Pigou on War Finance and State Action

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Resumo: O artigo trata da contribuição de Arthur C. Pigou aos debates sobre política econômica na Grã-Bretanha durante a Primeira Guerra Mundial, mostrando como muitas de suas ideias sobre o assunto originaram-se em sua obra maior no pré-guerra, *Wealth and Welfare*. Inicialmente, são apresentados os argumentos de Pigou em prol de um aumento nos impostos, bem como sobre a forma mediante a qual as decisões individuais afetam a distribuição dos custos de guerra através do tempo. Coloca-se em evidência igualmente o seu entendimento da natureza da inflação no país ao longo do conflito, complementado por suas observações a respeito da continuidade da intervenção estatal no período de paz. A preocupação de Pigou com a dívida pública é apresentada no contexto do debate sobre a conveniência de um confisco de capital no pós-guerra. Por fim, consideram-se suas recomendações relativas à reconstrução política e financeira da Europa.

Palavras-chave: orçamentos de guerra britânicos, empréstimos, tributação, confisco de capital

Abstract: This paper reviews Arthur C. Pigou's intellectual contribution to the debates on economic policy during World War I in Britain, showing how many of his ideas on the subject can be traced back to his major pre-war work, *Wealth and Welfare*. Initially, we present Pigou's arguments in favour of an increase in taxation and on how individual choices affect the distribution of war costs over time. Attention is also drawn to his understanding of the nature of inflation in Britain during the war, as well as to his remarks about the efficacy of state wartime controls continuing into the post-war era. Pigou's concerns with Britain's massive national debt are considered in regard to the controversy over the convenience of a capital levy after the war. Lastly, his recommendations on European political and financial reconstruction are addressed, along with his specific proposals for state action in matters connected with national defense.

Key words: Britain's war budgets, borrowing, taxation, capital levy

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The economic wreckage now going forward, immense and unprecedented though it be, is to my mind trivial and insignificant in comparison with the human and moral wreckage – the mangled bodies of men and the shattered fabric if ideas, with which it is so fatally accompanied. It is not the business of this conference to discuss these things, and I do not propose to discuss them. But it is not right that we should come to debate our lesser economic problems without a memory and a word for their terrible setting in blood.

A. C. Pigou, 27 July 1916, Conference on the Reorganisation of Industry

1. Introduction

Speaking at the annual meeting of the British Association, on 8 September 1815, the president of the Economic Science and Statistics Section, William R. Scott, expressed his regret at the lack of a full treatise on the economic theory of war. British liberal economists, he complained, had invariably emphasized the beneficial effects of free trade in bringing nations together, forgetting, however, to develop and elaborate upon a serious theoretical explanation of the workings of an economy under extreme belligerent duress (Scott, 1915, pp. 495-496). Scott's worries, though, were a bit overstated.[1] Some voices in Parliament, albeit few, had questioned indeed the first two fast-tracked war budgets, introduced by the Chancellor of the Exchequer David Lloyd George, that privileged a borrowing policy, supplemented by the issue of Treasury notes and the depletion of the sinking fund (Mallet and George, 1929, pp. 19-65; Hirst and Allen, 1926, pp. 21-72). At the same time, a number of public intellectuals had already come out in the press debating the nation's financial strategy.[2] The main topic of dispute revolved around how much of the war costs should be covered by taxes instead of by the indiscriminate resort to loans.

A. C. Pigou was perhaps the academic and public figure who was most active in investigating~~,~~ – through a series of papers, books and testimonies~~,~~ – the long-term implications of World War I for the British economy. Reviewing his expressive work on the financial and monetary dilemmas of the time is relevant for four reasons~~,~~. ~~Firstly~~ Firstly, in contrast to other scholars and contemporary politicians, he approached the matter wielding the theoretical arsenal he had just developed in *Wealth and Welfare* (1912), a work that brought him fame as the leader of the Marshallian school of

[1] Earlier that year, the editor of *The Economist*, Francis W. Hirst, had published *The Political Economy of War* (1915), containing a good deal of historical information on Britain's past international conflicts mixed up with some old-fashioned financial prescriptions from Adam Smith, William E. Gladstone and Robert Hamilton's 1814 tract about Britain's national debt (Hirst, 1915, pp. 18-71, 136-149, 175-206; see Hamilton, 1814, pp. 7-11).

[2] John E. Allen (1914) advocated an immediate program of heavy taxation since he believed people would be more willing to pay additional taxes at the beginning of the war than later. Sir Charles Hobhouse (1914) called for a retrenchment in the government's regular expenditures as an example of economy to civil society. Frederick Pethick-Lawrence (1915) condemned the loan policy for its granting the richer classes a share in the nation's future prosperity disproportionate to their true sacrifice. W.M.J. Williams (1915) deemed the government's borrowing strategy as essentially correct in view of his prediction of an imminent victory on the battlefield, as would boldly assert as well Sir George Paish (1916) in a round table at the Royal Statistical Society the following year. Paish's undisguised optimism, though, was harshly contested by his peers (Flux and others, 1916).

economics at Cambridge (McLure, 2012). Secondly, Pigou's prescriptions on war finance can be taken as a conspicuous example of his lifelong commitment to practical issues, a feature of his academic career often neglected in the literature.[3] Thirdly, as the war reached an unprecedented scale, it is possible to track down how Pigou's original stance toward its economic repercussions, as elaborated in *The Economy and Finance of the War* (1916), evolved over time to reach its final form in *The Political Economy of War* (1921). Lastly, by examining his thoughts on war issues, new insights can be unveiled into Pigou's position as regards not only Britain's post-war economic performance, but also toward that momentous decision of economic policy during the interwar years, the return to the gold standard in 1925.[4]

In the light of these introductory remarks, this paper is structured as follows. Section 2 focuses on Pigou's initial writings, from 1915 and 1916, on the economics and finance of war, especially his reflections on the best way to finance the escalating war budgets. Section 3 covers his papers published during the late phase of the war, 1917 and 1918, dealing with the nature of the British current inflation and the role of the state in the economy. Section 5 examines the main arguments summoned by Pigou in favour of a capital levy, along with the key arguments against the levy raised by a number of scholars after the war, showing also Pigou's late change of mind on this issue. Section 6 reviews the Professor's thoughts on the lasting consequences of the war and the required steps toward the political and monetary reconstruction of Europe. The paper concludes with a summary of the main traits of Pigou's contribution on the economic consequences of World War I.

