

## Elements of Risk in Classical Political Economy and Marx

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**Abstract:** As against the established view in HET text books, elements of risk decision making were present in economic theory, long before Frank Knight's great contribution. Smith announced the importance of risk premium and analysed thoroughly the different kinds of "chances of profit" between lotteries, insurances, sea trade etc. Mill also recognised risk as a distinct element of profits of capital and distinguished two different sources of risk. Risky behaviour, although subordinated, is also investigated in Marx's work. Therefore, even if the distinction between insurable risks and non-insurable uncertainty is equivocal before 1921, substantial evidence of it is indeed perceptible long before.

**Keywords:** risk, uncertainty, Adam Smith, Nassau William Senior, John Stuart Mill, Karl Marx

**JEL Classification:** B12, B14, D81

### INTRODUCTION

The established view in history of economic thought denies that elements of risk decision making were present in the economic theory of the entrepreneur before Frank Knight's renowned contribution in 1921. Thus, Schumpeter (1954: p. 646) asserted that until Knight, "nobody that I know of took the trouble to investigate why this item [risk-bearing premium] should be necessarily positive". Blaug (1986: p. 78) has also declared that "English classical economists, regarded production and the investment of capital as a more or less automatic process, involving no critical decision making and certainly no risky judgment or imagination of any kind". While this assertion applies to Ricardo's *Principles*, there is plenty of textual evidence confirming the opposite especially in the work of Smith, Say, Senior, J.S. Mill and even in Marx. Unquestionably, thanks to Frank Knight, economists were definitely able to distinguish between risky and uncertain decisions. In situations

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involving risk, agents are not certain about the prospect of their decisions, but they are able to calculate its eventual risk. In that sense, to put your savings in a common bank deposit account is less risky than buying bonds, which is less risky than buying a company's shares on the stock market. On the contrary, in situations involving uncertainty there is no way to calculate the possibility of the outcome, because it is just impossible to know. As Knight put it, "the given outcome is not certain, nor even extremely probable, but only contingent" (1921: p. 213). A simple way of distinguishing between risk and uncertainty is to relate the eventual outcome of a decision with probabilities (Lawson 1988: p. 50). In situations of risk, the possible outcomes have objectively known probabilities, like the probability of rolling one dice for the number five. In contrast, in the case of uncertainty, the probabilities associated with the possible outcomes, or even the range of the outcomes are unknown.<sup>1</sup> Hence, risk is related to measurable randomness and should be differentiated from the notion of uncertainty, related to the unknowable.

It is the object of this paper to investigate the sense according to which risky decision-making was apprehended by selected Classical Political Economists, without claiming to be exhaustive. In the next section we present Adam Smith's view of profit risk, a view developed further by N.W. Senior. We will then move to focus on J.S. Mill's analysis of the risks attending the investment, an analysis based on the concept of entrepreneurship of J.B. Say. In the subsequent section we will succinctly investigate Marx's perception of risk bearing in profit making. The last section concludes by comparing the classical notion of risk with those of Knight and Keynes.

### **ADAM SMITH AND THE PROBABILITY OF SUCCESS**

In the chapter VI, of the first book of *The Wealth of Nations* Adam Smith discusses the components of profit, following Cantillon's inspiration.<sup>2</sup> He distinguishes three distinct components of profit, each one compensating eventually a different person. Profits are remunerating the owner of the capital for the "value of the stock employed" through interests. Additionally, profits should also include the wage of the manager of the firm for the "labour of inspection and direction" he offers. Finally, he announces the necessity of risk premium recognising that "something must be given for the profits of the undertaker of the work who hazards his stock in this adventure" (Smith 1776, I: p. 54). In the last case, Smith has a particular concern for the compensation of the entrepreneur who takes the risky decision of investing his own capital, or the capital entrusted to him by a third party, in a particular employment. On that ground, Smith rejects the

idea of direct taxation of that part of profit which constitutes the “compensation for the risk and trouble of employing the stock” (Smith 1776, II: p. 374). Because, as “the revenue from stock naturally divides itself in two parts”, the interests of the capital employed and “that surplus part which is over and above what is necessary for paying the interest”, he argues that only the former are capable of carrying the burden of direct tax incidence. As against the landowner, “the proprietor of stock is properly the citizen of the world [...] and he would remove his stock to some other country” if someone in the home country had the idea of imposing the interests of the risk premium with a significant tax (Smith 1776, II: pp. 375-6. See Aspromourgos 2009: p. 198).

