated hours logged into digital systems, waiting in urban spaces for task assignments. Because algorithms demand constant real-time responsiveness, these uncompensated blocks of "waiting time" act as a direct extraction of human capital, rendering the worker's time completely non-discretionary without providing financial remuneration.

**The Multifaceted Causes of Time Poverty:** To systematically mitigate this pervasive form of deprivation, public policy must dismantle its root causes, which are deeply systemic and operate across an interlocking matrix of structural, economic, and socio-cultural forces rather than personal time-management failures (**Hirway, 2021**). The first major vector involves structural infrastructure deficits and severe public utility vacuums—such as a lack of piped water or clean energy networks—which force individuals to waste precious hours performing basic survival tasks like hauling water or scavenging for firewood (**Hirway, 2020**). This physical strain is compounded in urban settings by rapid, unplanned congestion that subjects low-wage commuters to multi-hour transit times, as well as localised climate degradation that continuously pushes communities to travel further to secure disappearing natural resources (**OECD, 2021; World Bank, 2022**). Simultaneously, predatory labour market mechanisms drive temporal deprivation through exploitative employment practices; when market structures fail to pay a true living wage, workers are economically compelled into survival-driven overwork, taking on excessive overtime or multiple informal jobs just to avoid absolute financial destitution (**ILO, 2021; Whillans and West, 2022**). This economic strain has been modernised by the rapid rise of the digital platform economy, where algorithmically managed gig workers face chaotic scheduling and extensive blocks of uncompensated on-call waiting time, locking up their daily flexibility without financial remuneration (**The Financial Express, 2024**). Finally, rigid sociocultural norms and deep-seated patriarchal expectations ensure that time poverty remains a highly gendered

crisis, as societal tracking routinely forces a profound "double burden" onto women, requiring them to manage intensive care work and a disproportionate domestic chore gap at home even after executing a full day of paid market labour (**Chaudhary and Verick, 2024; Sayer, 2018**). Together, these underlying drivers and forces—which are comprehensively evaluated across 25 distinct causal mechanisms categorised by the structural, labour-market, and cultural origins—strip marginalised populations of their discretionary hours, leaving them materially alive but temporally bankrupt (**Ghosh, 2016; Rodgers, 2022**). The aetiology of time poverty is rooted in an interlocking matrix of structural deficits, labour market architectures, socio-cultural expectations, psychological behaviours, and institutional frictions. Rather than a consequence of personal scheduling errors, temporal scarcity represents a profound structural inequality that restricts human agency. The following analysis provides a narrative deconstruction of the twenty-five core drivers of time poverty across five primary thematic dimensions.

**Structural and Infrastructure Causes: Inadequate Water Access and the Spatial Burden:** In developing and emerging economies, the absolute deficit in decentralised public utilities serves as a primary engine of temporal depletion. The global health researchers **Hyde et al. (2020)**, writing in the *Journal of Global Health*, demonstrate that the lack of piped household water forces rural women and children to spend multiple hours daily trekking to distant, shared water sources. This gruelling physical requirement acts as a non-negotiable drain on their daytime schedules, directly generating acute, rural time poverty and restricting hours that could otherwise be allocated to education or remunerated employment. **Lack of Clean Energy and Sourcing Friction:** The development economist **Hirway (2020)**, in her foundational volume *Mainstreaming Unpaid Work*, published by Oxford University Press, documents that a household's reliance on solid biomass fuels—such as firewood, crop residue, and dried dung—imposes a severe temporal penalty. Vulnerable individuals must forfeit significant portions of their weekly time budgets to forage for fuel across long distances and manage slow, rudimentary cooking processes, which systematically prevent them from accessing formal labour markets. **Poor Public Transportation and Complex Commuting:** The **OECD (2021)** identifies broken, inefficient, or non-existent transit networks as critical drivers of time scarcity. Poor transit design forces low-income workers into highly fragmented, "star-shaped" commutes, where they must combine separate, complex trips for child school drops, public administration visits, and market work. This structural friction transforms potentially open personal time into hours of rigid, uncompensated travel. **Urban Congestion and Agglomeration Drag:** The **World Bank (2022)** outlines how rapid, unplanned urbanisation in hyper-dense metropolitan regions like Mumbai, Delhi, or Nairobi forces the working poor to live on geographic margins. Lacking affordable local housing, these citizens endure long, multi-hour commutes through gridlocked corridors, creating a severe administrative and physical drag that consumes their residual non-working hours. **Digital Connectivity Gaps and Line Friction:** The **UNDP (2023)**, in its social infrastructure reviews, highlights that deficits in digital public platforms and mobile connectivity create immense temporal waste. A lack of secure access to online banking, digital utility portals, or electronic welfare disbursements forces marginalised individuals to travel to physical branches and stand in long administrative queues, translating institutional friction directly into a loss of personal lifespans. **Geographic Distance to Healthcare Facilities:** The public health risks of temporal scarcity are heavily intensified by the spatial centralisation of medical care. **Hyde, Greene, and Darmstadt (2020)** observe that in rural contexts, travelling multiple hours to access a primary health centre constitutes a major regressive tax on human time, forcing vulnerable families to completely abandon preventative checkups due to the prohibitive opportunity cost of lost working hours.