2. The first phase of the war: real and monetary finance

2.1. *First reflections: Pigou on war, taxes and loans*

Pigou's preliminary inroad into war finance came with the paper "Sources and Methods of Paying for the War", in the 1915 July issue of the *Contemporary Review*. According to him, the actual costs of the military engagement, that is, the real resources directed to the war effort, could be drawn either from the future or the present. In that regard, future production is affected when inventories are used up; the capital stock is run without proper maintenance or replacement; people refrain from new investments; property owned abroad is sold to foreigners, and, lastly, when debt is funded from loans obtained overseas.[5] With respect to resources drawn from the present, Pigou lists two ways of

[3] David G. Champernowne (1959, p. 264) has asserted that Pigou had no concern for "practical and human problems" and Harry Johnson (1960, p. 152) has claimed that the Professor's intellectual drift to formalism drove him toward scientific inquiries bearing far more light than fruit. While this may have been the case when Champernowne and Johnson were at Cambridge, it most certainly was not the case during the first two decades of Pigou's professorship.

[4] William Barber (1991) has indicated that Pigou was an unlikely figure to write about the economics of war considering his lack of expertise on administrative issues. Pigou's rather academic approach to wartime economic policy, sometimes disdained as too speculative, was nonetheless unavoidable for a series of reasons, namely: the almost total inexistence of statistics on Britain's main economic aggregates; the distortionary effects of inflation on public accounts; the unreliability of war budget estimates (see footnote 6); the absolute lack of supervision over the war ministries; the secrecy about the figures on the actual state of public finances, and, lastly, the absence of written records of cabinet meetings, at least under the premiership of Herbert H. Asquith's (1908-1916) (Burk, 1982, pp. 33-107; Hazlehurt, 1970; Mallet and George, 1929, pp. 130-143, 162-174; Lawson, 1915, pp. 151-220).

[5] Pigou forgets to deduct the concession of loans to allied countries. As for Britain, in the fiscal year 1919-1920, this sum amounted to £1.712 million, much of it admitted as unrecoverable by British

getting access to them, either by increasing the overall level of production, which would involve longer working hours and less strikes, or by reducing the share of production dedicated to private consumption, which would require voluntary abstinence by private individuals. As for the monetary and fiscal instruments that can be used to pay for the war, Pigou highlighted four channels, namely: foreign loans; extra taxation; domestic loans, and an increased fiduciary issue of currency notes (in modern terminology, "quantitave easing" or "an increase in fiat money"). In relation to the last point, the increase in the supply of fiat money had the potential to contract real consumption but not nominal consumption spending, owing to the consequent inflation, and release real resources that can be appropriated by the government[6] (Pigou, 1915b).

A critical notion in Pigou's argument is that there might not be a direct correspondence between how the government finances its budget and the way real resources are put at its disposal by the people. Some individuals might pay taxes out of their savings while others might subscribe to loans by cutting on personal consumption or by borrowing from the banks.[7] The particular method chosen by the government to pay for its expenditures has, however, a distributive effect that can influence how the burden of the war is parceled out over time. Although war loans tend to make the resources for private capital accumulation more scarce, Pigou notes that an excess of fiduciary inflation or of indirect taxes could be far more damaging to the economy by deteriorating the living standard of poor families and, therefore, putting them at greater risk of reduced productive capacity in the long run. This proposition, which had been raised in different parts of *Wealth and Welfare*[8], is worded by Pigou as follows:

> This point is of very great importance. It shows that methods of financing the war which mean large contributions by the poor, though they are likely to diminish the material capital of the

authorities themselves, of which Russia answered for £568 million, France for £514.8 million, Italy for £457.4 million, and other allies for £180.8 million. The United Kingdom debt to the United States reached £1.038 million in that same period (Morgan, 1952, pp. 107, 317-321).

[6] Here, Pigou does not include cuts in the government's ordinary spending, a point scarcely brought up during the early phase of the war. The notable exceptions were Hobhouse (1914, see note 3), and Lord Middleton, who, on 6 July 1915, at the House of the Lords, called for the utmost economy in peace services (Hirst and Allen, 1926, pp. 76-79). Two years later, on 6 July 1917, the uncontrolled growth of national expenditure was finally questioned at the Commons by Colonel Godfrey Collins, and a Special Committee was set up to review the matter (Mallet and George, 1929, pp. 133-134). The Committee's final report, issued in 1918, identified "excessively liberal" payments being made, the existence of redundant staff in several departments and bad accounting practices as a rule, so it strongly advised a more active scrutiny of government's expenditures by the Commons thereafter (Committee on National Expenditure, 1918, pp. 108-149).

[7] Interestingly, analogous to the issue of whether individuals respond to an increase in their taxation obligation with increased debt or reduced consumption, is the government's own decisions to fund war expenditure through increased tax or additional debt. That, of course, raises issues associated with the *Ricardian equivalence*, a subject that Italian public finance economists had raised before and during the war (see De Marco (1992) [1893] and Griziotti (1992) [1917]). Pigou though take it as self-evident that, in the presence of increased fiduciary issue of currency, there is no such equivalence and, in that circumstance, he endeavors to consider the combination of domestic debt, foreign debt and taxes that will prove least disruptive in transferring resources to the government by reducing real private consumption, either from current or future generations.

[8] Pigou made use of the this proposition extensively in *Wealth and Welfare* when arguing in favor of transferences to the poor in order to improve their health, education and housing, resulting thus in stronger bodies and trained minds that would bring about an increase in productivity (Pigou, 1912, pp. 54-65, 343-345, 355-364, 393-398). Alfred Marshall, Pigou's mentor, had already maintained that a well-fed and educated population was the best investment a nation could undertake to promote the growth of wealth (Marshall, 1920, pp. 220-236).

> country less than other methods, may, nevertheless, be more hurtful than other methods to the accumulation of capital in the widest sense, and, therefore, to the productivity of the country in future years (Pigou, 1915b, p. 717).

