Abstract

Since the emergence of human capital theory in the late 1950s and the subsequent development of the economics of education, there has been some interest and debate about the historical roots of the economic analysis of education. There is a consensus that, until the mid-twentieth century, most economists paid little attention to the economic analysis of education. In this paper will be analyzed the work of José Joaquim Rodrigues de Freitas (24.1.1840–27.7.1896), one of the most influential Portuguese intellectuals and politicians of the second half of the nineteenth century. He devoted a large part of his work on Political Economy to the analysis of educational issues and regarded the latter as having major economic and social consequences. We will discuss the interest and originality of his work in the way he linked several aspects of the economic system to his educational reflections.

Keywords

Education; Portugal; Human Capital; Political Economy; Rodrigues de Freitas

Resumo

Desde a sua emergência, nos anos cinquenta do século XX, que a teoria do capital humano, e o subsequente desenvolvimento da economia da educação, tem havido um interesse crescente acerca das origens do pensamento económico sobre educação. Na literatura anglo-saxónica existe um consenso acerca do interesse limitado da maioria dos economistas anteriores acerca desse assunto. No entanto, o mesmo parece não se aplicar a outros contextos económicos e culturais. Neste texto analisa-se o pensamento de José Joaquim Rodrigues de Freitas (24.1.1840 – 27.7.1896), um dos mais influentes intelectuais e economistas Portugueses da segunda metade do século XIX, dando particular atenção à sua reflexão das questões educativas no quadro dos seus escritos de economia política, as quais considerava serem da maior importância social e política. O texto discute a originalidade dessas reflexões, nomeadamente através do modo como relaciona os aspectos educativos com a realidade económica.

Palavras-chave

Educação; Portugal; Capital Humano; Economia Política; Rodrigues de Freitas

1 Department of Economics (University of Porto) and CIPES (Centre of Research in Higher Education Policies). E-mail: pedrotx@fep.up.pt. This research has been funded by FCT through project PEst-OE/CED/UI0757/2013.
I. Introduction

Since the emergence of human capital theory in the late 1950s, and the subsequent development of the economics of education, there has been some interest and debate about the historical roots of the economic analysis of education (Kiker, 1966; Blaug, 1975; Miller, 1966; and O’Donnell, 1990). As often happens with new theories, human capital theory was presented as a consistent and natural development of the ideas presented by the several founding fathers of the discipline.\(^2\) It was maintained that several authors from the classical period of political economy had already provided a simple, though clear, theoretical basis for the subsequent modern developments (see especially Kiker, 1966). This idea of historical pedigree and continuity was questioned by several authors (Miller, 1966; Blaug, 1975; and Bowman, 1990), whom offered several reasons why pre-modern economic thought, including classical political economy, could hardly be considered a first version of modern human capital theory. This generated a consensus that until the mid-twentieth century many economists would have paid little attention to the economic analysis of education and that they did not regard human capital as a good analogy for skilled labor (Teixeira, 2007a and 2007b).

Nonetheless, this view is largely based on a canonical view of the history of economic thought, supported by the prominent role played by British and American economics in the development of the discipline. In this article, a complementary view is put forward that the limited attention afforded to the economic role of education was not necessarily the case in the whole of continental Europe, especially in those countries that faced difficulties in keeping up with the industrial and technological developments that characterized the nineteenth century. In these countries, it was possible to find more eclectic authors, who combined elements of the dominant canon with other influences.\(^3\) In this article, is analyzed the work of José Joaquim Rodrigues de Freitas (24.1.1840 – 27.7.1896), one of the most influential Portuguese intellectuals and politicians from the second half of the nineteenth century.\(^4\) Rodrigues de Freitas devoted a large part of his political economy to the analysis of educational issues that he regarded as having major economic and social consequences. Moreover, in the article will be discussed the interest

\(^2\) See Bowman (1966), Kiker (1968), and Schultz (1961 and 1963).

\(^3\) For a comprehensive analysis of the Portuguese case, see Cardoso and Almodovar (1998). For other European and non-European examples, see Barnett (2014).

\(^4\) For a detailed analysis of his life and writings, see Almodovar et alii (1997).
and the relative originality of his work, namely in the way that he linked several aspects of the economic system to his educational reflections.

