

A crisis of worklessness?

The phenomenon of *worklessness*, a neologism not yet found in dictionaries, has recently been commented on almost daily in the national press, especially in Great Britain. Nevertheless, it was defined as long ago as 2016 by Public Health England.¹

Worklessness refers to a state where an individual or no one in a household aged 16 and over are in employment, either through unemployment or economic inactivity.

Its origins lie, it is suggested, in high taxation and, especially, high marginal tax rates.² The “collapse of the work ethic” is also mentioned. Unsurprisingly, this is perceived at least partly to be an effect of the lockdowns imposed during the Covid-19 pandemic: many people were not allowed to work normally, and were paid by the Government not to work (the so-called furlough scheme). Nevertheless, not least considering that the above definition predates Covid-19, its origins may lie deeper than these rather superficial suggestions.

A clue is given by a remark of Marconi in the 1920s, that within a decade everyone would be able to work for just two hours a day in order to satisfy all our material needs.³ It was a reasonable extrapolation of the exponential growth in technology, which had already been going on since the beginning of the Industrial Revolution, and was on the threshold of being supercharged due to the scientific revolution [6].⁴

Nevertheless, as we well know that did not happen. John Hodgson has written a penetrating analysis of this phenomenon [3]. He called it the “leaky tank” theory. At the time he was writing (the 1920s) there were three main groups in society:⁵ (a) the dispossessed, employed in factories and other enterprises, and as agricultural labourers, who could eke out a living from day to day by their toils; (b) a middle group, financially independent and

professionally active, whose income was mainly derived from their work (this group encompassed artisans and craftsmen—the range of whose activities can be seen in the variety of livery companies still existing in the City of London—as well as members of the liberal professions such as architects, engineers, lawyers, medical doctors and scientists); (c) owners of land and the means of production (i.e., factories) of goods (including food) desired by the entire community, employers of group (a), and whose income was derived primarily from their ownership (insofar as they managed the businesses they owned, they would belong to group b). Numerically, $(a) \gg (b) > (c)$. Hodgson’s thesis is that in order for (c) to maintain control over (a), the material superabundance enabled by technological growth was deliberately leaked away in order to keep (a) poor, both materially and spiritually. Only rarely were more violent means necessary.⁶ In this struggle, group (b), although neutral, tended to side with (c);⁷ Orwell calls it “fear of the mob”.⁸ Hodgson introduced the term “communal waste”, defined as “human effort spent without adequate satisfaction to the individual or benefit to the community”,⁹ to delineate the mechanism of leakage.¹⁰

This societal structure was by no means static. The upheavals of World War I were having an effect. Universal suffrage meant that legislation was starting to favour the most numerous group (a). Rapidly increasing mechanization in both manufacturing and agriculture diminished the need for vast numbers of relatively unskilled workers. World War II brought further upheavals and, in its aftermath, a greatly expanded “welfare state”. Lessons were being learned from observing the USSR, in which group (a), with the

¹ Definitions, references and indicator sources for Work, Worklessness and Health: Local Infographic tool. London: Public Health England (2018).

² Two very simple changes that would not even significantly affect revenues could, in principle, be enacted almost immediately: (i) a drastic simplification of the system, such that all kinds of personal income, whether from paid employment, dividends, interest on savings, capital gains, are taxed at the same rate, which could be aligned with corporation tax; (ii) replacement of thresholds by a smooth function (see Appendix). For more discussion see ref. 1; for discussion of progressive tax rates see ref. 2.

³ Quoted by ref. 3, p. 61. Similar ideas were expressed by John Maynard Keynes—three hours a day [4]; just over a decade earlier Lord Leverhulme had put it as little as one hour’s work per week, in the preface to ref. 5.

⁴ Moore’s law provides excellent evidence for the exponential growth; similar laws could doubtless be derived for other branches of technology. Now that semiconductor-based microprocessors dominate so much of technology, which is independently improving exponentially, overall growth is in many cases superexponential.