The same line of reasoning was further explored by Pigou in the paper "The Distribution of the Burden of the War Charges", in the 1916 July issue of the *Contemporary Review*. This time, though, he put forth a case for a heavier taxation of the well-to-do people using the assumptions of diminishing marginal utility and its comparability among individuals, on which he based his plea for income redistribution in *Wealth and Welfare* (Pigou, 1912, pp. 2-31, Part II, Part III, chap. IX)[9]. Pigou holds that the suggestion for increasing taxes in equal proportion for everybody would be intrinsically unfair, since a shilling taken from the poor occasions a loss of utility greater than the one experienced by a rich person deprived of that same shilling. Still, the decision of conferring priority on domestic loans benefits mostly affluent investors, given that the interest rate on public bonds has to be higher than the existing alternatives to the private sector, while a significant portion of the loans is taken up by rich individuals out of funds borrowed from the banks. The inflation resulting from the government's extraordinary demand built upon private credit, observes Pigou, hits harder the working people, who is thus forced to reduce their regular consumption. Besides that, they are bound to face further adversity after the war due to the lessened supply of capital caused by the higher taxes required to servicing the national debt (Pigou, 1916a).

2.2. A more comprehensive approach to war finance

From the above papers and two lectures delivered that same year, Pigou composed in 1916 the book "The Economy and Finance of the War", whose overall content can be placed under four heads: (i) the temporal incidence of war costs, (ii) the foreign exchanges, (iii) the distributive effects of the financial policy, and (iv) the post-war economic reconstruction. On the first issue, Pigou observes that since people have a marked preference for present *vis-à-vis* future enjoyments, direct interference by the government to coordinate private choices is inevitable in time of war to preserve a minimum level of capital formation and to discourage luxury spending.[10] Restrictions on the importation of consumable goods, the adoption of food rationing and the introduction of duties on consumption goods would go a long way toward inducing society to draw upon the present in meeting the war necessities. Restrictions on investment, on the other hand, as the prohibition of placing capital abroad or on certain

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[9] Based on those assumptions, Pigou maintained that economic welfare could be increased in three different ways, namely: (1) by an expansion in the national dividend, for a given distribution of income; (2) by a more even distribution of income, provided the national dividend is not diminished and (3) by attenuating the intensity of business cycles, since for the representative man more utility is lost during the depression than is gained in the prosperity phase for commensurate variations of income (Pigou, 1912, pp. 14-32, 401-407).

[10] The idea received further elaboration in *The Economics of Welfare*, published in 1920, where Pigou pins down the deficiency in telescopic faculty, that is, the circumstance that people see future pleasures in a diminished scale as compared with pleasures of the same intensity at the present, as limiting investments and pressing for the overuse of the available capital stock. In view of this particularity of the human nature, the government should intervene in the economy to stimulate savings and preserve existing resources for future generations (Pigou, 1920a, Part I, chap. II).

kinds of activities, set up by the Treasury early in the war, would have a contrary effect (Pigou, 1916b, pp. 48-52).[11]

In regard to "the exchanges", that is, foreign trade, Pigou identifies Britain's large trade deficit as one of the crucial economic problems in prosecuting the war. British imports of food, munitions and raw materials had grown considerably to attend war needs and her exports had fallen heavily as a result of the shortage of labor and capital. The terms of trade consequently moved against the country, a fact that had the potential to undermine the whole war effort unless adequate means of paying for extraordinary purchases from overseas were found. That was the root cause behind the depreciation of the pound against neutral currencies, notices Pigou. The first solution to this problem would comprise cutting back ordinary imports to a minimum while diverting labor and capital to produce more exportable goods. The second one would require the transference of gold and the selling of assets held abroad. Here, however, Pigou makes it clear that the first of the above options is the best as it would keep stocks of gold and foreign securities intact for longer, ready as a trump card to be pulled out only when the decisive circumstance arrived.

> If they [authorities] have the fortitude to do this, they will have at their command, when the critical moment comes, a powerful strategical reserve. By conserving it till then, and then throwing it into the scale, they may, if fortunate and wise, bring about the end of the war (Pigou, 1916b, pp. 63-64).

But again, Pigou became preoccupied with the distributive aspects of the government's financial policy. In addition to replicating the arguments on distribution that he outlined in his previous papers on the subject, he added four new reasons for taxing the more well-off of society. First, he alerts readers to the existence of a limit on taxing the poor, and, since such limit had presumably been reached, no major additional revenue could be reaped from this particular source. Second, a strict loan policy alone would mainly benefit wealthy creditors of the government, since they would earn a higher real interest rate on their bonds when deflation comes about after the war. Third, paying off the national debt, built by indiscriminate borrowing, would necessitate heavier taxes most likely to be weight, to a large extent, on the shoulders of the poorest segments of the nation.[12] Lastly, explains Pigou, although taxing the rich actually reduces the funds available to capital accumulation, this measure would be just temporary, lasting only until the war ends and having, therefore, no permanent effect on savings afterwards (Pigou, 1916c, pp. 66-83).[13]

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[11] The London Stock Exchange had been closed on 31 July 1914 and reopened only in 4 January 1915. On the following 19 January, the Treasury determined that new issues of capital would be conditioned on its previous authorization based on considerations of 'national interest'. Empire issues would be approved only in cases of urgency and special circumstances, while foreign issues would normally be not allowed (Burk, 1984, p. 86-89; Morgan, 1952, p. 261-266).

[12] In a letter to the editor of *The Economist* by the end of 1916, Pigou suggested that everyone not engaged in combatant service should be subjected to an extra tax. In addition, he pressed again for a heavier taxation of the rich on the grounds that as the stronger man faces the most perilous missions in battle, the economically stronger has to be subjected to similar treatment at home (Pigou, 1916d, pp. 1003-1004).

[13] Alfred Marshall wrote to *The Economist* in 1916 in support of Pigou's taxing proposals for fear that the heavy tax burden needed to service the debt would encroach upon the supply of the badly needed capital after the war (*The Economist*, 30 December 1916, p. 1228). Earlier that month, a certain Graham Bower had called the Professor unpatriotic for advocating socialistic proposals without taking into consideration that excessive taxes on the rich would destroy industry and thrift, pushing capital out the country and making the government goes bankrupt (*The Economist*, 16 December 1916, p. 1128-1129). The following

Reflecting a combination of stoic realism and guarded optimism for the future at the time, Pigou dedicated the book's last section to the aftermath of the war. The transition to peace, in his estimation, was bound to be seriously complicated by the demobilization of large contingents of men from military service and the deficiency of savings to attend domestic and, especially, foreign demands for capital from war torn countries in Europe. The resulting imbalance, between the demand and the respective supplies of capital and labor, would put pressure on interest rates to rise and wages to fall, thereby further worsening the distribution of income. Nevertheless, Pigou foresaw an industrial boom on the horizon, powered by the unrestrained enthusiasm of producers and merchants with the peacetime recovery of civilian demand. That prosperity, though, cautioned him, inspired by his depiction of expectations-fueled business cycles in *Wealth and Welfare* (Pigou, 1912, pp. 453-466)[14], should be moderated by the authorities through some kind of credit restriction in order to attenuate the pessimism to be triggered by the subsequent slowdown in sales.