II. The Satisfaction of Human Needs

Rodrigues de Freitas was born in Porto, where he lived, studied, and worked for most of his life. His writings ranged from Political Economy to Pedagogy, covering the main political discussions of his time, with a prolific intervention in the press, where he assumed editorial functions. He was also a significant politician, being the first republican MP (1878). Like many of his contemporary political economists, he was particularly concerned with understanding the way that the economic system operated, in order to promote the advancement of national wealth.

The starting point for any venture into economic analysis was, for Rodrigues de Freitas, the existence of human needs and the search for the instruments to satisfy them. It was therefore essential to analyze how society should be organized in order to provide for its needs. The existence of human needs and their satisfaction implied the existence of goods and riches that had utility properties, and this utility, which could be either free or required payment, had to be analyzed economically in relation to its costs. The costs resulted from the value given to goods and riches by human work. Likewise, riches and goods could be either free or paid for. Hence, the productive agents had to be classified as free or paid for, and as internal or external. According to this classification, education, which had an important effect on productive activity, had to be considered as a costly and internal productive agent. On the one hand, it implied human intervention; on the other hand, its potential was internal to mankind:

education is for man as a second nature (...) the qualities of the organisms to be educated and the effort of the educators may vary to such an extent that education itself can either be his maximal personal wealth, or be almost completely void in terms of value. (1883, 13)

This perspective expressed in his Principles of Political Economy (1883) had already been explored several years earlier in a series of texts entitled “Education and Insurance” (1866). In the latter, it was stated that “the properties of man are in themselves so large, that from them comes all wealth” (1866, 381). Hence, by using the natural capacities of all
individuals, the life of every human being would be much easier, even pleasant, especially in the case of those that, due to their lack of a physical, moral, and intellectual education, endured in poverty (1866, 382). His conception of value based on the conjugation of human capacities and its development led him to a systematic defense of the advantages of the early stages of education (1866, 381). Likewise, he declared the need to adopt the most effective and modern teaching methods.

His analysis of production convinced him that advances in human knowledge, through education, would play a significant role in the advancement of the country (cf. 1883, 21-22). However, he did not restrict the role of education to its socializing role, pointing to a significant economic role for education. This was visible in his analysis of the creation of value, or the process of production and its maximization. Due to this economic role, education became a crucial social investment that had to be stimulated by the state, both directly and indirectly.

Despite its already being discernible when he discussed human industry in general, the role of education became even more visible when he analyzed the type of industries in which he classified human activities. The first type of industry to be considered would be the group of productive or formative industries. This type divided itself into the industry of primary or fundamental production (which also included the extractive industry) and the secondary productive industry. In this second group, besides the manufacturing industry, he included the secondary productive industry of education. The latter was composed of physical, intellectual, and moral education (1883, 64). Hence, the activities of physical, intellectual, and moral strengthening constituted one category of human productive activity.

According to Rodrigues de Freitas, the productive dimension of education was one of the main reasons why certain countries achieved a significant degree of prosperity, overcoming the difficulties raised by the limitations of the soil or other natural and physical obstacles. This productive dimension was visible in both agriculture and industry. The effectiveness of education and of organization in contributing to the progress of industry would contrast with his skepticism towards the use of protectionist instruments, especially in a country of such a small size as Portugal (1889, 38). Rodrigues de Freitas regarded human activity as the foundation stone of any productive process and the subsequent

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5 In his texts dedicated to the role of Credit and Portuguese Agriculture (1869), he underlined the importance of education for rural development (1996, 164). Moreover, he considered that the former had been a key factor in Scottish prosperity, compensating for the limitations of the soil with the development of the population’s intellectual capacities through the multiplication of schools within the parish system.
creation of wealth. His statements on the quality and quantity of both labor and capital as the main limitations or engines of progress underlined the importance of both of these for the prosperity of the national economy (1883, 71 and 95).

   Progress also meant avoiding situations of ignorance and uncertainty. Hence, the advances made in knowledge by improving humankind’s capacity to prevent the existence of failures and limit the effects of chance would lead to savings in terms of production costs (1883, 98). They would also lead to a better understanding of the workings of the laws governing the economic system. In both cases, the final result would be an increase in final output (1883, 100). Rodrigues de Freitas considered that the costs of scientific improvements providing instruments that reduced the effect of chance and other disturbances should be taken into account in the costs of production. In fact, his concern with the effect of these factors on savings in production would lead him to include the expenditures incurred in the maintenance of economic agents under production costs (1883, 98).

