



Why time poverty matters for individuals, organisations and nations

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Over the last two decades, global wealth has risen. Yet material affluence has not translated into time affluence. Most people report feeling persistently ‘time poor’—like they have too many things to do and not enough time to do them. Time poverty is linked to lower well-being, physical health and productivity. Individuals, organisations and policymakers often overlook the pernicious effects of time poverty. Billions of dollars are spent each year to alleviate material poverty, while time poverty is often ignored or exacerbated. In this Perspective, we discuss the societal, organisational, institutional and psychological factors that explain why time poverty is often under appreciated. We argue that scientists, policymakers and organisational leaders should devote more attention and resources toward understanding and reducing time poverty to promote psychological and economic well-being.

Human beings have always faced resource constraints driven by crises such as plagues, famine and drought. Consistent with our species’ struggle to obtain enough tangible assets to survive, policy decisions have primarily focused on increasing material prosperity¹. Historically, this focus has been driven by the general belief that material wealth results in greater welfare^{2,3}, a perspective that is exemplified by the fact that the gross domestic product has been used as the primary tool for measuring country-level welfare since its development in 1934⁴.

More recently, however, this narrow focus on material resources has been challenged^{5,6}. In the 1970s, the economist Richard Easterlin discovered a paradox: while economic growth in the US had steadily increased over the previous decades, citizens’ happiness had remained largely unaltered². Initially debated by some scholars^{7,8}, the ‘Easterlin Paradox’ was confirmed in recent years and across countries^{9–11}. Following from these findings, policymakers have come to recognise that non-monetary factors, such as societal trust and optimism, are also critical in shaping citizens’ well-being and societal progress^{12–14}. In this Perspective, we argue that policymakers also need to consider the role of time affluence. Although wealth has risen around the world, material prosperity has not translated into an abundance of time; on the contrary, rising wealth often exacerbates feelings of time poverty¹⁵.

Defined as the chronic feeling of having too many things to do and not enough time to do them^{16,17}, time poverty is increasing in society. Data from the Gallup US daily poll—a nationally representative sample of US residents—shows that, in 2011, 70% of employed Americans reported that they “never had enough time,” and in 2018, this proportion increased to 80% (ref. 18). Coinciding with these societal trends, researchers across academic fields have started to systematically study this phenomenon. In social psychology, a growing body of literature finds that people who are more time-affluent experience greater psychological well-being^{19–21}. Organisational behaviour research documents the role of workplace structures in shaping how people think about and use their time^{22,23}. Legal scholars are starting to consider the full welfare costs of the time burdens imposed by social structures (i.e., unpaid labour burdens incurred by women²⁴) and government processes (i.e., paperwork and administrative burdens²⁵). Political

theorists are urging scholars to study wasted time in political institutions, such as how wait-times at voting booths or in court influence democratic processes²⁶. Developmental economists are advocating for the systematic study of time-use and associated stressors among the working poor^{27–29}. The common thread across these diverse disciplines is that time poverty may be as important as material poverty in shaping human welfare.

Today, time poverty and ‘busyness’ are often seen as signals of productivity, success and high status^{30,31}. Yet, recent scientific evidence provides compelling evidence that feeling time-poor can adversely affect subjective well-being (for example, life satisfaction, positive affect), mental health, work performance, creativity and relationship quality (see Table 1 for some of the documented negative consequences of time poverty). Building on this work, the aim of the current paper is to analyse the causes of time poverty and discuss potential solutions.

First, we focus on the societal, institutional, organisational and psychological factors that contribute to time poverty at work and outside of it. In doing so, we provide an explanation for why policymakers, companies and individuals tend to overlook or exacerbate time poverty. Second, we discuss the potential role of social scientists, policymakers and organisational leaders in reversing the upward trend in time poverty worldwide.

Societal drivers of time poverty

There are two important changes in society that have contributed to increased time poverty³². First, changes to social structures that shape time have accelerated the speed of life³³. Family structures are no longer stable: they are increasingly punctuated by divorce³⁴. Careers are no longer passed down from generation to generation: people now change jobs an average of 11 times^{35,36}. Second, the Internet and mobile phones provide people with access to an infinite number of experiences and the opportunity to “live a multiplicity of lives within a single lifetime.”^{32,33} Thus, people increasingly worry about missing out, which can increase feelings of time poverty³².