> "It is practically certain that, to make good the havoc and the waste of war, there will be a strong industrial boom. This boom, if history is any guide, will generate in many minds an unreasoning sense of optimism leading to much wild investment. The result, some years afterwards, will be failures, crisis and depression. If this danger is to be obviated or mitigated, it is imperative that the Government and the banks should so act as to restrain and keep within reasonable limits the initial peace boom." (Pigou, 1916c, p. 88).

At the end of 1916, Pigou published "Interest after the War and the Export of Capital" in *The Economic Journal*. From the conjectures that the supply of fresh capital would be close to its pre-war level, while the corresponding demand would be larger due to the reconstruction process in Europe, he projected a higher real interest in peacetime. Continuity of the prohibition on sending capital abroad would immediately hurt savers as the interest rate received on saving would be lower, but that same restriction would benefit workers, in the medium term at least, owing to their increased productivity as a result of a greater availability of capital equipment. In the long run, however, capital accumulation would be slowed down due to the loss of a higher income inflow from property owned abroad. On balance, the best policy on this issue would, according to Pigou, be to leave capital free to seek the most rewarding return overseas, but to prohibit funds from going into the buildup of armaments, while also ensuring that, through bounties or grants-in-aid, some minimum value of domestic investment in social infrastructure, as in housing, for instance, were maintained (Pigou, 1916).

3. The final phase of the war: Pigou on inflation and state intervention

As the war dragged on into 1917, Pigou's confidence on a near end to the conflict must have worn away very quickly. Reginald McKenna, Chancellor of the Exchequer (1915-1916), who had attempted to fund by taxes a more substantial part of the ever growing government spending, was replaced by Andrew Bonar Law (1917-1919), and the new Chancellor quickly went back to Lloyd George's former loan strategy (Peden, 2000, pp.

year, in a letter to the editor of *The Times*, Pigou explained again how a policy of taxes was supposed to work as against loans: "The difference is that on the borrowing plan these persons [bondholders] are, and under the tax plan they are not, promised a high rate of interest at the expenses of the tax-payers in the future" (*The Times*, 23 April 1917, p. 9).

[14] As stated in *Wealth and Welfare*: "Experience suggests that, apart altogether from the financial ties, by which different business men are bound together, there exists among them a certain measure of psychological interdependence. A change of tone in one part of the business world diffuses itself, in a quite unreasoning manner, over other and wholly disconnected parts." (Pigou, 1912, p. 460).

73-127; Mallet and George, 1929, pp. 68-174). Inflation, as Pigou had feared, continued in a crescendo during the war years. The Ministry of Labour Cost of Living Index, taken as 100 in July 1914, reached 165 in January 1917 and 220 in December 1918, similar variations registered for *The Economist* index over the same period (Morgan, 1952, pp. 267-285).

In December 1917, a paper by Pigou entitled "Inflation" came out once again in *The Economic Journal*, analyzing the sources of the ongoing rise in prices in Britain.[15] In general terms, says Pigou, any typical country within the international gold standard could be considered small when set against the remaining others taken as a whole. More specifically, what happens in a single country has a small effect over the world, while world scale events have a large influence on the economic state of any single country. Considering the gold standard system with fixed exchange rates, says Pigou, if a government issues too much money, prices go up and gold flows out of the country, while commodities move in the opposite direction until a new equilibrium is reached with slightly higher prices all around. Britain was being successful in evading this mechanism during the war due, first, to the selling of foreign securities abroad to pay for her excess imports and, second, to the difficulties of moving gold around. This last factor particularly meant that her domestic inflation had had a negligible impact in the world at large, while the worldwide rise in shipping and insurance charges had hit the country hard. By comparing retail food prices in the US, Canada and Britain, Pigou asserts that much of the increase in British prices was actually due to external causes. This conclusion would be important in his future analysis of Britain's return to gold at the pre-war parity, as will be seen ahead. In his words:

> On the whole, therefore, it would seem fair to conclude that perhaps four-fifths of the rise that has taken place in this country has been, in a loose sense, 'inevitable'; and that responsibility cannot properly be thrown upon our monetary and banking arrangements for more than the remaining one-fifth (Pigou, 1917b, p. 464).

Right after the Armistice, in December 1918, Pigou had one important paper, "Government Control in War in Peace", published once again by *The Economic Journal*. The reason for its relevance lies in the fact that it allows a glimpse of how Pigou weighed the impact of the war on the role of the state under normal conditions. A strong case for public intervention in the economy had indeed been set out in *Wealth and Welfare* in three different circumstances. First, when social costs happened to be distinct from private costs, this situation might require the control of monopolies, the regulation of unbalanced contracts or even the taxation of certain activities with harmful effects on third parties. A second instance of state intervention conceived by Pigou comprised the redistribution of income by means of progressive taxation and the provision of public goods to the poor, as well by the establishment of a basic income at a national level. Lastly, industrial fluctuations could be mitigated by a mandatory insurance for wage earners and by the undertaking of public works for the unemployed

[15] The month before, in *The Quarterly Journal of Economics*, Pigou had published his famous paper "The Value of Money", which introduced explicitly the well-known Cambridge equation $P = (kR)/M$, defining the demand for money M as a rectangular hyperbole on prices P when total resources R and the proportion k of those resources kept as legal tender are assumed constant. In the case of a freely coined metallic legal tender, as in a pure gold standard regime, Pigou held that international gold movements would tend to equalize price levels in the countries sharing a similar monetary regime (Pigou, 1917a, pp. 61-63).

in times of economic distress (Pigou, 1912, pp. 246-289; 346-398; 408-422; 476-488; see also footnote 3 above).[16]

Despite the unprecedented scale of state command over the economy during the war, it did not substantially change Pigou's convictions about the matter, at least until that moment. Apart from the cases aforementioned, he believed, as expressed in *Wealth and Welfare*, that the government interference in the economy, at least in principle, would reduce the national dividend and, consequently, economic welfare (Pigou, 1912, p. 104-108). In his 1918 paper, though, Pigou attacks the issue from three different perspectives. From a purely administrative standpoint, he observes that the government was forced to take full control of some strategic industries to speed up the manufacture and delivery of munitions and all sorts of goods to the troops. The relative success of this kind of intervention resulted, however, from the very unique situation of almost all resources being directed to one well-defined and single end. Once the war was over, though, such restriction would no longer apply and the effectiveness of this kind of action would become extremely dubious (Pigou, 1918).[17]

The second form of government wartime intervention contemplated by Pigou was the rationing of food among people and of raw materials among industries. To preserve these wartime practices in peace conditions would be unfeasible, according to him, owing to the complexity of the enterprise and the political resistance to any type of intervention of that nature in normal times. In point of fact, writes Pigou, any pre-determined scheme of rationing used during the war would be unsuited to a market economy because there would no longer be a single end to be achieved, but instead many concurring ends which are not only varied but also extremely volatile.