**Economic and Labour Market Causes:** The labour researchers **Whillans and West (2022)** prove empirically that depressed market wages structurally compel families into a state of severe overwork. When statutory hourly minimum wages fall below regional subsistence thresholds, workers are legally and economically forced to take on extreme overtime, secondary informal jobs, or multiple piece-rate tasks simply to bridge their fiscal deficits, generating absolute objective time poverty as an inescapable mechanism of biological survival. **Algorithmic Uncertainty in the "Gig" Economy (ILO, 2021)** highlights the rapid rise of digital platform labour as a highly predatory structural driver of temporal scarcity. Driven by digital platforms, the gig economy replaces traditional 9-to-5 jobs with short-term, task-based assignments. While this freelance model offers independent contractors schedule flexibility, it fundamentally redefines labour regulations by swapping standard employee benefits and predictable wages for intense market competition and uncompensated on-call waiting times. App-based employment lacks predictable or guaranteed shifts, forcing workers to spend multiple uncompensated hours logged into digital interfaces, actively waiting for task assignments or delivery pings. This unremunerated "on-call" waiting time locks up their personal schedule without providing financial compensation. **Precarious Employment and Forced Presenteeism:** The development economist **Rodgers (2022)** demonstrates that a chronic lack of job security and the rise of precarious employment contracts trigger high levels of forced "presenteeism." To prove their institutional value to corporate employers and avoid sudden termination, workers are compelled to stay late at workplaces voluntarily, expanding their contracted labour portfolios at the direct expense of biological rest. **The Gendered "Double Burden" of Reproductive Work:** The time-use sociologist **Sayer (2018)** opined that gendered time allocation outlines the destructive mechanism of the "double burden." Societal and patriarchal expectations dictate that even when women break through workplace barriers and secure full-time market employment, they must continue to retain primary responsibility for unremunerated household reproduction, effectively forcing them to work an exhausting "second shift" at home. **Labour Intensification and Workplace Squeeze:** The occupational researchers **Härtull and Nygård (2024)**, writing in the *European Journal of Ageing*, investigate the consequences of corporate workplace squeeze and labour intensification. They show that increased digital surveillance, strict workplace monitoring, and highly aggressive output targets have systematically eliminated brief "breather" periods and informal pauses during the workday, increasing the physical and cognitive exhaustion of the labour force. **Inflexible Work Hours and Scheduling Friction:** The **OECD (2021)** notes that a complete absence of employee autonomy over the start and end times of formal work prevents the efficient management of household duties. Inflexible shifts make it impossible for working parents to engage in "time-stacking"—the strategic overlapping of routine household maintenance tasks—thereby amplifying the overall temporal pressure on the family unit.

**Sociocultural and Gendered Causes:** The labour analysts **Chaudhary and Verick (2024)**, in their specialised reports for the International Labour Organisation, demonstrate that deep-seated patriarchy and traditional gender roles act as the primary cross-cutting drivers of temporal inequality. Cultural beliefs that label domestic chores and direct caregiving as exclusively "women's work" prevent an equitable, internal distribution of the household time-load, structurally trapping female schedules in non-market activities. **Accelerated Ageing Populations and Elder Care Demands:** **Sayer (2018)** highlights that rapidly ageing global populations have triggered a sharp inflation in the time required for domestic elder care. Because formal, state-funded long-term care infrastructure is heavily underfunded, this intensive caregiving burden falls with immense weight upon middle-aged family members, specifically women, compressing their discretionary hours during their peak career years. **Catastrophic Childcare Costs and Supervision Demands:** The public health review conducted by **Hyde et al. (2020)** proves that the prohibitive financial cost of professional, private childcare options forces low-income parents—almost exclusively mothers—to sacrifice their entire pool of personal discretionary time to provide direct, unremunerated child supervision, blocking their path to financial independence. **Social Expectations of "Intensive Parenting":** **Whillans and West (2022)** identify modern, middle-class socio-cultural transformations as a hidden source of temporal strain, specifically through the rise of "intensive parenting" norms. Modern cultural expectations require parents to be hyper-involved in their children's complex extracurricular programs, school tracking, and developmental play, converting what used to be open family leisure into structured, high-pressure labour tasks. **The Breakdown of Communal Support Networks:** The **UNDP (2023)** documents that the systematic breakdown of traditional extended family systems and close-knit community networks has left young parents highly vulnerable. Lacking access to informal, shared caregiving support from relatives or neighbours, nuclear households must absorb all care requirements internally, compounding their temporal deficits.

**Psychological and Behavioural Causes:** **Whillans and West (2022)** explore a powerful cognitive bias known as the "time-money" tradeoff. Their behavioural experiments reveal that individuals frequently exhibit a strong psychological tendency to prioritise earning marginal income over saving time, choosing long hours of extra work over outsourcing tasks, even when their baseline material and financial needs are entirely satisfied. **Digital Overload and "Time Confetti":** The social analyst **Schulte (2014)**, in her influential research on temporal fragmentation, conceptualises the phenomenon of "time confetti." The continuous interruption of human leisure by digital notifications, emails, and hyper-connectivity shatters contiguous free time into tiny, unpredictable fragments. While a time diary might show hours of "rest," the extreme fragmentation renders those moments psychologically useless for genuine cognitive restoration. **Status Seeking and the Veblenian "Busyness" Symbol:** The time sociologist **Gershuny (2018)** examines the historical evaluations of time use outlines a profound cultural shift where conspicuous "busyness" has replaced conspicuous leisure as a primary status symbol. In hyper-competitive corporate environments, individuals frequently over-schedule their calendars and overwork voluntarily as a mechanism to signal high social worth and institutional importance to their peers. **Mental Health Deterioration and Efficiency Losses:** The public health researchers **Scheyett et al. (2025)**, in Integrative and Complementary Medicine (OBM), examine how severe mental health struggles like depression and chronic anxiety lower cognitive "time efficiency." Psychological distress delays routine decision-making and slows down everyday household and occupational tasks, making them take significantly longer to complete, which directly expands the individual's time deficit.