III. Exploring and Preserving Human Potential

   Like any other industry, education should observe the guidelines of Political Economy in order to derive the best possible advantage from its productive potential. The principle of maximum effect was therefore to be found in both educational organization and teaching methods. Hence, pedagogy also meant discovering ways of obtaining maximum effect for a given level of effort (1872, 124). Accordingly, he frequently criticized the educational practices of that time due to the scarce attention that they paid to useful education, being more concerned with social ostentation, which was detrimental to a true moral and political education (1876, 43). He also criticized the old-fashioned education that promoted dogmatism instead of encouraging the exercise of mental capacities. In fact, for him, the greatest failure of public instruction was the absence of the extremely necessary “useful” education. This failure was visible at every level and in every type of education. “Useful” education had to be based on priorities, the foremost of these being its adaptation to the national reality and needs (1879, 98-99).

   This problem was even more acute when it came to technical education. In the case of industrial training, special emphasis was placed on its adaptation and integration into its environment, whose costs would not even be significant. One of the possibilities would be to set up temporary units that would operate for as long as was required for the training of
the labor force (based on policies adopted in other countries) (1879, 108). In the case of commercial training, on the one hand, there was a scarcity of establishments, but, on the other hand, the little interest that there was in this subject was reflected in the low level of demand for courses in this area. This apparent paradox was due to the current working conditions of those establishments and the type of knowledge that they provided. Such establishments mainly lacked any form of practical training, a failure exacerbated by their lack of equipment and supporting structures, as well as by the persistently insufficient interconnections between the curricula (1881, 126 and 138).

As far as higher levels of education were concerned, Rodrigues de Freitas focused in particular on the Polytechnic Academy of Porto, where he taught for several years. In this case, the problems were also due to the scanty resources provided, as well as to a poor correspondence between the purposes of the Academy and its actual working, by overlooking its practical/vocational mission. Hence, it was important to strengthen the useful dimensions of learning, in order to prepare the labor force for competition, especially in the industrial sector. In fact, for a small country with a small market, expensive transport costs, and a heavy fiscal burden, an effective education system could make the difference, becoming a powerful instrument of industrial progress (1880, 113; 1881, 142).

It was in this context that he became increasingly interested in the work of Friedrich Froebel, whose writings he praised for emphasizing the idea of human progress associated with the development of education. In the work of Froebel, education became an instrument of personal development. Since first impressions left an enduring effect on human nature, in the promotion of human industry, it was important to promote education at the very early stages of a child’s life. In this context, he drew an analogy between personal and social development, in terms of their stages of discovery and their economic activity. The results were visible in terms of civilization, both through technical evolution and artistic education (1882). It was important for each of the aspects in the learning process to be linked to one another. Therefore, the choices about the books to be used, the methods of learning, the quality of the staff, all of these aspects made an important contribution to the improvement of children’s intellectual capacities (1881, 166). There were several examples that underlined this importance.

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6 The small amounts of funding needed were justified by some foreign experiences with temporary industrial schools, which only existed for as long as was required to train an industrial workforce at a given location (187, 108-9).

7 In terms of secondary education, the need to save resources could be satisfied through the increased pragmatism and usefulness of the learning contents. Thus, he criticized the importance given to classical languages, which should be reduced in the case of most professions (1880, 112). This is at odds with the views expressed some years earlier by authors such as John Stuart Mill (1967).
According to Rodrigues de Freitas, the creation of value implied an occupation, which could be either real or personal, with education being linked to the latter (1883, 27). This incorporation of internal or external value made it possible to create economic properties. It was in this context that he saw the worker as both a producer and a product. On the one hand, the worker could create value through his external occupation, and hence incorporate or develop economic properties in commodities. On the other hand, the worker could also be regarded as the result of a process of value creation, by occupying himself internally in his education, thus increasing his productive potential (1883, 26-28). Furthermore, education became an essential instrument for the preservation of human productive capacities (1883, 30). If human labor was the essential basis of production, it was important to be aware of its physical and intellectual limits, as well as to know the best means of preserving it.