⁵ We have Great Britain in mind, but the argument applies to most developed countries.

⁶ A similar problem prevailed in European possessions in the rest of the world, where a tiny European minority controlled a large native majority.

⁷ It is worth noting that most creative innovation came from group (b).

⁸ “The educated man pictures a horde of submen, wanting only a day’s liberty to loot his house, burn his books, and set him to work minding a machine or sweeping out a lavatory” (ref. 7, p. 108).

⁹ Cf. ref. 8.

¹⁰ Ref. 3, ch. 4, §6 (p. 15).

indispensable assistance of members of groups (b) and (c), was at least nominally in control (it is perhaps still too early to say what lessons can be learnt from the collapse of the USSR [9]). The structure evolved.

At the beginning of the 21st century there were again three main groups in society, different from before, with the following apparent characteristics: (i) the workless, including the unemployed and those whose actual contribution to productivity is negligible;¹¹ (ii) active and diligent workers who are often greatly, and possibly unsustainably, overworked; (iii) those whose income is derived solely from passive property and whose actual contribution to productivity *appears* to be negligible. This structure has persisted, and seemingly become more entrenched since the Covid-19 pandemic.

Numerically, (i) \approx (ii) \gg (iii).¹² The old group (a) has largely disappeared—for example, only about 1% of the population is now engaged in agriculture; with the aid of sophisticated machinery, many farmers nowadays run their farms practically single-handed. Group (ii) is very diverse. It incorporates many of the formerly independent members of the old group (b) who are now salaried employees; for example, most medical doctors are nowadays employed by the National Health Service (NHS), which is the largest organization in the UK, and one of the largest employers in the world; it has about 2 million staff, or about 6% of the total workforce. This staff is very diverse, and includes many who would formerly have been ranked in the old group (a), whose work cannot be mechanized. Group (iii) corresponds numerically to the old group (c) but it is much more labile. Instead of relatively static vast landholdings, which death duties (inheritance tax) largely made unsustainable, we

now have vastly ramified and intricate commercial structures,¹³ the apotheosis of which is ownerless trusts domiciled on Caribbean islands [10].

One of the arguments against the introduction of the NHS was that it would inculcate the mentality of everyone giving as little as possible to, and taking as much as possible from, the state [11].¹⁴ Other facets of the welfare state, similarly introduced after the end of World War II, may reinforce this mentality. Nevertheless, the country continues to function and for many people daily life can continue much as before, perhaps even with steadily increasing day-to-day conveniences. Hence, another explanation of worklessness is that the system, without social reformers or anyone else having consciously worked to achieve that end, has actually moved towards a situation in which everyone (on average) *does* only work a couple of hours each day, which indeed suffices to supply our material needs. As Hodgson eloquently sets out, at our level of technology it is perfectly unnecessary for us all to work productively (in the sense of supplying our material needs) for eight hours a day. Worklessness is therefore a consequence of the kind of decentralized regulation conceived by Adam Smith with his “invisible hand”.¹⁵

Whether society continues to progress depends on what we do with our new leisure time. Bernal envisaged a great increase in scientific activity [14], with almost everyone engaged in some kind of investigation of the world around us. Such intensity is very necessary if we are to progress from a Type I (and we are not even truly that yet) to a Type II civilization [15]. For that to become a reality, we need to radically overhaul our education system. Indeed problems with

¹¹ This group includes unpaid, but productive, work, such as housework and caring for infirm relatives. Those nominally in employment but ostensibly unproductive are epitomized by the formerly ubiquitous janitors of apartment and office blocks in the socialist countries of Eastern Europe. Of course they played a valuable and reassuring rôle in society, much like the platform and ticket office staff in metropolitan railway systems, who have also been swept away.

¹² Group (i), “economically inactive” or unemployed, numbers about 10.5 million out of a total population of about 67 million (UK); group (ii), employees, numbers about 33 million.