Along with the acceleration of time, the shifting nature of work and its relationship with time contribute to time poverty³⁷. Marx³⁸

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Table 1 | A brief overview of the documented consequences of time poverty

Reference	Context	N	Definition of time poverty	Outcomes	Effect size			
104	Canada	10,748	Feelings of time pressure (composite index of 12 items, for example, "Compared to five years ago, do you feel more rushed, about the same, or less rushed?" Range: 0-100)	Job satisfaction (1 = very dissatisfied to 4 = very satisfied)	$r = -0.20^*$			
				Life satisfaction (1 = not too happy to 3 = very happy)	$r = -0.28^*$			
				Work-family balance satisfaction (0 = dissatisfied to 1 = satisfied)	$r = -0.38^*$			
				Satisfaction with non-working time (1 = very dissatisfied to 4 = very satisfied)	$r = -0.37^*$			
				Perceived psychological stress (1 = almost none to 4 = a lot)	$r = 0.49^*$			
				Self-assessed health ("Compared to other people of your age, how would you describe your state of health?"; 1 = poor to 5 = excellent)	$r = -0.13^*$			
				Satisfaction with health (1 = very dissatisfied to 4 = very satisfied)	$r = -0.20^*$			
				Sleep quality (for example, "Do you regularly have trouble going to sleep or falling asleep?"; 1 = yes; 0 = no)	$r = 0.19^*$			
				17,626		Feelings of trying to take on too many things at once (scale: 1: yes vs 0 = no)	Job satisfaction (1 = not at all satisfied to 4 = very satisfied)	$r = -0.05^*$
							Feeling happy (for example, "Would you describe yourself as being usually:" 1 = so unhappy that life is not worthwhile to 4 = happy and interested in life)	$r = -0.05^*$
Self-assessed health (for example, "In general, would you say your health is:" 1 = poor to 5 = excellent)	$r = -0.07^*$							
Self-assessed mental health (for example, "During the past month, about how often did you feel so sad that nothing could cheer you up?"; 1 = none of the time to 5 = all of the time)	$r = -0.15^*$							
Use of antidepressant drugs (for example, "In the past month, how many antidepressants did you take?")	$r = 0.06^*$							
105	Finland	2,979	Feelings of time pressure (defined by the presence of at least five of the eight factors capturing time pressure, e.g., "Do you work under such pressure that there is no time to talk or think about anything except your work?"; coded as: high vs low)	Headache (occurrence per month)	48% of respondents			
				Fatigue (occurrence per month))	69% of respondents			
				Sleeping difficulties, incidence per month (occurrence per month)	45% of respondents			
				Depression (occurrence per month)	19% of respondents			
				Overexhaustion (occurrence per month)	50% of respondents			
				Tension (occurrence per month)	54% of respondents			
				All just too much (occurrence per month)	28% of respondents			
106	United States	32,392	Time poverty is defined as the amount of discretionary time, such as time available for personal care, market work, household work, child and adult care (dichotomous scale: 1 = if daily discretionary time is less than 289.8 min or 4.83 h; 0 = otherwise)	Fast food purchases (1 = yes; 0 = no)	$m.e. = -0.034^{**}$			
				Number of drinking and eating occurrences per day	$m.e. = -0.273^{**}$			
				Time spent on sports and exercise (in minutes)	$m.e. = -17.64^{**}$			
				Active travel (for example, walked or biked twenty minutes or more a day; 1 = yes; 0 = no)	$m.e. = -0.012^{**}$			

Continued

Table 1 | A brief overview of the documented consequences of time poverty (continued)

Reference	Context	N	Definition of time poverty	Outcomes	Effect size
107	Australia	50	Time poverty was measured qualitatively with semi-structured interviews with experts in the domain of physical activity and food consumption. Experts described time poverty as ‘busyness’ and lack of time	Frequency of physical activity compared to 50 years ago	Decreased
				Frequency of cooking compared to 50 years ago	Decreased
				Frequency of buying pre-prepared and take-away foods compared to 50 years ago	Increased
108	United States	3,308	Feelings of time urgency or impatience (for example, feeling pressured for time in general, feeling pressured at the end of an average work or housework day, eating too quickly, and getting quite upset when having to wait for anything; 0 = low, 1 = medium-low, 2 = medium-high, 3-4 = high)	Hypertension incidence (percentage of non-hypertensive participants at year 0 or year 5 who developed hypertension at year 15; hypertension defined as systolic blood pressure of at least 140 mm Hg, diastolic blood pressure of at least 90 mm Hg, and use of anti-hypertensive medication)	$OR_{\text{medium-low time urgency or impatience}} = 1.51$ $OR_{\text{medium-high time urgency or impatience}} = 1.47$ $OR_{\text{high time urgency or impatience}} = 1.84$
109	United States	40	Feelings of not having enough time (definition based on interviews conducted in households in the United States)	Use of medication to cope with demands and avoid visits to doctors observed over an 18-month period	Increased
110	United States	790	Subjective experience of time pressure (for example, “In the last 12 months how often have you felt like you never seem to have enough time to get everything done?” 1 = strongly disagree to 4 = strongly agree)	Depression (frequency of experiencing various symptoms; for example, “you had trouble keeping your mind on what you were doing”; 1 = rarely or none of the time, 2 = some or a little of the time; 3 = occasionally or a moderate amount of time; 4 = most or all of the time)	$\beta_{\text{women}} = 0.37^{***}$ $\beta_{\text{men}} = 0.37^{***}$ $\beta_{\text{overall}} = 0.41^{***}$
111	United Kingdom	254	Subjective experience of time pressure (visual analogous scale from 0 = no experience to ++ = maximum experience; 20 possible positions)	Perceived control at work (for example, extent to which participants felt in control of their current situation)	$\beta = -0.17^{**}$
				Emotional exhaustion (for example, extent of feeling emotionally drained by work and feeling burned out from work)	$\beta = 0.19^{***}$
				Negative mood (for example, extent of feeling very sad, very drowsy)	$\beta = 0.27^{***}$
				All outcome variables were measured using a visual analogous scale from 0 = no experience to ++ = maximum experience; 20 possible positions	
112	United States	289	Feelings of not having enough time to do one’s work (for example, item: “There is just not enough time to do my work”; 1 = strongly disagree to 7 = strongly agree)	Work-vs-family conflict (for example, items: “I came home from work too tired to do some of the things I wanted to do”; 1 = never to 7 = most of the time)	$\beta = 0.30^{**}$
				Family-vs-work conflict (“I was too tired to be effective at work because of things I had to do at home”; 1 = never to 7 = most of the time)	$\beta = 0.09$ (ns)
				Number of work hours (“How many hours do you typically work in a week?”)	$\beta = 0.20^{**}$
				Turnover intentions (“How likely is it that you will look for a job outside of this organisation during the next year?”; 1 = very unlikely to 7 = very likely)	<i>i.e.</i> = 0.09**
				Self-assessed health (“In general, would you say your health is”; 1 = poor to 5 = excellent)	<i>i.e.</i> = -0.06**
				Perceived work performance (“Overall, how would you rate your work performance?”; 1 = poor; to 5 = excellent)	<i>i.e.</i> = -0.03 (ns)