**Policy and Institutional Causes:** The **ILO (2021)** identifies short, poorly compensated, or entirely unpaid maternity and paternity leave statutory frameworks as central institutional causes of temporal crises. A lack of protected public leave forces parents to execute a rapid, premature return to full-time market labour while their infant care and biological recuperation demands remain at their absolute peak, creating a severe structural crunch. **Disconnected Urban Zoning and Geographic Separation:** **World Bank (2022)**, in its structural urban planning briefs, critiques outdated or highly segmented zoning laws that intentionally isolate low-income residential suburbs from central commercial and industrial hubs. This strict geographic separation artificially inflates the physical distances of everyday life, forcing citizens to spend massive portions of their days in transit to access basic employment. **Bureaucratic "Sludge" and Frictional Compliance:** **Sunstein (2021)**, in his foundational treatise *Sludge*, outlines how excessively complex, multi-layered, and non-digitised government processes for welfare subsidies, permits, and licensing act as a deliberate theft of human time. Forcing low-income populations to navigate paper-heavy workflows and complete multiple physical visits to state offices drains them of vital hours that are extracted purely by administrative friction. **Anthropogenic Climate Change and Resource Displacement:** **Hirway (2020)**, an environmental analysts track how climate change and localised ecological degradation—manifesting as rapidly drying groundwater tables, deforestation, and soil erosion—directly worsen time poverty in the Global South. As local ecosystems collapse, rural communities are forced to travel exponentially further distances each year simply to source basic fuel and water, demonstrating that environmental crises translate directly into a regressive extraction of human lifespans.

Time poverty is a structural form of deprivation that systematically undermines human capabilities, reinforces entrenched gender inequalities, and locks vulnerable populations into self-perpetuating traps of income poverty (**Ghosh, 2016; Rodgers, 2022**). Unlike income poverty, which can theoretically be mitigated through direct capital injections, progressive fiscal transfers, or resource realignments, time is an absolute, non-transferable commodity bounded by the strict physiological limits of the 24-hour day. Human beings cannot borrow, save, or aggregate hours across a lifetime. Consequently, the complete eradication of temporal scarcity cannot be achieved through marginal individual lifestyle choices or private behavioural adjustments. It demands sweeping, systemic public policy interventions that fundamentally alter the macroeconomic frameworks of labour markets, cultural care roles, urban design, and national social provisioning. To execute a comprehensive assault on this hidden form of inequality, public policy must transition from treating time scarcity as a private logistical failure or a personal time-management deficit to addressing it as an urgent public policy priority and a foundational human rights frontier. The following detailed strategic domains outline an integrated, multi-

sectoral policy roadmap designed to dismantle time poverty and foster inclusive, time-sufficient global development. Across developing countries and marginalised urban peripheries, severe time poverty is heavily driven by basic infrastructure deficits. Absent public utilities force vulnerable individuals—disproportionately women and girls—to pay a regressive, physically exhausting "time tax" simply to fulfil rudimentary daily survival needs.

## 1.5 Consequences of Time Poverty

The ramifications of time poverty extend far beyond simple feelings of daily hurry or fatigue. Instead, they manifest as severe structural costs that affect every dimension of human and macroeconomic development. When an individual's temporal resources are completely exhausted by mandatory paid labour and unremunerated care duties, the resulting deprivation undermines physiological health, degrades mental stability, limits economic mobility, and introduces deep structural distortions into national accounting systems. This section comprehensively examines these critical consequences.

**Physiological Health and Biological Self-Neglect:** The most immediate and physically damaging consequence of severe time poverty is the systemic neglect of personal health and biological maintenance. In their extensive global epidemiological analysis published in **Hyde et al. (2020)** document that approximately 24 per cent of women, even in high-income countries, routinely delay or completely skip seeking essential medical care due to severe time constraints. This metric worsens exponentially in low-income settings and rural regions of the Global South, where healthcare facilities are geographically distant and public transit corridors are highly inefficient. For a time-bankrupt individual, spending half a day travelling to a primary health centre requires missing vital income-generating work or abandoning urgent domestic care tasks, transforming medical care into an unaffordable luxury. The compounding physiological damage of temporal deprivation operates as a direct downward spiral. The cycle initiates with chronic time scarcity, which plunges the individual into a state of severe temporal bankruptcy. This constant deficit forces an immediate compression of the biological recovery window, as the 24-hour day leaves insufficient space for physical restoration. Consequently, this compression manifests as a destructive combination of inadequate sleep, a forced reliance on processed nutrition, and skipped medical care due to a lack of travel and line-standing hours. Lacking the necessary hours for physical repair and health-seeking behaviours, the body ultimately experiences intense allostatic overload and chronic physiological weathering, accelerating the biological ageing process and locking in long-term health vulnerabilities. Furthermore, chronic sleep deprivation, poor nutritional choices, and reduced physical exercise are well-documented physiological sequelae of severe time poverty, as verified by development economists and public health experts alike (**Ghosh, 2016**). When the dual pressures of market work and household maintenance squeeze the 24-hour day, individuals are forced to compress their biological recovery windows. This manifests as substantially truncated sleep cycles that trigger long-term cardiovascular and metabolic disorders. A forced reliance on low-cost, nutrient-poor convenience foods that require zero preparation time, accelerating the global rise of non-communicable diseases and the absolute elimination of physical exercise or preventative health-seeking behaviours. This process underpins what public health researchers term "allostatic weathering"—the premature biological ageing and systemic wear-and-tear of the body caused by chronic exposure to unmanaged, structural stress.