The human machine was regarded not only as capable of providing its own self-support, due to its earning capacity, which ensured its present and future subsistence (especially during retirement), but also as capable of educating the next generation, and hence preparing it for foreseeable productive activity. The former involved the conservation of the productive capacity of mankind, while the latter was concerned with the reconstitution of that capacity (1883, 106). Therefore, the need arose to raise and educate children by making them more robust, promoting a more productive labor force and a better-sustained social organism (1883, 113). In particular, it was important to extend the productive period, by increasing humankind’s physical and intellectual vigor (1883, 115). This greater vitality, with which education was associated, would allow for a deeper knowledge of the workings of the human machine, and, just as happened in the organism of the human body, would lead to progress in the use of human productive capacities.

Furthermore, the enhanced intellectual, moral and physical vigor delivered by the civilizing force of education would reduce the reproductive ability of mankind, thus lowering the risks suggested by Malthus’ analysis of the situation (cf. 1889, Ch. VIII). On the one hand, because the greater technical capacity would lead to savings in terms of labor, inducing a more dynamic increase in production rather than population (1883, 37). On the other hand, because the rejection of Malthus’ so-called laws would be associated with the effects of education on heredity and the adaptability of human beings, as well as on their exercise of their rational abilities (1883, 132). He therefore stated his firm belief in the power of education to promote the intellectual and moral progress of society. Despite

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8 It was in this context that Rodrigues de Freitas turned to the calculations used by authors such as Engels, seeing labor as a capital – the capital-man.
its slowness in some periods, the clear and unmistakable signs of this capacity to improve the material and moral condition of humankind guaranteed the continued existence of progress.

Since education had a significant effect in terms of wealth creation, it was important to analyze the impact of education on the distribution of wealth. In his analysis of the return on various productive activities, Rodrigues de Freitas sought, on the one hand, to enhance the role of education, and on the other hand, to emphasize the substantial similarities between the types of remuneration yielded by each productive resource. This latter aspect was particularly important in a context of increasing social conflict related with the so-called social question. Accordingly, he considered that “the labor classes are all those that work,” regardless of their specific contribution, their merits, and their individual capacities.\(^9\) As far as the distribution of the product was concerned, and despite the differences between each worker, all of them shared the fact of their possessing both a personal and a real capital, albeit in different proportions. Moreover, his analysis emphasized the similarities between the different types of remuneration. Although he reserved the title of entrepreneur for those who had their own firm, the similarity with the economic rationale applied to the laborer became apparent:

> All those that contribute to production, all those that co-operate in that activity are therefore agents of the same economic nature, all proceeding from the economy, and risking more or less; while they differ in form, type, or size, they are in essence the same. (1883, 175)

This was due to the fact that the concept of capital was not limited to a real dimension, but also included a personal dimension:

> the worker applies at least the capital of his education, either acquired by him, or by other educators; this capital, which will face a higher or smaller risk in his own business, comes from savings. (1883, 175; see also 176-77)

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\(^9\) Moreover, the label “worker” was nothing more than a social abstraction and a crude simplification of a much more complex reality, namely that of man as a social being. The thorough understanding of this reality implied a wider perspective not supplied by those reductionist theories that focused only on the productive level of analysis. In relation to this aspect, see Cardoso (1997, 52).
This general characterization was followed by a description of the individual productive capacities resulting from differences in personal capacity (natural ability and education) and in terms of real capital, which would have an impact in terms of differentiated individual returns (1883, 181). The impact of education on the redistribution of wealth was visible, not only at a general level of analysis, but also at a more specific one, by helping to explain the individual differences in terms of remuneration. Education had a significant impact on the remuneration of individuals, with benefits for society as a whole, through the increase in personal and real capitalization, which increased productive potential, due to the aforementioned role of capital.

IV. A Different Economic System

Several of the aforementioned principles governing economic activity suggested that humankind was progressing, i.e. evolving towards a better satisfaction of its material needs. This evolution nevertheless had a significant impact on its operating framework. This was particularly relevant to the principle of liberty, to which should be added the principle of association as a mechanism for enhancing the potential of liberty itself. According to Rodrigues de Freitas, an analysis of the results of human industry underlined not only the fundamental role of labor in its attainment, but also the interdependence of these productive efforts.