> Those things ought to be made, which are most wanted and will yield the greatest sum of satisfaction. But the Government cannot possibly decide what these things are; and, even if it could decide what they are at one moment, before its decision had been put into effect conditions would very probably be changed and they would have become something entirely different (Pigou, 1918, p. 369).

As for the third type of government intervention, price control, its usefulness had long been established in cases of monopolies in order to avoid excess profits and limited supplies. The situation is totally different, says Pigou, for the case of competitive industries subject to a fluctuating demand. Times of good sales are commonly followed by a retraction in spending so that, over a period of years, each firm reckons just average profits. Price regulation, in such context, would deprive entrepreneurs of their abnormal profits in prosperity without helping them anyway when bad times come around. Price caps would drive capital away from regulated activities, which could have actually prospered if the restriction was not in place. Productive resources would thus end up misdirected by continued state intervention in prices, diminishing total output and, therefore, economic welfare (Pigou, 1918).

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[16] For a broader approach to the relation between the state and the economy, as formulated by Pigou in a lecture to the London School of Economics in 1934, see "State Action and *Laissez-Faire*" (Pigou, 1935, pp. 107-128).

[17] This same argument had been advanced by Pigou the previous year in the paper "The Economics of the War Loan", out in *The Economic Journal*, which dealt with the government's borrowing policy in the terms already presented here, but which, at some point, reflected on the convenience of a state controlled economy in the following terms: "To compel people to do things involves a great deal of organisation, and it is very difficult to make sure that one is compelling the people best suited to different things to do those things. Therefore, a Government naturally likes to do very little compelling and to make its arrangements, so far as possible, in other ways." (Pigou, 1917a, p. 16).

4. The capital levy debate

4.1. The need of the levy

By the end of the war, Britain's domestic debt had soared from £649.7 million in 1913 to £6,552.9 million in 1919, a tenfold increase, while interest charges reached £320 million in 1920, absorbing almost one third of the whole central government revenue, as shown in Table 1. Wartime calls for heavier taxation were commonly accompanied by the suggestion of some type of wealth confiscation, most frequently during the debates over the war budgets. That was the case on 22 April 1918, when after the financial statement by Bonar Law, Mr. Sydney Arnold proposed a levy to be charged in two instalments, one right after the war and the other one two years later, each of them of 12 per cent on private owned capital, idea that aroused immediate and fierce opposition. The controversy continued well into the 1920s, the taxation of capital being incorporated into the Labour platform for the 1924 election (on the Parliamentary debates, see Hirst and Allen, 1926, pp. 28, 224-233, 265-275; for the broader discussion of this topic by the British society, see Dauton, 1996).

The idea soon became one of Pigou's key recommendations for handling Britain's post-war economy, the other involving the resumption of the gold-standard, as will be presented in the next section. Such was the cry for some kind of resolute action to tackle the massive national debt that in the second half of 1818 *The Economic Journal* dedicated two consecutive issues to the theme of the capital levy. The July edition, with contributions in favour of the proposal, had Pigou leading the group with the paper "A Special Levy to Discharge the War Debt". From the proposition that paying off the debt means only transferring purchasing power from one to another group of citizens within the country, irrespective of this payment taking place in present or future, Pigou goes on explaining the main reasons for adopting the levy instead of facing the prospect of decades of heavy taxation. First, the income-tax in its current form was discriminating against saving, given that spent income paid tax once, while income invested paid tax twice, once in itself and the other round on the yield of the investment. Second, each additional increase in the tax burden is more likely to make people indulge in extra consumption or to divert their savings to investments abroad. Third, high taxes hurt the competitiveness of domestic industry, lowering its productivity. Lastly, in view of the probable outlook of a post-war deflation, nominal incomes would fall while interest charges on the debt would stay unaltered, generating the necessity of further duties and increased rates on existing taxes.

> With money incomes probably less than they are now (in consequence of a lower level of prices) what taxes relatively innocuous to production is it possible to devise to raise this enormous sum? Except in so far as other duties are imposed, and, broadly speaking, other duties hamper and interfere with production more than the income-tax does, it would seem inevitable that income tax and super-tax, which yielded £239 millions in 1917-18, will have to be raised permanently to double the rates which then ruled (Pigou, 1918, p. 142).

Although Pigou does accept the possibility that the levy could raise fears of similar exactions in future, he is just too optimistic when it comes to evaluating the practical aspects of the proposal. He quickly dismisses the need of assessing immaterial capital owned by individuals due to its alleged small proportional value when set against other forms of capital, while he also recommends leaving the miscellaneous forms of personal wealth to be taxed as death duties when they came to be handed down to others (Pigou, 1918).

Year	(1) Receipts	(2) Expenditures	(3) Debt Interest	(4) (3)÷(1)	(5) National Debt
1913	167	168	23	13.7	649
1914	170	299	24	14.1	1,105
1915	245	1,051	52	21.2	2,072
1916	429	1,403	107	24.9	3,644
1917	658	1,849	167	25.3	4,877
1918	829	2,160	248	29.9	6,143
1919	981	1,408	310	31.6	6,553
1920	1,039	990	320	30.7	6,273

Table 1. UK Budget and National Debt 1913-1920 (*£ millions*)

Source: (1)-(3) Feinstein (1972, Table 12, T31); (5) Mallet and George, 1929, Table XIX, p. 411 (National Debt values on 31 March of each year).