**Psychological Exhaustion, Burnout, and Occupational Crises:** The psychological toll extracted by temporal scarcity is equally severe, leading to profound emotional exhaustion and a sharp drop in individual agency. Writing in *Frontlines in Psychology*, **Wang (2025)** conducted a three-wave longitudinal analysis within high-stress human-service professions like teaching. He demonstrates that time poverty under conditions of accelerating work intensification directly precipitates severe emotional exhaustion, professional burnout, and a catastrophic reduction in subjective well-being. This research proves that when the institutional boundary between work and home life is erased, the continuous mental load of managing overlapping tasks rapidly depletes psychological resilience. The erosion of modern occupational boundaries triggers a distinct, escalating psychological crisis within the individual. The process accelerates with the complete erasing of the institutional work-home boundary, allowing professional demands and digital connectivity to invade private domestic spaces seamlessly. This constant collapse of physical and temporal separation forces a state of persistent mental overload and highly fragmented rest, turning personal downtime into disconnected moments commonly termed "time confetti." Because leisure hours are continually interrupted and stripped of their restorative quality, the individual is denied the continuous cognitive space required for mental repair. This psychological drain ultimately culminates in acute emotional exhaustion, deep professional burnout, and a complete loss of individual agency, leaving the person feeling utterly powerless over the direction of their own lifespan. This psychological strain can escalate into severe occupational and human crises within marginalised livelihoods. In a groundbreaking study published in *OBM Integrative and Complementary Medicine*, **Scheyett et al. (2025)** investigate occupational stress among agricultural workers. They document elevated suicide rates among farmers—reaching a level three times the national average—and link this crisis directly to the severe temporal squeeze of modern agricultural livelihoods. Agrarian workers are caught in a vice between unpredictable climate shifts that demand sudden, intensive field labour and rigid, non-negotiable household maintenance requirements, pushing their psychological systems to the point of structural collapse. This systemic depletion of human well-being is why **The Economist (2025)** has termed time poverty the ultimate "time tax" on global prosperity, illustrating through international data how deficient public systems and broken infrastructures extract vital temporal wealth from the world's poorest populations, leaving them materially alive but psychologically exhausted.

**Intergenerational Educational Stagnation and Gendered Disadvantage:** Economically, time poverty acts as a powerful brake on human capital accumulation, reinforcing intergenerational poverty and gendered disadvantage. As the **GoI (2009)** and policy briefs issued by **NITI Aayog (2023)** have noted, the domestic temporal deficit of a household is rarely shared equally among its members. When a mother experiences severe time poverty due to expanded market labour or basic resource collection demands, the household frequently covers this deficit by pulling young girls into domestic tasks. Girls in time-poor households spend disproportionately more time on cooking, cleaning, and sibling care than boys, foreclosing their ability to complete school

homework, achieve literacy, or sustain formal educational attainment. The intergenerational transmission of socioeconomic disadvantage operates through an unbroken, gendered pathway that passes temporal deprivation from parents to children. The cycle begins with severe parental time poverty, which is driven by the extreme labour portfolios required to sustain the household on inadequate baseline incomes. Because parents possess zero discretionary hours, the resulting internal domestic care deficit naturally overflows to the eldest daughter, who is forced to step into the household production vacuum. This transition compels a mandatory absorption of unpaid care tasks, subjecting the young girl to a 50.0 per cent inflation in household chores relative to her male peers. Consequently, this non-negotiable domestic burden results in forced school absenteeism and early-stage human capital foreclosure, as the girl lacks the literal hours required to maintain regular school attendance or complete basic assignments. Deprived of foundational education and vocational literacy during her formative years, she faces an inescapable lock-in of gendered wage disadvantage across generations, entering the adult workforce with the same structural vulnerabilities that constrained her parents. This hidden dynamic is quantitatively verified by **Hyde, Greene, and Darmstadt (2020)**, who document that girls in resource-poor households spend an average of 50.0 per cent more time on unremunerated chores than their male counterparts. This structural imbalance functions as an invisible mechanism through which gender inequality reproduces itself across generations. Socio-economic studies published by **Somra (2021)** and **Stevano and Johnston (2019)** have documented analogous structural patterns across India's agrarian belt. They demonstrate that rural girls' educational attainment and vocational upskilling are systematically constrained by non-negotiable domestic labour demands, ensuring that next-generation female workers remain tracked into low-value, informal labour pools due to an early-stage theft of their discretionary time.