¹³ For example, the property company Signa, owned by René Benko, an Austrian businessman. “The business is made up of more than 100 companies held through trusts and shell companies based in Switzerland and Liechtenstein. Prior to Signa’s collapse, Mr Benko was ranked as one of Austria’s richest people” (D. Woolfson, Selfridges tycoon files for personal insolvency as empire collapses. *Daily Telegraph*, 8 March 2024). The case attracted press interest in England because Signa owned the well-known London department store Selfridges.

¹⁴ To some extent this dismal prediction appears to have been fulfilled. For example, it has just been reported that member of Parliament (MP) Esther McVey, who is also a government minister entrusted with tackling waste, claims financial support from the state for renting a flat in London (as she is entitled to do), while her husband, who is also an MP, claims financial support for a separate, nearby flat; the report (*Daily Telegraph*, 21 March 2024) has identified at least another 8 MPs claiming support for rent while also registering income from letting their properties in London. In Japan one would say that this was astoundingly KY (kuuki-yomenai—literally “unable to read the air”). Just how pervasive this mentality has become is well illustrated by the veritable outrage over the fact that if anyone in a household earns more than 100 k GBP per annum—about 3 times the average salary—it is no longer eligible for free childcare (L. Burton, Controversial £100,000 childcare tax trap destroys any incentive you may have to thrive, *Daily Telegraph*, 25 March 2024).

¹⁵ This should not be taken to imply that the “invisible hand” actually exists; it probably doesn’t, or doesn’t work [12]. Nevertheless, the notion of the invisible hand is certainly influential, to the extent that Hardin decried its interference with positive action based on rational analysis [13].

schools are sometimes linked to worklessness.¹⁶ Let us hope that “invisible”, decentralized regulation solves that problem as well.¹⁷

Are there other explanations to be considered? In recent months many scientific colleagues of mine have expressed their pessimism at the general turn of world events, not least the seemingly endless initiation of wars. Such events do, of course, have a psychological impact on society—not least because news about them is nowadays disseminated so widely, swiftly and vividly via electronic media.¹⁸ This could well account for the general political apathy that characterizes contemporary citizenry, alongside the fact that those who set themselves up as political leaders have failed abysmally. But if the notion of the “invisible hand” is not completely absurd, this apparent disconnexion between society and its government is not as great a problem as it appears to politicians and journalists, because individual self-interest should promote the collective good.

One can only hope that some of the remedies advocated by politicians (government) will not be implemented. Lack of houses has also been mentioned as sapping the motivating spirit—for which the obvious solution is to build even more, further despoiling what little remains of our natural environment.¹⁹ Alarm is raised at our shrinking workforce (because of the decline in tax revenues needed to pay those not working and earning), for which the solution is to encourage population growth and immigration.²⁰ Yet already in the 1920s it was commented that the British Isles were “overcrowded” with a population of about 40 million, and we are getting on for double that now—hence vastly more overcrowded, which of course weighs heavily on everybody, especially on groups (i) and (ii). Nevertheless, the unsustainability of our present world population is rarely discussed.²¹

Deliberately enacted (government) policy is exacerbating local (i.e., within the British Isles, or similarly within any particular jurisdiction) overpopulation. About 1 million people immigrated to the UK in 2022 (including

50,000 illegal immigrants).²² To put these numbers in perspective, the population of Nigeria increased by about 5 million in the same year. As mentioned, such immigration is welcomed by governments (of the UK and other European countries), which see immigration as a solution to falling birth rates and increasing worklessness, both of which diminish revenue from taxation, and it is welcomed by members of group (iii), who need a supply of workers satisfied with minimal remuneration to carry out the still not inconsiderable number of unskilled tasks that would be much more expensive to mechanize, including building the houses for the migrants to live in.