Continued

Table 1 | A brief overview of the documented consequences of time poverty (continued)

Reference	Context	N	Definition of time poverty	Outcomes	Effect size
			Feelings of not having enough time to complete family responsibilities (for example, item: "I have to rush in order to complete my family responsibilities and chores"; 1 = strongly disagree to 7 = strongly agree)	Work-vs-family conflict (same scale as above)	$\beta = 0.27^{**}$
				Family-vs-work conflict (same scale as above)	$\beta = 0.46^{**}$
				Number of family hours ("How many hours a week do you typically spend doing household-related chores (things like cooking, cleaning, repairs, shopping, yard work, and keeping track of money and bills)?")	$\beta = 0.16^{**}$
				Turnover intentions (same scale as above)	<i>i.e.</i> = 0.08 ^{**}
				Self-assessed health (same scale as above)	<i>i.e.</i> = -0.11 ^{**}
				Perceived work performance (same scale as above)	<i>i.e.</i> = -0.13 ^{**}
113	United States	659	Feelings of not having enough time to do all the tasks one needs to do at work ("In general, how do you feel about your time: would you say you always feel rushed even to do things you have to do, only sometimes feel rushed, or almost never feel rushed? 1 = never, 2 = sometimes, 3 = always)	Trouble concentrating at work ("I have found it difficult to concentrate at work because of my family responsibilities?"; 1 = never, 2 = sometimes, 3 = always)	$\beta = 0.13^{**}$
				Self-rated stress at work ("My job is rarely stressful"; 1 = strongly disagree to 5 = strongly agree)	$\beta = 0.33^{***}$
				Self-rated stress at home ("My life at home is rarely stressful"; 1 = strongly disagree to 5 = strongly agree)	$\beta = -0.02$ (ns)
			Feelings of not having enough time to do all the tasks one needs to do at home ("There are so many things to do at home, I often run out of time before I get them all done"; 1 = strongly disagree to 5 = strongly agree)	Trouble concentrating at work (same scale as above)	$\beta = 0.13^{***}$
				Self-rated stress at work (same scale as above)	$\beta = 0.20^{***}$
114	United States	1,77 (8,910 daily observations)	Daily perceived time pressure at work (for example, "I feel a sense of time pressure in my work" 1 = never or almost never true to 4 = always or almost always true)	Daily creative cognitive processing (dichotomous: 1 = yes if participants' daily event description mentioned having had a cognitive creative event; 0 = no mention of such event)	<i>Beta</i> = -0.10 ^{**}
115	Australia	9,177	Feelings of always rushing ("How often do you feel rushed or pressed for time?"; 0 = rarely rushing, 1 = often rushing; 3 = always rushing)	Physical inactivity (frequency of exercising moderately or intensely for at least 30 min; 0 = not at all, less than once a week; 1 = one to two times a week)	$OR_{\text{often rushing}} = 1.44$ $OR_{\text{always rushing}} = 1.48$
				Self-assessed health ("In general, would you say your health is excellent, very good, good, fair or poor?"; 0 = poor, fair health, 1 = good, very good, or excellent health)	$OR_{\text{often rushing}} = 1.83$ $OR_{\text{always rushing}} = 3.15$
				Self-assessed mental health (for example, "How often over the previous 4 weeks did you feel: "tired out for no good reason"; 1 = none of the time to 5 = all of the time)	$OR_{\text{often rushing}} = 3.18$ $OR_{\text{always rushing}} = 5.11$
116	Sweden	1,507	Feelings of not having enough time to do one's work ("I frequently feel that I don't have enough time to complete my job assignments"; 1 = do not agree at all; 7 = completely agree)	Emotional well-being ("How would you say you typically have felt last month?"; 3-bipolar adjective scales from 0 to 10; for example, 0 = very sad, displeased, depressed to 10 = very glad, pleased, happy)	$r = -0.17^{***}$