**Macroeconomic Distortions and the Subsidisation of Formal Capital:** At the macro-structural level, time poverty introduces profound distortions into development economics and national accounting frameworks. The heterodox economist **Ghosh (2016)**, writing in *METU Studies in Development*, compellingly argues that the systematic exclusion of unremunerated care and domestic reproduction from Gross Domestic Product (GDP) calculations creates a deep analytical error. Because standard accounting models treat this reproductive labour as if it were a free, infinite resource, the formal corporate economy effectively treats women's temporal resources as an infinite, cost-free input. In practice, formal market production is directly subsidised through the severe time poverty of women, who perform the vital tasks of feeding, cleaning, and maintaining the workforce without receiving commercial compensation. The structural extraction of unvalued human time operates as a hidden macro-stabiliser within modern economic models. The process initiates with the massive accumulation of total unremunerated care labour, which serves as the foundational domestic substrate that physically maintains and reproduces the daily workforce. Because these vital inputs take place outside formal commercial channels, they face a systemic exclusion from national accounts, rendering them an invisible statistical blind spot within traditional Gross Domestic Product measurements. Consequently, this institutional non-valuation transforms women's reproductive time into an infinite, zero-cost subsidy imposed directly onto female schedules, which are forced to absorb the operational shocks of broken public services and low market wages. By extracting this critical structural foundation without providing financial compensation, the formal macroeconomic architecture secures artificially low costs of production for formal corporate capital, effectively fueling commercial growth by running down the finite lifespans of the society's most vulnerable demographic. This conceptual critique aligns with policy positions issued by the World Bank and the Food and Agriculture Organisation on the urgent need to count, measure, and value care work within satellite national accounts. The World Development Report issued by the **World Bank (2023)** and specialised reports on rural development issued by **FAO (2023)** both identify the structural non-valuation of women's time as a major distortion in development planning. By treating temporal depletion as a private logistical failure rather than a macroeconomic cost, national policies fail to internalise the structural depletion of human capital. Inclusive development remains impossible as long as macroeconomic growth metrics continue to register economic expansion by drawing down the vital, finite time reserves of the most vulnerable segments of global society.

## 1.6 Strategies to Emancipate Time Poverty

Executing rapid state capital investments to install piped household water connections, community boreholes, and solar-powered water filtration units—while promoting clean cooking energy transitions through subsidised liquefied petroleum gas (LPG) and electric induction or solar cookstoves—is a primary requirement for rural developmental equity. Agrarian field studies confirm that rural women and children expend billions of collective hours annually trekking across distant terrains to fetch potable water and forage for biomass fuels (**Hyde et al., 2020**). Automating, localising, and shifting these provisions directly into or adjacent to the domestic household systematically eliminates hours of gruelling, non-market manual labour. Consequently, national infrastructure budgeting models must intentionally prioritise utility expansion through a gender-sensitive lens. State planning commissions must evaluate project execution and capital efficacy not merely by short-term commercial rate-of-return metrics or aggregate industrial output, but by the objective volume of "hours liberated" for historically marginalised populations (**Hirway, 2020**). Simultaneously, engineering high-speed, affordable, well-integrated, and physically safe public transportation networks can alleviate severe temporal drains by synchronising low-income residential urban fringes with central commercial hubs. Low-wage informal and corporate workers routinely face heavy time penalties due to fragmented, multi-hour, multi-modal commutes through gridlocked urban spaces (**World Bank, 2022**). High-speed public transit directly cuts into this non-discretionary time sink, converting wasted transit periods back into restorative rest. To secure these gains, master urban planning frameworks must systematically incorporate "15-minute city" guidelines. Urban spaces must be redesigned so that healthcare facilities, primary schools, daycare centres, public administration offices, and commercial markets are accessible within a short walk or rapid transit trip from any residential point, executing an urban decompression that returns hours to the working poor (**OECD, 2021**). Furthermore, transitioning civic administration, banking networks, social welfare distribution, and utility payment architectures to digital, mobile-first public platforms can targetingly dismantle structural friction. Administrative "sludge"—the institutional burden created by complex, non-digitised, in-person bureaucratic processes—forces low-income populations to forfeit vital work or leisure hours standing in physical queues to secure subsidies, documentation, or permits (**Sunstein, 2021**). Streamlined digitalisation removes these physical

bottlenecks, provided that governments invest heavily in universal digital literacy programs and establish free public internet access points across rural panchayats and urban slums. This proactive investment ensures that digital administration acts as a temporal bridge rather than compounding a regressive digital divide (UNDP, 2023).

**Macro-Labour Reforms and Social Provisioning: Reclaiming the Clock:** The architectures of formal and informal labour markets serve as primary engines of temporal scarcity; when statutory wage levels are completely decoupled from actual living costs, workers are structurally compelled into excessive working hours simply to avoid absolute financial destitution. Mandating a legally binding, regionally indexed "living wage" that reflects the true cost of baseline economic survival within a standard 35-to-40-hour workweek directly counters this economic compulsion. Depressed hourly minimum wages force the working poor into extreme overtime or secondary informal gig employment to supplement their baseline earnings, generating severe, objective time poverty (Whillans and West, 2022). A living wage allows workers to sustain families without sacrificing essential sleep and rest hours. Labour market regulations must structurally decouple poverty alleviation from overwork by indexing baseline pay to regional consumer price indices, ensuring that workers can achieve financial self-sufficiency within a standard workweek without being forced to run down their physical health. In tandem, transitioning industrial and corporate labour policies toward shorter standard working hours, such as legislated 32-hour or four-day workweeks without executing any wage reductions, fundamentally reshapes modern production. Longitudinal trials of shortened workweeks demonstrate massive reductions in subjective time anxiety and employee burnout alongside stable or substantially improved economic productivity (Wang, 2025). Shorter weeks give workers the temporal space to recuperate cognitively and physically. To preserve these benefits, national statutory frameworks must actively penalise predatory corporate overtime cultures. Labour regulations must incentivise corporations to evaluate employee productivity through output quality rather than physical desk time or forced presenteeism (Rodgers, 2022). This configuration must be supported by codifying legal protections that guarantee workers the right to request flexible start and end times, hybrid remote work options, and predictable shift scheduling. Inflexible corporate schedules disrupt the fragile coordination of household care and market labour, while in the digital platform economy, highly unpredictable scheduling forces workers into a perpetual state of unpaid, on-call waiting (ILO, 2021). Labour legislation must require digital platforms and employers to provide advance notice of shift schedules—commonly termed "fair scheduling laws"—to eliminate the temporal chaos that destabilises low-wage families and gig workers (OECD, 2021).