It seems that any discussion of population strikes at the root of our humanity. If we assert that $N - 1$ is better than N , one of us could be that “ -1 ”, hence such an assertion denies ourselves. That may explain why the matter is never properly debated. Hence, perhaps humanity has no choice but to continue headlong on its path of proliferation, much as it continues with mechanization [19,20], unless “invisible”, decentralized regulation comes to the rescue, in one or more of the manifold forms available to it.

Do one or more of high taxation, habituation to furlough, gloom at the national and world situation (eschatology), lack of houses and overcrowding suffice to explain the “deepening cultural resistance among sections of the British population to taking a job” that has been noted?²³ We still seem to be skating around the problem. Let us recall traditional wooden ships, inevitably subject to bending and torsion at sea, resulting in heavy shears in the hull, in turn resulting in more or less leakage between the beams, with the omnipresent danger that the crew would become exhausted and demoralized from the need to continuously pump out the water. In Figure 1, Greta Tolson depicts communal waste [3] taking toll of or paralysing endeavour. This should make it clear that no single measure is going to resolve the crisis, if crisis it is.

Turning away from purely economic considerations, it is revealing that the number of human resources (HR)

¹⁶ T. Wallace, Worklessness and truancy drive Britain into recession. *Daily Telegraph* (16 February 2024).

¹⁷ A possible manifestation of a new trend is low-cost private schools, of which there is now at least one example in England, the Independent Grammar School (IGS) in Durham. Costs are kept low by concentrating on essentials rather than providing and maintaining lavish facilities for sports etc.

¹⁸ There may also be bafflement at the lack of any obvious overarching principle—for example we are exhorted to stop the war in Gaza because of the humanitarian toll, but hostilities are stoked in Ukraine where the humanitarian toll is even greater.

¹⁹ See ref. 16.

²⁰ It is often stated that the UK needs to build 300,000 new houses each year (adding to the existing stock of about 25 million—but of course some of these have to be demolished), which greatly exceeds the capacity of planning authorities, builders etc.—in reality only about half that number are built. At the same time net migration to the UK is about 700,000; if one assumes that each new dwelling accommodates 2–3 people, then the requirement for new houses is accounted for simply by population growth. Hence, if net migration were reduced to about 300,000, then the existing rate of construction would be adequate.

²¹ See ref. 17, and further remarks in ref. 18. Hardin points out that there is no technical solution [13].

²² About 250,000 emigrated.

²³ Workless Britain (editorial). *Daily Telegraph* (14 February 2024).



Figure 1. The Great God Waste depicted by Greta Tolson as an octopus (from ref. 3).

rôles in British companies has increased tenfold in as many years. Practically every advertised job vacancy comes with text like “it is important that we [the employer] reflect the diversity of the population we serve, and we strongly encourage applications from candidates of all backgrounds”. This is the philosophy of the “diversity, equity, inclusion” (DEI) movement, but its practical effect is to discourage applications from the actual majority of the population, because they perceive that their actual merits for the job in question will not be at the forefront of any evaluation of their application.

This brings us back to the title question, to which the answer is that there is no crisis because we can well afford to have many workless. GDP *per capita* is about 46,100 USD in the UK, somewhat more than the overall European average, but similar to those of comparable countries like France and Germany.²⁴ This is presumably more than enough with which to live reasonably comfortably—the average UK annual salary is about

38,000 USD (GDP *per capita* includes net benefits from the NHS, state schools etc.). Another way of looking at this is to note that there are about a quarter of a million people with an annual income exceeding 200 kGBP. Their total income therefore exceeds 50,000 MGBP, which is almost exactly the same as the total expenditure on Universal Credit (a state benefit paid to those on a low income, limited to about 14,000 GBP per annum per person). Clearly there is, in principle, enough money available to pay for the workless to remain idle,²⁵ even after those contributing the money have retained sufficient for their own needs.²⁶