Continued

Table 1 | A brief overview of the documented consequences of time poverty (continued)

Reference	Context	N	Definition of time poverty	Outcomes	Effect size
			Feelings of not having enough time to enjoy leisure (“I frequently feel that I don’t have enough time to do what I want to do in my leisure time”; 1 = do not agree at all; 7 = completely agree)	Emotional well-being (same scale as above)	$r = -0.20^{***}$
		587	Feelings of not having enough time (for example, “I frequently feel I do not have sufficient time”; 0 = do not agree at all to 6 = completely agree)	Emotional well-being (frequency of emotions experienced at work and off work over the past month; 0 = never to 6 = always; created index from -6 to 6)	$B = -0.11$ (ns)
				Perceptions of goal progress (for example, “I frequently fail to reach goals I set”; 0 = do not agree at all to 6 = completely agree)	$B = 0.34^*$
				Frequency of stress-related symptoms (frequency of experiencing headaches, musculoskeletal pains, gastrointestinal problems, sleep disturbances and anxiety over the last year; 0 = never to 7 = daily)	$B = 0.28^*$
117	Canada	326	Feelings of not having enough time to get everything done (for example, “I feel pressed for time today”; 1 = strongly disagree to 7 = strongly agree)	Life satisfaction (two-item scale: “Taking all things together, how happy would you say you are?”; 0 = not at all to 10 = extremely; and the Cantril Ladder capturing where participants currently stand in life on a ladder from 0 = bottom step, worst possible life imaginable to 10 = top step, best possible life imaginable)	$\beta = -0.22^{***}$
	The Netherlands	1,232		Life satisfaction (only the Cantril Ladder item)	$\beta = -0.18^{***}$
	The Netherlands	818		Life satisfaction (Only the Cantril Ladder item)	$\beta = -0.00^*$
	United States	1,802		Life satisfaction (the two-item scale)	$\beta = -0.02$ (ns)
	United States	60		Positive affect (12-item scale; for example, “happy”; 1 = very rarely or never to 5 = very often or always)	$\beta = -0.06$ (ns)
118	The Netherlands	1,296	Husband’s work hours (average number of hours worked per week during the first 5 years of marriage; range from 0 = never worked to 130 h per week)	Probability of divorce (dichotomous variable capturing the moment when the couple stopped living together within a 10-year time period)	$B^{\circ} = -0.016^*$
			Wife’s work hours (same measure; range from 0 to 90 h per week)	Probability of divorce (same scale as above)	$B^{\circ} = 0.009^*$
			Husband’s overtime (dichotomous variable 0 = worked less than 50 h per week; 1 = worked more than 50 h a week)	Probability of divorce (same scale as above)	$B^{\circ} = -0.051$ (ns)
			Wife’s overtime (dichotomous variable 0 = worked less than 40 h per week; 1 = worked more than 40 h a week)	Probability of divorce (same scale as above)	$B^{\circ} = 0.036$ (ns)
			Husband’s irregular work hours (for example, night shifts, weekends) (measure of frequency; 0 = never, 1 = sometimes, 2 = often)	Probability of divorce (same scale as above)	$B^{\circ} = 0.20^*$
			Wife’s irregular work hours (same measure of frequency as for husbands)	Probability of divorce (same scale as above)	$B^{\circ} = -0.10$ (ns)

Continued

Table 1 | A brief overview of the documented consequences of time poverty (continued)

Reference	Context	N	Definition of time poverty	Outcomes	Effect size
			Marital interaction time (frequency of engaging in various activities, for example, “visiting friends, neighbours, or colleagues”; 0 = often without the spouse; 1 = sometimes without the spouse; 2 = never without the spouse)	Probability of divorce (same scale as above)	$B^a = -0.23^*$
119	Germany	576	Feelings of not having enough time to get everything done or to meet deadlines (“At work for this home care service, one frequently has to hasten and yet cannot complete the work tasks”; 1 = no, not at all, to 5 = yes, indeed)	Work-family conflict (for example, “The demands of my work interfere with my home and family life”; 1 = no, not at all to 5 = yes, indeed)	$\beta = 0.23^{**}$
				Cognitive irritation (for example, “Even at home I cannot stop thinking about problems from work”; 1 = no, not at all to 5 = yes, indeed)	$\beta = 0.30^{**}$
				Emotional irritation (for example, “I react irritably to other people although I do not want this”; 1 = no, not at all to 5 = yes, indeed)	$\beta = 0.19^{**}$
				Psychosomatic complaints (for example, “Do you suffer from dizziness?”; 1 = never to 5 = nearly daily)	$\beta = 0.04$ (ns)