**Structural, Institutional, and Behavioural Interventions for Time Sufficiency:** Because a massive share of global time poverty is gendered, the "double burden"—wherein women participate in market employment but retain near-total responsibility for domestic maintenance—requires a complete overhaul of the care economy through social protection policies that systematically align with the United Nations-endorsed "Triple R" framework: Recognise, Reduce, and Redistribute (ILO, 2021). Establishing a comprehensive network of public, high-quality, and structurally free or subsidised daycare centres and preschools operating during standard and non-standard shift hours institutionalises childhood care. This structural shift liberates parents—especially mothers—from constant active supervision requirements, converting intensive unpaid care blocks into discretionary or economically productive hours (Hyde et al., 2020). Early childhood care must be categorised as an essential public good, similar to primary education, and funded systematically through direct national budget allocations rather than relying on private market outsourcing. Similarly, constructing community-based care homes, adult day health programs, and state-funded home-nursing services addresses multi-generational care demands that fall heavily on working-age adults as global populations age. Professionalising this infrastructure relieves families of chronic, highly intensive care tasks (Sayer, 2018). Public health insurance frameworks must expand long-term care coverage options, preventing domestic households from becoming default, uncompensated medical centres that drain the finite time resources of women (ILO, 2021). To balance early-stage child development roles, mandating parental leave frameworks that include well-compensated, non-transferable leave periods specifically allocated to fathers on a "use-it-or-lose-it" basis prevents the automatic re-entrenchment of unequal domestic habits. When parental leave is entirely generic, deep-seated socio-cultural expectations dictate that women utilise the entirety of the leave window, reinforcing unequal domestic divisions of labour from the moment of childbirth. Non-transferable paternal leave forces an immediate structural rebalancing of infant care within the home (ILO, 2021), provided that statutory paid leave guarantees near-full wage replacement, removing the financial disincentives that prevent fathers from stepping away from market work to assume care roles (Chaudhary and Verick, 2024). While macro structural shifts alter long-term environments, micro behavioural interventions can targetedly alleviate acute time pressure for the most vulnerable subsets of society. Distributing state or NGO-sponsored "time vouchers" to low-income, single-parent, or elderly households that can be directly redeemed for services like laundry, prepared meals, or home cleaning functions as a critical temporal safety net. Empirical field experiments demonstrate that providing direct time-saving cash adjustments significantly reduces chronic cortisol levels, lowers relationship conflict, and enhances subjective well-being among the working poor (Whillans and West, 2022). Social safety nets should move beyond exclusively providing cash or food transfers to piloting "time transfers"—acknowledging that time is a form of welfare capital equal to money (Rodgers, 2022). This configuration must be defended by mitigating "time confetti" and digital overload through codifying the "Right to Disconnect"—legally prohibiting employers from penalising staff for ignoring communications outside official working hours. Digital connectivity has fragmented human downtime into brief, interrupted spaces of leisure that fail to provide genuine physical or psychological restoration (Schulte, 2014). Legally protecting off-hours consolidates contiguous leisure time, requiring telecommunication and employment regulations to hold corporations accountable for digital overreach and fostering an institutional boundary between work and home life (Wang, 2025).

**Governance, Measurement, and Public Policy Integration:** A critical barrier to eradicating time poverty is its relative invisibility within traditional macroeconomic indicators like Gross Domestic Product (GDP), because what is not measured cannot be managed. Mandating national statistical agencies to conduct frequent, granular Time Use Surveys using harmonised time diaries is an

indispensable step. Standard economic audits track fiscal flows but ignore temporal deficits, whereas longitudinal time surveys bring empirical visibility to the volume, intensity, and demographics of unpaid labour and time scarcity (GoI, 2020). Time-use metrics must be integrated alongside traditional income poverty lines to develop a "Time-Adjusted Income Poverty Line," mapping households that are financially secure but temporally bankrupt (Levy Economics Institute, 2021; Rodgers, 2022). Finally, constructing "Satellite National Accounts" within national budgeting frameworks quantifies the monetary equivalent value of domestic and care labour. The systematic exclusion of unpaid care from GDP calculations means the formal economy effectively treats women's time as an infinite, cost-free input, securing artificially low costs of production for formal corporate capital by running down the finite lifespans of society (Ghosh, 2016). Valuing this labour forces economic policy to internalise the structural costs of time depletion, requiring fiscal models to treat public investments in time-saving assets (such as childcare networks or rural public transport) not as deadweight public expenditures, but as capital injections that generate immense social return on investment (Hirway, 2020).