This is not, however, particularly desirable, not least for personal development.²⁷ Far better is Hodgson’s suggestion that *everyone* puts in a couple of months a year of routine work to maintain the amenities of society. This recalls the fortnight, as it was usually, that scientists had to spend away from their laboratories to help with the potato harvest in the USSR.²⁸ Everyone thereby will have a stake in society. It is a way of enacting the universal ties advocated by Watanabe [21]. It seems difficult, though, to organize this pattern without having recourse to a central planning authority. That is, indeed, the solution envisaged by Hodgson [3], although he passes rather glibly over it. It is the weakness of the whole scheme. *Quis custodiet ipsos custodes?* Hodgson describes approvingly the selection of representatives to serve on a managerial committee, which in turn chooses delegates for a higher committee, and so on, very like the system that prevailed in the USSR.

The human brain, the highest, most complex entity in the universe (as far as we are aware) is organized heterarchically, self-referentially [22]. Should not this be the model for society? But structure has to evolve, not be imposed. In the Middle Ages in Europe the problem was solved by reference to an external entity, God, who inspired a widely held (i.e., by most of society) belief in a common goal. Despite the emphasis of Christianity on *personal* salvation, and hence the preëminence of

²⁴ It will be found that the actual numbers vary surprisingly widely depending on which organization has calculated them. GDP data in this paper are from the World Bank.

²⁵ This approach can be refined and extended as desired. For example, it is stated that 25% of children in Scotland live below the breadline. The population of Scotland is 5.46 million, of which 16.1% are under 15, meaning that about 220,000 are below the breadline. If the 6 GGBP presently given annually as military aid to Ukraine were distributed among these needy children, they would each receive about 27,000 GBP per annum. But of course many jobs depend on the weapons manufacturing industry, hence GDP would fall if these arms could not be sold. The approach could also be applied to the whole world: with a global GDP of almost 10¹⁴ USD in 2021, and a population of almost 8 milliard, global GDP *per capita* is about 12,000 USD. This greatly exceeds that of Madagascar (independent in 1960), 500 USD; that of Mozambique (independent in 1975), 500 USD; and that of South Sudan (independent in 2011), 1100 USD (cf. Ref. 18). The *per capita* GDP is of the countries from which they gained independence are now, respectively, 40,800 USD (France); 24,500 USD (Portugal); and 1100 USD (Sudan). Sudan itself gained independence from Egypt and the UK in 1956; their GDPs *per capita* are now, respectively, 4300 and 46,100 USD.

²⁶ “Give me neither poverty nor riches; feed me with food convenient for me” (Proverbs 30, 8).

²⁷ Remarkably little seems to be known about how the workless actually spend the time they are not working.

²⁸ Immortalized in Vladimir Vysotsky’s *chanson* “Tovarishchi uchenye”.

individual liberty, in mediaeval times the church was pains to promote a collective view of society.²⁹ It was Machiavelli who pointed out the irreconcilability of these two views [26]. In China the collective view was always preëminent [27]. Both developed commercial systems that could be labeled “capitalist” [28]—unsurprisingly perhaps, because capital is essential for development [29]. In China, except for the chaotic intervals between dynasties, the collective arrangements for society have always been imposed from the top, but the moral and intellectual circumstances ensured that they met with general approval. Westerners fret about the apparent restrictions on individual liberty; the system is certainly not, and never has been, heterarchical. Can we, therefore, do better? To some extent we do, insofar as the foundation of business is making products that people wish to buy; hence, ultimately, group (iii) depends on groups (i) and (ii). This is heterarchicality, which answers the problematic question *Quis custodiet ipsos custodes?* and it has arisen spontaneously but, as is typical for evolved and evolving systems, has many irrational features, which we should strive to amend.