This interdependence between productive efforts was apparent both in diachronic and synchronic terms. On the one hand, it was visible in the effects of past labor on present production, i.e. the current state of human industry was the result and consequence of its past evolution. On the other hand, it was reflected in the interdependence of efforts leading to the attainment of the final output in any productive process. Moreover, this interdependence between human activities was also visible at the personal level due to the links existing between personal productive efforts. The interdependence between productive agents was in itself a sign of evolution, since this inevitably led to a greater complexity in every organism, and therefore also the economic one. Just as the human body became more complex as it developed, so too did the social body when reaching a higher phase.

10 Moreover, wages could suffer changes due to transitory variations in the supply and demand of labor, due to changes in the cost of subsistence, or even due to changes in the balance between the political and economic power of workers and entrepreneurs (1883, 191).
Since every productive process could and should produce a surplus, it was important to discover the means of maximizing that surplus, which, by being converted into capital, would stimulate forthcoming production. Included in this context was every means of improving the degree of perfection and specialization of the social organism, such as the already famous division of labor. Due to the differences existing in terms of vocation, this would lead to the emergence of several important benefits to production. Greater specialization implied that individuals faced an increasing degree of productive cooperation. This situation was enhanced by the expansion of production, which not only increased the quantity of productive forces, but also increased their productive potential, by raising new possibilities through the mechanisms of association. The whole was therefore larger and more valuable than the sum of its parts (1889, Ch. 8).

The thrust of the discussion was the emergence of a new system that through Legal Philosophy and Political Economy had established the supremacy of liberty and competition respectively (1883, 149). However, the necessary and inevitable evolution of the founding principles of the system would, in a more advanced stage, highlight the utility and benefits of the complementary principles of authority and association, namely through their positive impact in the creation of social wealth. Although competition and liberty were the axes of the system, especially because of their stimulus to human activity, it was desirable to add these latter two principles to the first two.

The much desired associativism should be neither imposed nor generalized. Its imposition would damage the basic principle of liberty, which was so important to the progress of mankind. Hence, association would not be the result of either intellectual or political strategies, despite their attractiveness, but it had to be the result of a mutual agreement regarding the purpose of improving the human condition. Rodrigues de Freitas’ targets for criticism were mainly mutualism and the socialist movements (1872, XII; cf. also Brandão 1997, 91-93). He pursued a similar line of thought regarding the principle of authority, which could be acceptable if reconciled with Liberty. In this case, it represented the progressive attachment between liberty and personal responsibility. The principle of authority did not derive from impositions or arbitrary decisions, but was the result of mutual agreement and convenience, of a harmony of individual interests. It was not the continuation of a past authority based on the convenience of some, and detrimental to many others; rather, it was an authority freely accepted by the whole community due to its general benefits.
These were the realities that emerged from human action and from human wealth when seen from a social perspective. According to this perspective, the concept of wealth extended its scope beyond the level of things and persons, in order to include the combinations between individuals and the relations established between them.

V. Education and the New Economic System

The evolution of the economic system towards increasing interdependence between economic agents was very relevant to education. Accordingly, the way in which education was to be organized and supported by private economic agents and by societal forces (mainly the State) should be guided by the principles of liberty and association, with clear support for free association in education. One of Rodrigues de Freitas’ main proposals included the establishment of a common educational fund, which took into account not only the need for significant expenditure in the supply of education to children, but also the risks associated with this, especially in the case of those that faced early death (whose expenditure would not be recovered). This was a way of sharing the risks of life and an education that had to be paid for (1866, 384), providing a safer situation and an improvement in the conditions under which the future was planned.

The institutions created within this framework were to provide a comprehensive education to children. Their resources would be provided by the survivors, in order to cover the costs supported, plus an additional contribution in terms of interest. The motivation and effectiveness of the institution in playing its educational role would be assured by the fact that the more successful its former alumni were, the easier it would be for the institution to recover its costs (and the greater would be the credit of the institution). Moreover, it was expected that the annual payment could be reduced due to the progress being made in medicine and pedagogy. Rodrigues de Freitas included this proposal in his parliamentary speech on education (May, 1879), in which he emphasized, in particular, the often mentioned additional benefits of education brought by the increased spread among the lower classes of the virtues of frugality and sobriety (1879, 530).