## 1.7 Policy Strategies

Dismantling the structural architecture of time poverty requires shifting public policy from a framework that views time scarcity as a private logistical failure to one that treats time sufficiency as a core public policy priority. Because time is a finite, non-transferable commodity, mitigating its deprivation cannot rely on simple market mechanisms or direct financial injections. Instead, it demands a coordinated, multi-sectoral strategy that reconstructs public infrastructure, regulates modern labour markets, professionalises social care, and modernises national statistical accounts. This section details these four critical policy pillars. **Infrastructure Investment through a Gender-Sensitive Lens:** In developing country contexts, the most immediate, highest-return state intervention is the aggressive deployment of public capital toward building time-saving infrastructure. The development economists Hirway (2020) and Hyde et al. (2020) converge on the structural recommendation that national infrastructure budgets must completely overhaul their project evaluation methodologies. Success should not be measured exclusively through short-term commercial rate-of-return metrics or aggregate economic output; instead, it must be indexed directly to the objective volume of "hours liberated" for historically marginalised populations. ADB (2024) and comprehensive UN Reports (2023) have established that local infrastructure projects—such as community solar boreholes, localised piped water systems, decentralised solar cookstoves, and rural micro-grid electricity networks—act as highly cost-effective temporal interventions. By embedding these utilities directly into or near households, the state systematically eliminates the hours of daily, exhausting physical labour currently required to secure basic survival commodities. The structural process of temporal emancipation through state action unfolds as a direct, cascading mechanism of development. The sequence initiates with a targeted capital injection in public utilities, establishing core local assets such as piped household water and micro-grid electrical connectivity. This targeted state intervention directly drives the elimination of arduous resource sourcing, freeing individuals from the multi-hour, daily physical burdens of water and biomass fuel collection. Consequently, this logistical decompression allows for the complete liberation of blocked non-market productive hours, which were previously tied up in basic survival-level household maintenance. With these locked hours returned to the individual's direct control, the process concludes with a systematic reallocation of time capital to discretionary rest and education, providing the foundational temporal resources necessary to build human capital and achieve long-term socioeconomic mobility. In the Indian developmental landscape, the expansion of the Pradhan Mantri Ujjwala Yojana—the state's flagship liquefied petroleum gas (LPG) cylinder distribution scheme—serves as a direct example of an infrastructure policy capable of reducing temporal scarcity. By shifting household cooking from wood-fired biomass to clean gas stoves, this program theoretically frees up hours previously lost to fuel scavenging and slow cooking processes. However, deep implementation gaps and fiscal refilling barriers persist in remote tribal and forest regions, as verified by investigative coverage in Narain (2024) and empirical field critiques in Ghosh (2016). When high cylinder refilling costs force families to slide back into solid fuel dependency, the regressive "time tax" is immediately reimposed on rural women, showing that infrastructure policies must combine physical asset distribution with long-term financial affordability.

**Labour Market Reforms and Temporal Autonomy:** The mitigation of time poverty among the working poor requires structural regulations within the labour market to decouple baseline economic survival from extreme, health-destroying work hour portfolios. ILO (2021), in its definitive global care standards, recommends that national labour policies mandate legally binding living wages that are indexed directly to local consumer price indices and actual regional subsistence costs. By forcing employer organisations to pay a living wage within a standard 40-hour work week, labour regulations can eliminate the economic compulsion that drives low-wage labourers to take on extreme overtime or secondary informal employment just to avoid starvation. Simultaneously, empirical evidence from international trials of shortened workweeks, reviewed comprehensively by organisational psychologist Wang (2025) and tracked by the OECD, demonstrates that four-day workweek pilots consistently yield stable or significantly improved employee productivity while producing deep, structural reductions in subjective time anxiety and professional burnout. To scale these benefits down to the informal and platform sectors, OECD (2021) strongly advocates for "fair scheduling" legislation. This regulatory framework requires corporate employers and digital applications to provide workers with advance, predictable notice of their shift timings and penalises sudden, uncompensated cancellations. Fair scheduling directly shields gig workers from the uncompensated "waiting hours" that current platform algorithms extract without pay, as documented across national business journals like The Economic Times (2024), Rajadhyaksha (2025) and The Financial Express (2024). Analogous sociological findings published by Hirway (2021) and Burton and Phimister (2022) demonstrate that extending formal labour protections and predictable compensation structures to seasonal agricultural workers is essential to break the intense occupational time poverty that locks agrarian communities into cycles of biological and financial exhaustion during peak cultivation windows.

**Restructuring the Care Economy through the Triple R Framework:** Perhaps the most structurally transformative policy intervention is the systematic redistribution of care responsibilities from private households—and specifically from the over-allocated schedules of women—to public, socialised provisioning systems. ILO (2021) anchors this transformation within its

globally recognised "Triple R" framework: Recognise the massive economic value of unpaid care within state planning; Reduce the time intensity of domestic labour through public utility deployment and Redistribute care obligations from households to the state and from women to men. As the time-use sociologist **Sayer (2018)**, writing on gender dynamics and well-being, and the **UNDP (2023)** Gender Social Norms Index both underscore, public investments in universal public childcare networks, state-subsidised elder care facilities, and well-compensated parental leave schemes should never be classified by fiscal planners as deadweight social expenditures. Rather, they function as high-return social capital investments that yield compounding macroeconomic returns by expanding human capital and lifting labour productivity across the entire economy. The structural re-engineering of the care economy operates as a transformative mechanism that shifts caregiving from an individual burden to a shared social responsibility. The process initiates with the establishment of universal public socialised care networks, providing state-funded, high-quality childcare and elder care infrastructure. This structural intervention directly facilitates the dismantling of the private domestic vice, freeing vulnerable families—and particularly women—from the constant, non-negotiable demands of unremunerated household maintenance. To prevent these newly liberated hours from being unevenly reallocated inside the home, the framework integrates mandatory non-transferable "daddy quotas" within national parental leave policies. These non-transferable, use-it-or-lose-it leave blocks compel fathers to step away from formal market production and assume direct caregiving roles during early child development. Ultimately, this dual intervention drives a symmetric rebalancing of the household time budget, ensuring an equitable distribution of temporal resources between genders and liberating female capital for professional, educational, and civic self-determination. To drive this rebalancing inside the domestic sphere, public policy must introduce non-transferable paternity leave policies, frequently operationalised as "use-it-or-lose-it" fatherhood quotas. As labour experts **Chaudhary and Verick (2024)** assert in their policy assessments, when parental leave remains completely generic, deep-seated socio-cultural biases ensure that women utilise the entirety of the leave window, reinforcing unequal domestic divisions of labour from the moment of childbirth. Mandating well-compensated, non-transferable paternal blocks forces fathers to step away from formal market production and assume primary caregiving roles, initiating a long-term behavioural shift that structurally balances the internal time budget of the household.