That is, however, a story for another day. For now let us summarize our thesis. The primary cause of worklessness is the now general but perhaps subliminal perception that the amenities of society can be provided with less than full-time work from nearly everybody. Since about 25% of the potential workforce is now inactive, and the average weekly hours for all those in employment is about 31 hours,³⁰ this situation is equivalent to everyone working 23 hours a week—only a little above Keynes’ prediction.³ The present situation is, therefore, unexceptionable. It might be considered inequitable by all those who do not enjoy their work and are not paid sufficiently above the average to be able to compensate for it by dissipating their excess income on eudemony-increasing activities. But it is futile for governments to strive to diminish or even eliminate worklessness.³¹ Their leaders would do well to remember an 1848 quote from Alexandre Ledru-Rollin: “Il faut bien que je les [le peuple] suive, puisque je suis leur chef”. The ideal would be, of course, “to enable everyone up to the limit of his abilities to take a conscious and responsible part in the functioning of Society”.³²

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References

1. J.J. Ramsden, Sovereign money. *Nanotechnol. Perceptions* **14** (2018) 3–7.
2. J. Ramsden, (In)equality. In: *Spiritual Motivation Vol. 2: New thinking for a post-Covid world* (ed. J. Ramsden), pp. 95–128. Basel: Collegium Basilea (2022).
3. J. Hodgson, *The Great God WASTE*. Eggington, Beds. (1933).
4. J.M. Keynes, Economic possibilities for our grandchildren, p.369. In: *Essays in Persuasion*. London: Macmillan (1931).
5. H.J. Spooner, *Wealth from Waste*. London: Routledge (1918).
6. J.J. Ramsden, Revolutions: agricultural, industrial and scientific. *J. Biol. Phys. Chem.* **21** (2021) 31–34.
7. G. Orwell, *Down and Out in Paris and London*, p. 108. London: Penguin Books (1975) (first published in 1933).
9. J.J. Ramsden, *The New World Order*. Moscow: Progress Publishers (1991).
8. S. Boyden, Phylogenetic maladjustment and the biology of modern society. In: *Spiritual Motivation Vol. 2: New thinking for a post-Covid world* (ed. J. Ramsden), pp. 3–34. Basel: Collegium Basilea (2022).
10. P.R. Beckett, The awakening conscience? Tax havens from pandemic to war. In: *Spiritual Motivation Vol. 2: New thinking for a post-Covid world* (ed. J. Ramsden), pp. 77–94. Basel: Collegium Basilea (2022).
11. National Health Service Bill (debate on 2nd Reading). HC Deb 30 April 1946 vol. 422 cols 43–142.
12. J.L. McCauley, Where is Adam Smith’s invisible hand? In: *Complexity from Microscopic to Macroscopic Scales: Coherence and Large Deviations* (eds A.T. Skjeltorp & T. Vicsek), pp. 181–214. Dordrecht: Kluwer (2002).
13. G. Hardin, The tragedy of the commons. *Science* **162** (1968) 1243–1248.
14. J.D. Bernal, *The Social Function of Science*. Cambridge, Mass., MIT Press (1967) (first published in 1939).
15. M. Kaku, *Visions*. Oxford: University Press (1998).
16. J.J. Ramsden, “Build back better”—a commentary. *J. Biol. Phys. Chem.* **20** (2020) 91–99.
17. J.J. Ramsden, A.A. Mamali and N.T. Athanassoulis, A sustainable world population. *J. Biol. Phys. Chem.* **19** (2019) 11–21 and references therein.
18. J.J. Ramsden, Sustainable development goals. *J. Biol. Phys. Chem.* **23** (2023) 99–102.
19. O. Spengler, *Der Mensch und die Technik*. Munich: C.H. Beck (1931).
20. J.J. Ramsden, Machinery secures human domination. *Nanotechnol. Perceptions* **18** (2022) 70–72.
21. S. Watanabe, A paradigm shift to sustainable evolution through creation of universal ties. *Nanotechnol. Perceptions* **12** (2015) 100–129.