In his analysis, Rodrigues de Freitas considered that, together with individual phenomena, functions, and needs, there were other needs and functions that were exclusively social. In the latter case, individuals were only part of a larger whole (1883, 152). This social dimension was the result, in economic terms, of the division of labor and the circulation of commodities. It was therefore necessary to distinguish between individual
and social spheres of activity. Notably, this required a definition of the controversial social functions that resulted from the general principle of human association. This freely accepted association of individuals sought to clarify and enforce the limits of individual rights, to provide protection against common menaces, and to preserve and to improve their working conditions (1883, 153).

Despite being frequently labeled as a liberal, Rodrigues de Freitas displayed a list of state functions that were clearly beyond the scope of such a model for the relationship between the state and economic activity (cf. Cardoso, 1997, 52-54). This was clearly the case with state intervention in education. Nevertheless, the intervention of the state in terms of education followed his views regarding association, since the state was considered “a large association, whose functions corresponded to the principle of mutuality.” Since this mutuality was perpetual, the compensation for that service should be requested neither universally nor immediately. Such repayment was owed only by those that had the ability to pay, and according to their possibilities. Although those who possessed the ability to pay should contribute to the costs of education, the financial incapacity of some should not prevent them from benefiting from elementary education (cf. 1879, 94-95). Hence, Rodrigues de Freitas concentrated the financial role of the state in basic educational levels, claiming support for all those that did not have the financial means to pay for it. In order to be coherent with his defense of the compulsory nature of basic education:

> We want primary education to be free and compulsory; but compulsory for those that can learn, and free for those that are unable to pay; apart from these cases, we can neither understand the principle of compulsoriness, nor can such gratuity be feasible. (1879, 94)

The financial support of basic education was based on its multiple advantages for the students and for society at large, notably because ignorance was a major social menace and represented a loss in terms of the community’s prosperity (1879, 95). It was also in this context that he appealed for private support for education in order to complement the role of the government (1879, 525).

The responsibility of the government also lay in improving the organization of the system. Accordingly, in several of his texts published in some of the main periodicals of his time, Rodrigues de Freitas frequently stressed the need and the difficulties in reforming public instruction. Above all, he emphasized the importance of primary education, due to
its individual and social benefits (1879, 90; 1867, X),\textsuperscript{11} but also due to the main problems affecting this stage of education, such as the lack of qualified teachers.\textsuperscript{12} This scarcity of qualified teachers was a clear sign of the insufficient resources ascribed to education, which could, and should, be supplemented. Another problem consisted in the bad organization of the country, which was also reflected in its system of education, namely in the poor coordination that was to be found between the different levels of education (1879, 102). In order to change this situation, he proposed the establishment of a Ministry of Education (cf. Alves 1997) that would coordinate the various activities that were currently scattered among several different Ministries: Home Affairs, Public Works, and Navy (cf. 1867, X).

Overall, Rodrigues de Freitas expressed a very critical view about the existing educational policies and the state of the educational system. His criticisms focused on the slowness in adopting policies and on the lack of any persistence in the improvement of education. This was exacerbated by the political instability that slowed and undermined the political decisions, giving it an erratic pattern (1879, 103). In fact, the constitutional promises of the development of education were seldom followed by any real progress, reflecting the lack of resources as much as the political will to improve the situation (1881, 122-141). This led him to call for an urgent reform of education, turning it into a national political priority.

VI. Concluding Remarks

There is a widespread perception that most nineteenth-century political economists paid little attention to education, based upon what happened in the Anglo-Saxon countries. However, in more peripheral countries, education may have been regarded as an important instrument for redressing economic and social backwardness, so that the interaction between education/training and economic analysis was clearly more explicit and frequent than it was in Europe’s leading countries in industrial and technological terms. This study has presented a Portuguese political economist who did not follow most of the patterns usually found in the case of English political economists, especially as far as the peripheral and/or autonomous role of education is concerned. Following several other political

\textsuperscript{11} The importance of the political benefits was significant for Freitas, since for him economic progress was necessarily interlinked with moral progress. However, in terms of the benefits mentioned, he was not particularly original, because these were the ones that were traditionally referred to by other political economists. Accordingly, he mentioned the promotion of an enlightened public opinion that better understood its duties and rights, which would be a better way of checking governmental activity, since public opinion had a better understanding of the way in which it was ruled (1879, 522).