**Statistical Reform and Macroeconomic Measurement:** An indispensable prerequisite for the execution of these structural remedies is an immediate overhaul of national statistical governance. As long as time poverty remains hidden within macroeconomic accounting models, fiscal planning will continue to misallocate resources. The development economists **Ghosh (2016)** and **Hirway (2020)** both argue that mandating regular, granular National Time Use Surveys—similar to the methodology initiated by India's **GoI (2020)**—is the foundational baseline required to design temporally informed social safety nets. Time-use diaries convert the invisible substrate of reproductive labour into empirical, high-resolution datasets, allowing states to identify exactly which demographic groups are trapped at the intersection of financial and temporal deprivation. In the wider domain of economic research, major methodological contributions published by **Agarwal (2018)** and **Ramey and Francis (2009)** have provided mathematical frameworks to integrate time-allocation metrics directly into multidimensional poverty indices. Furthermore, macroeconomic research endorsed in **Bardasi and Wodon (2006)** and the **World Bank (2022)** strongly advocates for the integration of "Satellite National Accounts" alongside standard Gross Domestic Product ledgers. Satellite accounting assigns a rigorous monetary value to unpaid domestic and caregiving labour by tracking what it would cost to purchase those same services on the open commercial market. By making the true structural scale of the care economy completely visible to national fiscal planners, satellite accounting forces states to internalise the real economic costs of time depletion, ensuring that future development strategies protect human time as a vital, protected public resource.

Time poverty is not a personal choice driven by poor scheduling, lack of discipline, or excess individual ambition; it is a profound structural injustice operating at the volatile cross-section of gender inequality, economic polarisation, and public infrastructure deficits. When an individual's entire daily existence is completely consumed by the grinding mechanics of market survival and unremunerated domestic obligations, their constitutional freedoms, legal protections, and human capabilities are functionally neutralised. A person who lacks control over their own hours cannot participate in democracy, cannot acquire knowledge, and cannot protect their own physical health. Eradicating time poverty requires an immediate paradigm shift in how states define, measure, and pursue macroeconomic prosperity. True human development implies that a society is not merely income-rich, but **time-sufficient**. By adopting a systemic, multi-sectoral approach—investing heavily in time-saving public utilities, restructuring labour regulations to safeguard leisure, universalising socialised care systems, and embedding time-use statistics directly into national accounting practices—governments can reclaim millions of lost human hours. In doing so, global society will move beyond the restrictive metrics of monetary accounting, liberating the economic potential of marginalised populations and restoring their fundamental, inalienable human right to rest, play, connect, and thrive.

## 1.8 Conclusion

The systematic deconstruction of temporal scarcity established in this paper confirms that time poverty is not an isolated, private logistical failure or a byproduct of personal scheduling inefficiencies; rather, it constitutes a profound, pervasive form of structural injustice operating at the critical intersection of entrenched gender asymmetries, exploitative labour market dynamics, regressive public infrastructure deficits, and environmental vulnerabilities. When an individual's finite, non-transferable 24-hour day is entirely cannibalized by the compounding demands of survival-driven paid work and unremunerated care obligations, their core human capabilities are fundamentally compromised, meaning a society that forces its most vulnerable citizens—particularly rural and marginalized women—to trade biological rest and cognitive leisure for basic survival tasks cannot achieve genuine inclusive growth or fulfill the United Nations Sustainable Development Goals (SDGs). Eradicating this invisible inequality demands an immediate paradigm shift in global development economics and fiscal planning that looks beyond the restrictive parameters of monetary accumulation and gross domestic product metrics to internalise time sufficiency as a foundational human right and a core determinant of public welfare. Macroeconomic governance frameworks must transition from treating reproductive care work as an infinite, cost-

free subsidy for formal capital to actively valuing it through institutionalised Satellite National Accounts and regular Time Use Surveys. Dismantling the structural architecture of temporal deprivation ultimately requires a coordinated, multi-sectoral state response relying on the aggressive deployment of public capital toward time-saving decentralised infrastructure, the legislative implementation of regionally indexed living wages alongside fair scheduling protections, and the systematic socialisation of care infrastructure via universal childcare and parental leave rebalancing. By shifting caregiving from an uncompensated domestic burden to a shared social responsibility and reducing public utility frictions, public policy can liberate billions of blocked human hours, thereby protecting physiological and psychological health across generations while unlocking foundational human agency. Only when global development frameworks safeguard and optimise human time can a society dismantle these hidden inequalities and foster a truly equitable, productive, and self-determining workforce capable of long-term economic and social flourishing.

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