²⁹ Rather like Christianity’s movement away from world- and life-denial focused on eschatology towards their affirmation [23] (see also ref. 24), post-Reformation it moved strongly away from corporatism towards individualism, spearheaded by the Puritans [25].

³⁰ <https://www.ons.gov.uk/economy/grossdomesticproductgdp/articles/averagehoursworkedandeconomicgrowth/2024-01-22>

³¹ The latest development is to label the workless as “sick”—“There are prizes in store for whoever can get Britain’s sick back into action” (Getting Britain back to work is a post-election priority (editorial), *Sunday Times*, 24 March 2024)—“Mental health issues appear to be at the forefront” (*Sunday Times*, loc. cit.); here it might be useful to recollect Thomas Szasz’ views on on mental illness [30].

³² Ref. 3, ch. 9 §5 (p. 104); see also ch. 4 §§33 and 37 (pp. 53 and 58); cf. ref. 8.

22. R. Kaehr and E. von Goldammer, Again computers and the brain. *J. Molec. Electronics* **4** (1988) 31–37.
23. A. Schweitzer, *Civilization and Ethics* (3rd edn). London: Adam & Charles Black (1949).
24. H.A. Rodgers, Dr Albert Schweitzer's eschatological interpretation of the life of Jesus (PhD thesis). University of Edinburgh (1948).
25. R.H. Tawney, *Religion and the Rise of Capitalism*. Harmondsworth, Middlesex: Penguin Books (1977) (1922 Holland Memorial Lectures, first published in 1926).
26. G. Stent, The dilemma of science and morals. *Zygon* **10** (1975) 95–112.
27. Chen Huan-Chang, *The Economic Principles of Confucius and his School*. New York: Longmans (1911). Reviewed by J.M. Keynes, *Econ. J.* **22** (1912) 584–588.
28. J.P. McDermott and S. Yoshinbu, Economic change in China, 960–1279. In: *The Cambridge History of China, vol. 5, part 2, Sung China, 960–1279* (eds J.W. Chaffee & D. Twitchett), pp. 321–436. Cambridge: University Press (2015).
29. J.J. Ramsden, What is capitalism? *Nanotechnol. Perceptions* **19** (2023) 5–26.
30. T.S. Szasz, Mental illness as a metaphor. *Nature* (Lond.) **242** (1973) 305–307.

APPENDIX

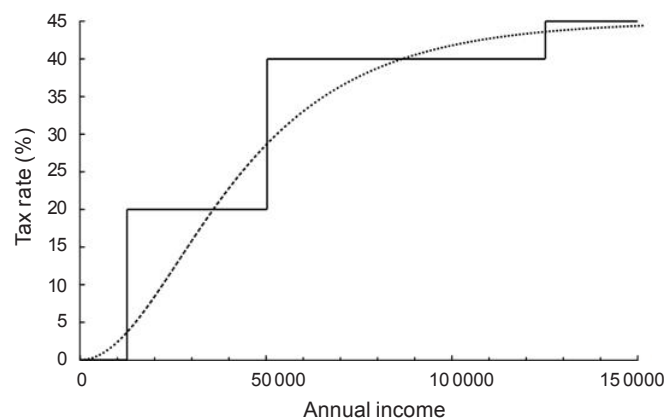


Figure 2. Taxation rates versus income/GBP. Continuous line, the actual régime in the UK. Dashed line: suggested régime—the function is: taxation rate = $\{1 - \text{sech}[(\text{annual income})/30,000]\} \times 45$. The chart only illustrates income tax; i.e., additional taxes on income such as National Insurance, council tax (paid to local authorities), graduate tax, fines for minor motoring offences,³³ and what are in effect negative taxes such as subsidies for children might also be included, but unlike mainstream income tax, which is universal, the additional taxes do not apply to everyone.

³³ Strictly speaking some of these are not taxes—National Insurance contributions are paying for future pensions, and the “graduate tax” (as it is widely perceived) is actually repaying student loans (with interest).