Another proponent of the levy in *The Economic Journal*, A. Hook, argues that since the war had been prosecuted not only for the benefit of present and future generations, but also to preserve the existing wealth of the community, at least a fraction of the debt should be redeemed through some type of "capital conscription" (Hook, 1918). Sydney Arnold, for his turn, remarks that since capital is usually evaluated for the sake of paying death duties, what is done to the dead could also be done to the living. In order to achieve that, he proposed the self-evaluation of each one’s assets, with the corresponding amount to be paid immediately, as a way of speeding up the process. After that, government officials would double-check each individual evaluation and, whenever necessary, process the corresponding extra collections or refunds (Arnold, 1918).[18]

4.2. The case against the levy and Pigou's turnabout

The following issue of *The Economic Journal*, from September 1918, brought a series of papers against the levy. The most articulated one was authored by W. R. Scott, who contends that the sums to be gathered from the owners of immaterial capital, as well as from small business and holdings, would most likely have to be received in installments, being equivalent therefore to an increase in the income-tax. In addition, instead of talking about a levy, the government better look into ways of cutting its own expenditures. Otherwise, paying off the whole war debt would just make room for a new round of reckless spending. Further negative effects of the levy lie in the fact that it rewards spending and punishes savings, while sparing future generations from paying for a war which benefited them as well. The levy would also damage London’s reputation as a financial centre, preventing foreign capital from coming to the City and raising therefore interest rates, hurting in that way industry in general. Lastly, Scott stresses the importance of high taxes in raising people’s awareness to the true costs of the war, making thus future conflicts more difficult to be accepted (Scott, 1918).

[18] An editorial in *The Economist* (27 July 1918, pp. 102-103) went as far as to contend that the ordinary redemption of the domestic debt would actually reduce income inequality, for the outstanding loans would be paid anyway by taxes leveled on the rich while many of the poor had their fair share of government bonds. A few pages ahead, a letter to the editor held that the levy should be considered a serious proposition, given the unfairness of the prevailing income-tax rates, while another reader simply called the idea a ‘confiscation’ that would be well received only in Lenin’s Russia (*The Economist*, 27 July 1918, p. 112).

A. A. Mitchell, for his turn, attacks the practical aspects of the capital levy. Before going all the way for that, he advises, the government should instead raise indirect taxes on common luxuries such as drink, tobacco and entertainment. Still, the main difficulty to work out the levy lies in the gigantic task of assessing the totality of the nation's net wealth, including immaterial capital, dwelling-houses, plant, inventories, and all sorts of personal items, not forgetting to subtract private outstanding debts from this grand total (Mitchell, 1918). In a note in the same issue of *The Economic Journal*, George B. Shaw slammed Pigou's suggestion of a capital levy as a "crazy delusion" after a war that had devoured so many of the nation's sons and so much of her wealth. Since the capital goods left over in the country could not be consumed, the government could only get ahold of current income. Even if the capital levy were made effective, claimed Shaw, it was hard to believe that taxes would be actually cut down, particularly under a future Labour government (Shaw, 1918). Pigou, in his brief reply, agreed with these observations, but lamented that Shaw seemed not to have read his paper (Pigou, 1918d).

In 1920, Pigou published the book *A Capital Levy and a Levy on War Wealth* as an attempt at heading off many of the criticisms leveled against the proposal. The novelties this time are, first, the argument that additional taxes have an increasing negative effect on savings and productivity. Besides that, he offers a more forceful presentation of the consequences of a deflation process, engineered to restore the gold standard, on the real burden of the national debt:

> Hence, while the prices of things in terms of gold may fall through currency causes [credit restriction], the price of gold in terms of sterling will almost certainly fall. This means that the prices of things in terms of sterling will probably fall before long to some extent, and may fall to a considerable extent. If, however, a fall of prices due to currency causes comes about, the money representation of any given amount of real income must fall correspondingly. Hence, in order to raise a given money revenue to meet debt charges, the Government will have to impose rates of taxation higher—perhaps much higher than are required now (Pigou, 1920b, p. 21).

In relation to the fear of the levy, Pigou observed that it already existed, adding that after it were implemented, people would feel that things have been definitely settled and, therefore, would be less fearful of a future riddled by high taxes. With regard to a possible raise in government's expenditures after the debt ceased to cripple the budget, Pigou, in accordance with his views on state intervention, replies that such assumption does not take into account that many types of public spending may be worth taking and that they could have just been avoided until then due to the lack of sufficient revenue (Pigou, 1920, pp. 24-26).[19] In the remainder of the book, Pigou recognizes the problems raised by the critics about the practical aspects of the levy proposal, but he systematically downplays all of them for having supposedly little impact on revenue, as in the case of immaterial capital, or for its being less prejudicial than the existing tax load (Pigou, 1920b, Part II, chaps. III-V).

As mentioned, the taxation of capital kept being debated regularly in Parliament during the post-war years. On 20 March 1924, the Labour Chancellor of the Exchequer Phillip Snowden (22 Jan-3 Nov 1924) appointed a Committee to assess the national debt

[19] It is worth noticing here that David Ricardo, over a hundred years later, had advocated a tax on property to pay off the public debt at once exactly for the opposite reason advanced by Pigou, that is, the fear that a sinking fund would most likely be squandered away by irresponsible ministers: "It is, we think, sufficiently proved, that no securities can be given by ministers that the sinking fund shall be faithfully devoted to the payment of debt, and without such securities we should be much better without such a fund. To pay off the whole, or a great portion of our debt, is, in our estimation, a most desirable object" (Ricardo, 2004 [1820], p. 196).

and the tax system, with Lord Colwyn as the chairman. Pigou gave testimony to that Committee on 3 March 1925. This time around, though, he had completely changed his mind about the convenience of the capital levy, for he explicitly declared his preference for the orthodox sinking fund policy, although with a more pronounced rate of debt redemption. Pigou explained that he had fought for the levy right after the war due to the negative impact of the prevailing high taxes on industry, personal exertion and savings, but never as a mechanism to redistribute wealth.[20] After saying that, he invoked the strong opposition which had grown to the idea of a levy; the fright of it being repeated in future; its negative impact on business expectations in a depressed conjuncture and, last of all, the effect of the levy in reducing the revenue of the income-tax as sufficient reasons to set the whole idea aside (Pigou, 1925, pp. 436-437).

The Committee's final report, released in 1927, concluded that there was no commanding evidence of the alleged benefits to come from the capital levy. The presumed economy in income-tax, a factor generally overestimated by the levy proponents, would not compensate most enterprises for the values paid on their capital and not even the gigantic effort involved in collecting those sums. In addition, such proposal had been more attractive during the post-war boom inflation years, when a future deflation was somehow foreseeable, than under conditions of price stability, as happened to be the case at the time.