We searched the term “time poverty” on the Web of Science. This resulted in a list of 125 articles, from which we selected 16 articles that were representative of research on the consequences of time poverty across disciplines. Thus, this table is meant to illustrate the various documented consequences of time poverty rather than provide an entirely comprehensive record. *r*, correlational coefficient that captures the strength and direction of the association between time poverty and each outcome. *i.e.*, standardised indirect effect of time measures on outcome measures as a result of all possible mediation paths. *m.e.*, marginal effects calculated at the mean for fast food and active travel probit equations and of discrete changes in the dummy variables from 0 to 1 for the other variables. β , unstandardized logistic regression coefficient. B , unstandardized linear regression coefficient. β , standardised linear regression coefficient. OR, odds ratio. B^a , estimates based on discrete-time event history analysis construing a person-period file starting from the first year of marriage and ending with the year of divorce or the tenth year after marriage (when the couple stays married), and applying logistic regression. * $P < 0.05$; ** $P < 0.01$; *** $P < 0.001$; ns = not significant.

argued that labour should be evaluated by work hours rather than outputs. Nyland³⁹ noted that 21st century employees are required to do increasingly complex tasks in less time. More modern theorising⁴⁰ suggests that jobs are task (vs time) oriented, such that people are rewarded for the number of tasks they complete. Recent macroeconomic changes, such as the emergence of global markets and ‘24–7 economies’⁴¹ have made task-oriented jobs—especially white-collar jobs like consulting—increasingly complex and competitive. In these contexts, actual performance is difficult to evaluate^{42,43}, yet small differences in productivity can translate into large differences in pay. As a result, there is a proliferation of ‘winner-take-all’ models of promotions⁴⁴ in which the ‘ideal worker’ can only signal their loyalty, devotion and productivity through long work hours^{38,41,42,45}. Employees who deviate from the ‘ideal worker’ norm are marginalised⁴⁶ or perceived as failed workers⁴⁷. These increased work time expectations contribute to the acceleration of time and thereby to increased time poverty.

Organisational and institutional drivers of time poverty

Organisations, governments and non-governmental organisations (NGOs) inadvertently, and sometimes intentionally, cause their constituents to feel time poor. In private and public organisations, there are two core structural sources of time poverty.

First, organisations create unnecessary idle time, defined as involuntary periods of downtime when employees cannot perform their work tasks. According to a recent investigation with over 1,000 employees across 29 occupations, including lawyers, managers and soldiers, more than 78% of employees reported that they were kept idle between meetings, assignments and other responsibilities⁴⁸. These idle hours resulted in the equivalent of over \$100 billion a year in lost wages. Furthermore, when employees anticipated experiencing idle time, they also slowed down their work pace. This is

because people dread idleness⁴⁹ and boredom^{50,51}. Relatedly, organisations are increasingly wasting employees’ time with menial administrative tasks that are not central or necessary to primary roles at work⁵². In a nationally representative survey of 4,720 US physicians, the average doctor spent 8.7 h per week on administrative tasks such as billing and record keeping, and these time burdens have increased by 20% in the last ten years⁵³. According to a detailed set of qualitative interviews⁵⁴, even CEOs of well-established organisations who have control over their schedules spent only 43% of time engaged in activities “directly related to furthering their mission.” When engaged in secondary tasks, employees are reminded of all the central tasks they could be doing, increasing their feelings of goal conflict, and in turn, their feelings of time poverty⁵⁵.

Second, organisations fragment employees’ time by imposing various meetings and social obligations. Results from a detailed study with American office workers revealed that a typical workday consists of 88 ‘episodes’ (i.e., switching from one task to another) that last 10 min or less, on average⁵⁶. Task switching and interruptions increase time poverty because they undermine employees’ sense of control over time⁵⁷. Employees’ coping tactics are often counterproductive: they tend to speed up their work pace, shorten the time they spend on any one activity, or engage in multitasking⁵⁸. In turn, these strategies tend to further increase feelings of time poverty and undermine productivity^{59,60}. Fragmented time undermines performance because of ‘attentional residue’ that carries over from one task to another: employees need time to stop thinking of one task before they can fully shift their attention to the next⁶¹.