Furthermore, in the Chapter X of the same book, he thoroughly analyzes the different kinds of “chances of profit” between lotteries, fire insurances, sea risk etc. Speaking of lotteries, he even suggests a probabilistic argument: “there is not, however a more certain proposition in mathematics, than the more tickets you adventure upon, the more likely you are to be a loser” (Smith 1776, I: p. 121). But his analysis does not distinguish risk from uncertainty as it deciphers the general predisposition to optimism rather than a mathematical investigation of the chances of loss and win: “the chance of gain is by every man more or less over-valued, and the chance of loss is by most men undervalued” (Smith 1776, I: p. 120). This is the explanation he gives to the fact that among house-owners, “ninety-nine in a hundred, are not insured from fire”; the same applies to “the neglect of insurance upon shipping”, as to the “contempt of risk” between young people who are ready to enlist in the army at the beginning of a new war (Smith 1776, I: p. 122). In all these cases, Smith explains that the neglect of risk is simply translating the “presumptuous hope of success” without really calculating the chances of loss, which are undervalued or just never considered seriously. Nevertheless, while Smith admits that people are naturally predisposed to the optimistic outcome, he repeatedly advances arguments that do reveal a conscious position vis-a-vis the possibility of calculating risk in order to take the appropriate decision. For example, in the insurance business where the chance of loss is undervalued and the insurers accept to make moderate profits, Smith considers they are able to calculate the value of the risk. As he wrote,

In order to make insurance, either of fire or sea risk, a trade at all, the common premium must be sufficient to compensate the common losses, to pay the expence of management, and to afford such a profit as might have been drawn from an equal capital employed in

any common trade. The person who pays no more than this, evidently pays no more than *the real value of the risk*, or the lowest price at which he can reasonably expect to insure it. (Smith 1776, I: p. 121, our emphasis).

As correctly pointed out, to pretend that an entrepreneur calculates the value of the risk means that “there are calculable odds in these situations” (Aspromourgos 2014: p. 29). Similarly, when it comes to explain why people accept to be sailors even if the dangers at sea are far greater, the work is harder and more skilful while the salaries are equally poor as in the army, he uses a probabilistic-like argument: “as the great prizes in the lottery are less, the smaller ones must be more numerous” (Smith 1776: p. 122). So, the reason of preferring to become a sailor rather than a foot-soldier lies in the small, customary laid advantages of the life at sea, like the “small provisions” given over and above the regular pay and the greater chances of “preferment”.

Sixty years later, Nassau William Senior reproduces and develops further Smith’s arguments on the “probability or improbability of success” in various liberal professions.<sup>3</sup> Senior rightly understands that the chance to succeed in business depends on the degree of knowledge of the circumstances (Senior 1836: p. 209). He even manages to distinguish two sorts of uncertainty, one resulting from the dangers of the nature of the business – like smuggling or producing gun powder - and the other resulting from the subjective abilities of the person itself. Senior calls this second uncertainty “personal” and, as he says, “it arises from the error to which every man is subject when he compares his own qualifications with those of his rivals” (Senior 1836: p. 210). Still, objective or subjective the uncertainty may be, Senior does not make the difference between measurable randomness and hazardous chance. Speaking of insurance risk, he gives a numerical example but, to conclude that the “value of the risk” is five times greater, only because the prime paid to the insurer is five times greater (Senior 1836: p. 212). Even if there is no real measurement of the risk yet, the idea of pricing risk is already there, though a Lawyer and Political writer like Senior was not in a position to grasp.