> Certainly, whether regarded as a means of lightening the annual burden of industry, or as a means of reducing indirect taxes and increasing expenditure on social objects, it [the levy] would, in our opinion, yield physical results quite disproportionate to the magnitude of the operation (Committee on National Debt, 1927, p. 293).

5. Post-war reconstruction: *The Political Economy of War*

All of Pigou's previous works on war related issues were brought together into a 1921 volume entitled *The Political Economy of War*, with almost three hundred pages and twenty-nine chapters. Since most of the book's contents have already been covered in the previous pages, this section deals just with the new ideas put forward by Pigou at the occasion, particularly on the causes of the war, its long term effects in peacetime and the fundamental steps toward the political and economic reconstruction of Europe.

Whatever the occasional event that actually sets off a war, explains Pigou, it always ignites a pile of material that had been accumulating on account of two main psychological reasons: first, the desire for domination, and second, the desire for gain. Be that a boy bullying his colleague at school or a European nation colonizing other peoples, both cases display the same longing for the exercise of raw power over individuals or nationalities. The domination that ensues from this deep-rooted propensity is at the very origin of the wars of independence and liberty conducted by oppressed peoples. The trap into which modern ruling powers had fallen, lamented Pigou, was that none of them wanted to slacken its grip over the subjugated territories for fear of losing the supply of colonial soldiers feeding their armies or yet of having

[20] In a paper published the year before in *The Quarterly Journal of Economics*, 'The Burden of War and Future Generations', Pigou recalled though that the loan policy had been mostly financed by savings, hurting thus future generations by reducing the capital stock available to them, and also that the poor would be taxed to pay for the service the national debt, held mostly by rich people, worsening thus income distribution and future welfare (Pigou, 1919).

those areas overtaken by rival powers which could use them as basis for future attacks (Pigou, 1921, pp. 16-19).[21]

The second factor fueling wars stressed by Pigou, that is, the desire for gain, drives the governments to set up areas of protective tariffs under its control in order to counterbalance similar initiatives by other governments. At the same time, exporters, traders and importers of raw materials from the colonies form a coalition of interests that pushes the government toward political imperialism. In this quest for domination, these individuals are helped by financiers seeking profitable concessions in undeveloped regions of the world, either by granting loans to suspect rulers or by exploiting natural resources through disguised types of forced labour. Governments are then dragged into a ferocious contest for spheres of influence or the direct annexation of weaker countries in order to reap undue gains for some of their nationals. In the background, armament makers bribe governments and disseminate war scares with a view of promoting a widespread military race. Pigou is most emphatic when talking about this whole process.

> Thus, the rivalry of the traders and financiers of different nations leads to a contest among their governments for "places in the sun". In this contest allies and associates are helpful, and so the area of contest is extended. In the background of it all stands military power. No government wants to fight for a sphere of influence or a concession for its nationals, but every government knows that, unless there is some point at which people believe that it will fight, its diplomacy will be relatively ineffective; and it knows too that, once it enters upon a game of bluff, the bluff may unexpectedly be called (Pigou, 1921, p. 22).

The only effective way to build an international environment less inoculated by tensions and disputes, as conceived by Pigou, would require, first, the suppression of all protective policies toward the "mother country" in undeveloped regions, opening those economies to trade with the community of nations. Second, there had to be a permanent dissociation between diplomacy and the special interests of traders and financiers, who would have to fend for themselves in their dealings with foreign governments. Moreover, advises Pigou, European powers have the moral obligation of actively preventing their own nationals from freely exploiting the most fragile regions of the globe. Besides that, whenever possible, some control over the armaments industry would contribute in large measure to preserving world peace. Lastly, free trade and international cooperation under the auspices of the League of Nations could bring about a substantial mitigation in the state of rivalry among nations (Pigou, 1921, pp. 22-27).

The second key area of improvement in the international sphere contemplated by Pigou involved the reconstruction of the international gold standard system, which had been shattered by the war and the subsequent remapping of Europe.[22] In the beginning

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[21] Pigou also deprecates wars for looting or indemnities as senseless, since after computing all human misery and material costs involved in the whole operation, the final result is most commonly a huge net loss for the aggressor (Pigou, 1921, pp. 18-19). Being an active pacifist during the war, he advocated an early and honorable peace with Germany, through the setting out of moderate terms by the Allies, as a way to avoid a protracted and tragic resolution through a crushing victory which would only cost more lives and stir resentment among the Germans, sowing in this way the seeds of a future war (Pigou, 1915; on Pigou's pacifism, see Wallace, 1986, pp. 144-147).

[22] In his *Memorandum on Credit, Currency and Exchange Fluctuations*, prepared for the 1920 Brussels International Financial Conference, Pigou devised a scheme of short term relief to distressed occupied regions through the issue of bonds by the responsible authorities of each country. The funds thus obtained were to finance only food, agricultural implements, material for factories and equipment, on condition of the benefited governments centralizing the exchanges, incurring in no military spending and forbidding the import of luxuries and the sending of capital abroad (Pigou, 1920, pp. 4-7).

of 1918, Pigou was appointed a member of the Committee on Currency and Foreign Exchanges After the War, the so-called Cunliffe Committee, after its chairman, Lord Cunliffe, then Governor of the Bank of England. The Committee indicated the immediate cessation of any further borrowing by the British government, the reduction of its indebtedness and the limitation of the note issue as necessary conditions for getting sterling back to its $4.86 pre-war parity with the dollar. Otherwise, said the Committee, Britain would lose her prominence as an international financial centre, jeopardizing in the wake of that disaster its industry and foreign trade (Cunliffe Committee, 1918, pp. 5-7).

In *The Political Economy of War*, Pigou elaborates additional thoughts on this particular issue. He points out the volatility of the exchanges and the wide range of their fluctuations as the major obstacle to the revival of trade in Europe. He does admit that stable exchanges could be achieved through central bank manipulation of the currency and the interest rate, but he explains also that governments as a rule were still too feeble to be trusted on this momentous task. Such risk would be eliminated, however, by the adoption of free gold convertibility by the international community. That agreed, though, the question about the most appropriate level of the rate of exchange for each country comes to the forefront. In a realistic scenario, says Pigou, in which America neutralizes her gold inflow and maintains her price level stable, the resumption of the pre-war parity with the dollar by any currency would demand an active police of price deflation. In the case of Britain, that could be implemented by a progressive contraction in the note issue and higher interest rates. Such rigorous policy, however, would not come about without huge economic distress or, more exactly, lower profits, increased unemployment and heavier taxation to service the debt.