\textsuperscript{12} On the problems affecting the training of primary teachers at that time, see Gomes (1996: Ch. 1).
economists, he addressed the civilizing role of education, molding human behavior, and promoting values of sobriety, industry and independence (Teixeira, 2007b). However, despite the importance of these values, his priority when calling for an increased support of education was not based so much upon these aspects. The beneficial character of education was to be found primarily in its contribution to the improvement of human productive capacities, leading in turn to a greater fulfillment of human material needs. Thus, his work suggests the existence of an alternative view, one that was less averse to the conceptualization of education as a form of capital, albeit in a rather crude form.

A major aspect of Rodrigues de Freitas’ work was that he did not develop his reflections on education as an area that was separate from his economic reflections. Whereas, for most nineteenth-century political economists, education was largely considered to be a peripheral issue, scarcely related to the dynamics of the economic system, for Rodrigues de Freitas, education was a central element of his economic analysis of the human condition. This was due to the fact that education was an integral part of his economic analysis. This centrality was mostly due to the role that human activity played in the creation of value, and thus in the creation of the instruments needed for the fulfillment of humankind’s material needs. This creative capacity was enhanced, preserved, and renewed through education.

Another very interesting aspect is that Rodrigues de Freitas played down the conceptual differences between the returns yielded by the different actors participating in the creation of wealth. The differences in payment were not so much the result of the different economic roles played by laborers or capitalists, but more the result of the different personal and real capacities possessed by each productive agent. The role of education thus became visible by enhancing personal capital, i.e. the productive capacities that were innate to each individual.

The links between educational questions and the thrust of his economic analysis again became apparent when Rodrigues de Freitas analyzed the way in which the system of education was to be funded and organized. Although he favored the role of the market and the private sector as opposed to state intervention, he considered that the role of the former should be complemented by the creation of free associations, especially in areas where competition would not necessarily provide an optimal outcome. On the one hand, Rodrigues de Freitas underlined the need to use the resources ascribed to this social function in an efficient and effective manner, namely through the promotion of useful knowledge, i.e. an education that improved human industry; on the other hand, he
considered that the costs associated with this activity should be analyzed within an associativist framework. Individuals would assume as much of these costs as they could, although the state should be responsible for ensuring that this service was not under-supplied, either quantitatively or in terms of the quality of the training provided. Moreover, as the leading symbol of the associative rationale, the state should be responsible for the co-ordination of the system.\(^{13}\)

Finally, it is worth mentioning the links in his work between a more analytical level of reflection and his social engagement, which was visible in his systematic intervention in relation to the choices faced by Portuguese society in the second half of the 19th century. Accordingly, he took up the honorable, although frequently unsuccessful, task of persuading the public and social powers about the crucial role of education in the promotion of material and moral progress. The fact that Rodrigues de Freitas awarded significant economic relevance to education was reflected in his approach to the organization of the Portuguese educational system and encouraged him to apply certain economic principles to its organization, notably for the promotion of a more efficient use of both the human and the material resources allocated to education.

As this text has indicated, we cannot take for granted that education was largely considered to be irrelevant for nineteenth-century economic thought. The work of authors such as Rodrigues de Freitas challenges us to pay more attention to the complexities and idiosyncrasies of nineteenth-century European political economy and its perspectives with regard to the economic roles of education. This requirement is even more relevant due to the role that education was to attain in economic thought many decades later. What this example suggests is that this was, in fact, already the case in some national traditions of economic thought well before it happened in the Anglo-Saxon world and that a different canon on the link between education and economics would eventually emerge in economic thought after World War II (Teixeira, 2001).

\(^ {13}\) This more eclectic tone was a characteristic of many Portuguese political economists of this period, being arguably linked to the peripheral nature of the Portuguese situation, both economically and intellectually (see, in particular, Cardoso and Almodovar, 1998).
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