Governments also contribute to time poverty in two primary ways. First, to receive necessary permits, licenses, tax deductions, subsidies, educational assistance and health benefits, citizens must fill out forms, travel to government offices and wait in lines. Recognising the potential welfare costs, in 1980, the United States

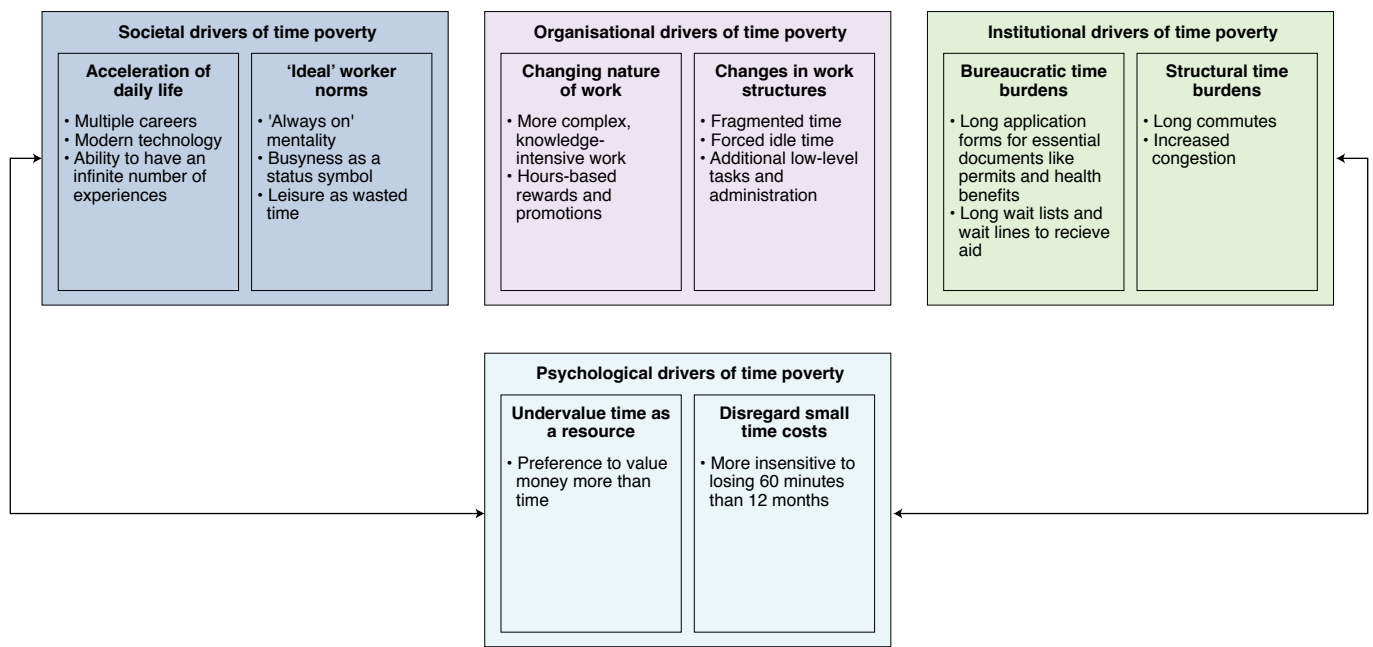


Fig. 1 | The reinforcing nature of the drivers of time poverty.

Congress passed the Paperwork Reduction Act to constrain the accumulation of administrative paperwork requirements imposed on citizens and businesses. This act was then amended in 1995, placing even greater emphasis on the need to reduce paperwork inefficiencies. Despite such initiatives, paperwork burdens have worsened. In 2015, federal government paperwork demands cost US citizens 9.78 billion hours (ref. ²⁵) or the equivalent of \$215 billion a year in lost wages. In 2019, the US Office of Information and Regulatory Affairs (OIRA)—the agency that oversees the implementation of governmental regulations—estimated that paperwork burdens had grown to 11.6 billion hours⁶².

Independent evaluations of government economic programs indicate that the burden of administrative paperwork is disproportionately placed on the poor, harming the very people these programs are intended to help⁶³. For example, low- and middle-income citizens who are eligible for the Earned Income Tax Credit are required to fill out long, complex application forms and to provide numerous documents, such as records of all of their expenses (for example, rent and groceries). Similarly, to receive Medicaid, families have to complete arduous eligibility paperwork that can range from 24 to 31 pages in length. Many families do not have the time to fulfil all these requirements and end up missing out on benefits for which they are eligible. Data from the State Children's Health Insurance Program shows that 24% of Medicaid re-enrolment applications were denied due to incorrect paperwork⁶⁴.

Second, citizens face increasingly long commute times⁶⁵. Globally, employees spend an average of 300 h each year traveling between work and home. This represents roughly 10% of their total working time^{66,67}. Similarly to paperwork burdens, commute times are not equally distributed across the income spectrum. Census data conducted by the District of Columbia's Office of Revenue Analysis shows that the commute time for low-income working adults is 120 min more per week than the commute time of higher-paid workers⁶⁸. Governments tend to exacerbate these differences because they fail to provide affordable housing options in city centres, where most jobs are located⁶⁹. Longer commute times reduce the amount of time available to search for better employment⁷⁰ and complete non-work activities⁷¹, and they are associated with lower levels of

social capital⁷², physical health^{73,74} and life satisfaction⁷⁵. In one study of 3,409 Canadian citizens, more time spent commuting was also associated with greater feelings of time poverty⁷⁵.