> The process to be gone through on the return journey to pre-war parity is not a smooth one either for employers, whose dividends will fall, or for wage-earners, whose employment will be threatened. Moreover, the successful accomplishment of it involves afterwards the payment of interest on war loans in a currency much more valuable than that in which a large part of them was subscribed. This is, *prima facie*, unfair. It is also, on the fiscal side, exceedingly inconvenient. For, money incomes being reduced in proportion as currency is appreciated, appreciation will make necessary much higher rates of tax for the service of the debt, and this will make more difficult the problem of balancing the budget (Pigou, 1921, p. 176-177).

Having thus identified the hardships associated with a deliberate policy of currency deflation, Pigou surprisingly calls for the resumption of gold payments at the old parity as the proper course to be followed by Britain in view of the proximity of the pound, then at $4.20, to its pre-war value. One possible reason for this call by Pigou might be his belief, as seen, that a significant portion of British wartime inflation had its origin in world events, so that domestic and international prices were assumed by him as not in substantial discrepancy. He must have also been somehow impressed by the then current deep recession which hit the former Allied countries after the United States cut short the supply of dollars to Europe (see Eichengreen, 1992, pp. 100-107; Samuelson and Hagen, 1943). That particular conjuncture might have induced him into thinking that a small further fall in prices would not bring about that much additional harm in view of the magnitude of what had already happened.[23]

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[23] In the paper "Unemployment", published in 1921 in *The Contemporary Review*, Pigou attributes the unemployment of the time to the dislocations in world trade caused by the war, as well as to the excessive optimism with the prospective demand from European countries in peacetime, which pushed British merchants and bankers to pile up large inventories of commodities at increased prices. As wages finally caught up with inflation and banks raised interest rates, sales receded, prices fell, and a wave of pessimism settled in. In his *Aspects of British Economic History* (1947), Pigou describes the trajectory of

Be that as it may, in 1924 Pigou was appointed a member of the Committee on the Currency and Bank Note Issues, or the Chamberlain-Bradbury Committee, which in its final report, released early the following year, advised Britain's immediate return to the gold standard, decision formally announced by the then Chancellor of the Exchequer, Winston Churchill, in his budget speech on 28 April 1925. Along with some warnings voiced by a few witnesses with regard to the dangers of further monetary stringency, the worries about the perverse effects of receding prices which Pigou had put forth in his 1921 book must have crossed his mind at the occasion. He actually was responsible for one of the drafts of the Committee's report, eventually discarded, suggesting that the decision of getting back to gold should be postponed for some time since the immediate resumption of free gold exports, then still legally blocked, would require an active deflationary policy (Moggridge, 1969, pp. 32-35).

Pigou's position with respect to government intervention in the economy has already been presented, but on his final reflections on the war we have him broadening the scope of state action for the sake of national defense. In Britain, as he points out, a large fleet proved to be fundamental, not because of its easy conversion to military needs, as happened in the past, but by its capacity to move large volumes of essential supplies during the war. If the shipping industry ever comes to a condition of stress, says Pigou, the government should come to its rescue through some special bounties and other stimulus in order to assure the readiness of a large merchant marine. Also, a system of national granaries should be built to keep a large store of grain capable to attend the society's needs for at least one whole year. Protection and artificial encouragement must be provided also to industries producing crucial materials and substances for armaments, the same applying for key industries like magneto-making and optical glasses. Although these measures, according to Pigou, involve the sacrifice of some opulence and welfare, they are all indispensable in a world where the menace of a new conflagration is permanently casting its shadow over the life of the nations. Finally, for activities under government control during the war period, as the railways and coal mining, effective economies were actually achieved by unified management, and a respectable case could be made for its nationalization in order to avoid collusion and the formation of private monopolies in peacetime.[24]

6. Concluding remarks

Although scattered through a number of sources, Pigou's economic analyses during World War I may be deemed extremely consistent, especially by his systematic use of the concepts previously outlined in *Wealth and Welfare* in regard to the growth of the national dividend, the importance of preventing the worsening of income inequality and the mitigation of business cycles. With reference to the financing of the war, the

Britain's post-war economy as follows: first, a period of 'breathing space', from the Armistice until the end of April 1919, followed by a monetary "boom", marked by price and wage inflation, which lasted until late April 1920. After that, came a "slump", with a huge price decline and high unemployment, which continued until the beginning of 1923. Eventually, the British economy entered the "doldrums", a state of semi-stagnation, and remained that way until the Wall Street Crash in 1929 (Pigou, 1999 [1947], Parts II, III and V).

[24] On 23 April 1919 Pigou gave evidence to the Coal Industry Comission, offering some alternatives on how to manage the whole sector. Under private ownership, he told the commissioners, the industry would have innovation, but some firms would lag behind. Under state control, all mines would work at the same technical level, but with no innovation whatsoever. Questioned about the possibility of the Ministry of Mines running three thousand concerns at once, Pigou replied that it would be indeed extremely difficult, but not impossible (*The Times*, 24 April 1919, p. 16).

authorities should seek the necessary funds, to the maximum extent possible, in the current income of the nation, that is, through the taxation of the people most able to pay, without any further sacrifice of the poor. Contrariwise, a loan strategy would not only sacrifice economic growth but also place an undeserved burden on future generations at the cost of additional concentration of income through the taxing of the more vulnerable segments of society.

Since Pigou believed that the higher taxes needed to service the national debt crippled savings and investments, that is, the long run expansion of the national dividend, the capital levy would be the best option to get rid of the the war debt at once in order to allow a reduction in taxes, the strengthening of economic growth and the introduction of new social expenditures. Some kind of credit control by authorities would also be required to dampen the intensity of economic fluctuations after the war. Although Pigou remained loyal to the basic principles of a market economy, he admitted that the range of state intervention should be extended to encompass national defense and, arguably, even the nationalization of the railway system and the coal mines. At the international level, he envisioned European economic recovery as conditioned on the cessation of both political imperialism and protectionism, complemented by the reconstruction of the international gold standard system, both initiatives concurring to the reinvigoration of free trade among sovereign nations.

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