The evidence outlined above illustrates the types of organisational and institutional factors that increase feelings of time poverty. In the next section, we argue that there are also psychological factors that impede people from recognising time as an important resource. These factors could help to explain why time poverty is often neglected and exacerbated by policymakers as well as organisational and non-profit leaders.

Psychological drivers of time poverty

First, relative to money, people tend to undervalue their time⁷⁶. Across six studies and 4,690 respondents, Whillans, Weidman and Dunn⁷⁷ found that only 48% of respondents indicated a preference for having more time, rather than more money. This effect held even for the most time-poor individuals in the sample: working parents with young children living at home. The tendency to undervalue time is also apparent when experts are making decisions on behalf of others. In a pilot study, Whillans and West³ asked thirty current and aspiring policymakers from the Harvard Kennedy School of Public Policy how they would allocate 2,100 Kenyan shilling to improve the welfare of working women living in Kibera, Africa. Only 6% of respondents spontaneously reported that they would use the money to save women time. When respondents explicitly chose between three policy programs (an unconditional cash transfer program, an in-kind goods program or a time-saving program), only four respondents (13%) selected the time-saving program; 87% chose cash. Thus, time poverty might be neglected because people tend to pay more attention to material resources than time-related resources.

Second, people are less sensitive to small losses of time relative to money. For example, Festjens et al.⁷⁸ found that people become more sensitive to losses of time compared to money when the amounts are large (12 months vs \$18,000). Yet, when the amounts are small, people become less sensitive to losses of time (60 min vs \$12). This research suggests that people tend to pay attention to time costs only when these costs are large, which might explain why

time poverty can go unnoticed on a daily basis—potentially accumulating across days.

These two psychological factors help to explain why societal, institutional and organisational factors systematically contribute to time poverty. Indeed, the tendency to undervalue time could explain why the ‘ideal worker’ norm of long hours prevails and why organisations often fail to address idle time or the increased fragmentation of individuals’ time. Similarly, because people are relatively insensitive to small losses of time, policymakers and aid organisations might fail to address the accumulation of small administrative burdens over time. Institutional and organisational factors could reinforce these psychological factors, resulting in a vicious circle (Fig. 1).

Overall, a better understanding of why time poverty accumulates and how to alleviate it could promote individual and societal well-being. Reducing time poverty could also promote economic mobility, which has been consistently declining in the United States over the last 70 years⁷⁹. We argue that reducing time poverty could enable individuals from all walks of life and socioeconomic backgrounds to devote more effort and attention to their health, work, families and communities. Time affluence could increase resilience to stressors and free mental resources necessary to make more prudent financial decisions. Thus, alleviating time poverty might be a viable path towards helping people lift themselves out of material poverty^{1,4}.

In the next section, we discuss critical steps that social scientists should take to enrich our understanding of time poverty, a topic that we believe deserves its own investigation.

Next steps in alleviating time poverty

At a conceptual level, time poverty as a psychological construct requires further clarification. Scholars have used a myriad of definitions: some focus on the quantity of working hours, others focus on the subjective aspects of time poverty, and some involve a combination of the two (Table 1). Beyond these definitions, time poverty might have different effects depending on whether people feel like they do not have enough time to complete activities that they want to do (for example, social gatherings) or activities they have to do (for example, work projects)⁸⁰. A clearer conceptualisation of the experience of time poverty across different tasks and domains (for example, home vs work⁸¹) could inform the design of interventions aimed at reducing time poverty as a general feeling and within specific domains of one’s life.

The experience of time poverty will likely differ across socioeconomic and demographic groups^{1,82}. Low-income workers’ experience of time poverty is often driven by working multiple jobs with unpredictable work schedules that make it difficult to manage family responsibilities⁸³. High-income workers have greater control over when and where they work and feel time poor because they need to conform to the ‘ideal worker’ norm of overtime⁸⁴. Yet, high-income workers can pay for childcare or take vacation⁸⁵. Thus, time poverty might be more detrimental for low-income workers who are unable to pay their way out of such constraints. Women (vs men) are also more likely to experience time poverty because they tend to invest as much or more time completing unpaid domestic labour today as in prior decades⁸⁶. This prevents women from working long hours and being seen as an ‘ideal worker’. When women try to work similar hours as men, they experience worse mental health⁸⁷ because they have less or lower-quality leisure⁸⁸. Overall, time inequality in unpaid work—like childcare—is a core indicator of gender inequality and further contributes to greater feelings of time poverty and lower well-being among working women (vs men)^{37,89–91}. Future research should identify critical factors underlying the unequal distribution of time poverty across social and demographic groups.

A related and equally important phenomenon to understand is the ‘forced idleness’ experienced by certain social groups such as

the sick, unemployed, underemployed or elderly^{92–95}. While our Perspective has primarily focused on individuals who experience time constraints, research finds a quadratic relationship between work hours and subjective well-being, such that working too much and too little are both detrimental^{96,97}. Future research should therefore seek to better understand when time constraints and time affluence negatively impact well-being.

At the methodological level, there is a need to develop more reliable and accurate measures of time poverty¹. Progress has been made to study objective time-use. The day reconstruction method (DRM) is one of the best methods to assess how people spend their time. The DRM asks people to systematically reconstruct their activities and experiences over the past 24 h by recalling sequential episodes (Supplementary Note 1)—which is thought to avoid recall bias⁹⁸. Other researchers⁹⁹ have developed time-use surveys that provide a comprehensive quantitative overview of how men and women spend time over specific periods, such as by capturing forms of work that are often excluded from traditional surveys (i.e., unpaid work or work typically undertaken by women, like cooking while caregiving¹⁰⁰). Although time-use surveys provide understanding of people’s quality of life and their experiences of time poverty (Supplementary Note 2), they are far from being fully institutionalized, particularly in developing nations, and often do not include subjective measures.

Relatedly, scholars (Belal, S & Whillans, A.V., unpublished data) have started to develop incentive compatible measures of the value of time that rely on behavioural responses versus self-reported measures. These measures involve sending text messages that prompt participants with a randomised time commitment and payment amount, asking participants whether they accept or decline the task. The wage people are willing to accept signals the underlying value of time. Future research should combine the use of DRM, time-use surveys and incentive-compatible measures to more accurately capture time-value and validate the existing research that has traditionally relied on self-reported measures of the value of time.

As others have argued, the acceleration of life should be measured using objective and subjective measures³². In practice, measures typically focus either on objective or subjective time (see Williams et al.¹ for a discussion on the need to create multidimensional poverty measures). Building on this research, we propose that future research should move beyond self-reported data to capture the dynamics underlying the multiple dimensions of time poverty, including not only what people do but what they are unable to complete. To more fully understand the impact of time poverty, scholars should develop measures that capture actual and ideal time-use, the trade-offs or conflicts that arise, as well as the intensification and compression of time. Having the proper measures to quantify time poverty are essential for creating actionable steps to tackle it.

At the empirical level, social scientists should focus on collecting time poverty in more representative samples. Like most behavioural science research, the majority of research on this topic has been conducted with samples from WEIRD countries (western, educated, industrialised, rich and democratic). Future research on time poverty would greatly benefit from surveying people within diverse socioeconomic and cultural contexts. In particular, existing data on time poverty are especially scarce in developing countries and in low socioeconomic status communities in developed countries²⁹. These populations are of particular interest because they tend to be both time poor and materially poor^{27–29}. In Sub-Saharan Africa, for example, women spend an average of 4.2 h per day on unpaid work, like cleaning and cooking, and in India, women spend up to 6 h per day. As a result, poor women have less time available to participate in paid labour and invest in the development and well-being of themselves and their children. Time poverty further prevents girls from attending school. In Bangladesh, girls from poor families living in rural areas spend up to 10 h per day collecting

enough water for their homes and their family's crops. There are also health-related consequences, such that objective lack of time is associated with constraints on cognitive resources¹⁰¹. These data illustrate the tremendous value of addressing time poverty among non-WEIRD individuals who are also materially poor.

Along with gathering data across nations, we argue that it is also important to collect data within nations from populations that are exposed to extreme time-based experiences. For example, scholars could focus on capturing time poverty among people in the top 1% of income earners, those whose occupations require working extremely long hours (for example, physicians, CEOs and truck drivers), as well as those with irregular or unpredictable hours (for example, retail workers in developed countries or casual labourers in developing countries) and those who work few or no hours (for example, retirees and the unemployed). These investigations would further our understanding of how objective factors—like the structure of one's work—shape subjective time poverty¹⁰².

Overall, the literature on time poverty as a psychological phenomenon is in its infancy. Nevertheless, we argue that policymakers and organisational leaders can already begin to tackle time poverty. For example, a straightforward step towards alleviating time poverty is to ensure that time burdens are adequately quantified. In developed countries such as the United States, there are institutions that already collect information on the time burdens associated with administrative programs and regulations (i.e., OIRA¹⁰³). However, most state and municipal governments have not enacted similar initiatives. Thus, a significant portion—perhaps the majority—of the total administrative burdens imposed on citizens is unaccounted for. At the country level, policymakers could consider developing a time poverty Gini index. This index would capture the statistical dispersion of feelings of time poverty at the national and local level, serving as a unique indicator of inequality along with the Gini coefficient.

Existing research and policy efforts have primarily focused on the consequences of tangible forms of poverty (i.e., material) rather than time poverty. As we have argued, time poverty is a threat to well-being and economic development that often goes unnoticed among human resources leaders, policymakers and citizens. This pervasive and problematic phenomenon deserves the attention of society and scientists to the same extent as material poverty.

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Author contributions

L.M.G., A.V.W., and C.W. conceptualized the paper and wrote the initial version of the manuscript. L.M.G. and A.V.W. made revisions and finalized the manuscript.

Competing interests

The authors declare no competing interests.

Additional information

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