### **J.S. MILL AND THE RISKS ATTENDING THE INVESTMENT**

Between Smith and Senior, there was of course the path-breaking contribution of David Ricardo (1817). According to his theoretical model, profits are proportional to the amount of the stock invested in production and the idea of entrepreneurship disappears. For Ricardo the risk involved

in capital employed in production had little theoretical importance, although he recognised that the rate of profit may differ among sectors due to risk elements (Ricardo 1817: p. 123).<sup>4</sup> On the contrary, having a long career as a successful broker in the stock market, he was aware of the differences between interest rates related to risk bearing investments. Yet, in general, money interest was a subordinate phenomenon to the variations of the rate of profit (Pivetti 2015: p. 427). It was the younger Mill, who in the Book III of the *Principles of Political Economy* (ch. XV “Of Profits”), reconciles the Ricardian legacy with Smith in distinguishing between three parts of profits, i.e., interest for the invested capital, insurance for compensating risk and remuneration for “superintendence” (J.S. Mill 1848: p. 406). The lowest rate of profit should be as high as to remunerate all three components.

After the 3d -1852- edition, J.S. Mill endorses Senior’s theory of abstinence in order to explain the compensation of the owner of capital “for forbearing to consume”. The wages of the manager are described in Smithian terms. But when it comes to explain the part of profit that compensates the “risks of the undertaker” Mill refers to J-B. Say when he introduces explicitly the French term ‘entrepreneur’ in economic analysis.<sup>5</sup> Speaking about risk-bearing as an entrepreneurial function he even foresees two distinct sources of risk, firstly “between different employments of capital in the same society, [and secondly] the very different degrees of security of property in different states of society” (J.S. Mill 1848: p. 408). The latter discusses openly the idea of insecurity of property rights which is characteristic of the less developed countries. In that sense, Mill compares the dangers of “spoliation from a tyrannical government” that exist in Asia, or existed in Medieval Europe, with the “secure state of society” prevailing in most capitalist countries, explaining hence the high differences in the interest of the capital required. In another occasion, he makes the same argument to explain the tendency of profits to their lowest rate: as society progresses, “destruction by wars, and spoliation by private and public violence, are less and less to be apprehended”. As a consequence, “the risks attending the investment of savings in productive employments require therefore, a smaller rate of profit to compensate for them than was a century ago, and will hereafter require less than at present” (J.S. Mill 1848: p. 730). In other words, less insecurity produces lower uncertainty and contributes to lower profits.

It is mostly with reference to the first source of risk “between different employments of capital in the same society” where Mill advances a rough idea of forecastable risk. To explain the differences of profit arising from the nature of the investment (J.S. Mill 1848, p. 409), he speaks generally

about the differences in business risk that lie behind the variation of “the premium of insurance”, very much alike Smith, to whom he refers explicitly to, as seen above. But, when it comes to determine the level of the rate of interest (Book III, Chapter XXIII) Mill becomes much more precise on this subject. In the classical theory, the rate of interest depends on the demand and supply of loanable funds. Speaking about the supply of these funds Mill tries to establish a crude evaluation of the investor’s decision making. On the one hand, capital owners decide to “engage in business”, only after considering the difference between the ordinary rate profit covering all its three components (abstinence reward, risk-taking and management wage) and the market rate of interest. As Say did before him, Mill tries to include forecastable riskiness into the cost of production (Fontaine 1999: p. 8). On the other hand, those who lend money for profit, like bankers, use a specific criterion: “professional money lenders, however must have more than a mere interest; they must have the ordinary rate of profit on their capital, risk and all other circumstances being allowed for” (J.S. Mill 1848: p. 639). So, what determines the decision to lend money to a stranger is the result of the comparison of the “permanent or average rate of interest” which expresses the equilibrium of supply and demand of the aggregate loanable funds, and the conjectural market interest.

Moreover, to capture the nature of economic fluctuations J.S. Mill refers to the role of money lenders who are willing to lend more “at the commencement of a period of speculation, and much less than usual during the revulsion which follows” (J.S. Mill 1848: p. 641). Bankers and other “interest-receiving capitalists” act as accelerators of the economic fluctuations because they tend to speculate on the prospective risk of loss. They differ substantially from the “class of profit-receiving capitalists” who have longer prospects and are less affected by the circumstances (J.S. Mill 1848: p. 642). From Adam Smith who was estimating the normal rate of interest to be “half of the ordinary profit rate”, Mill moves a step forward and tries to analyze further the rationality of the financial investor by measuring indirectly his calculations, in a very simplistic manner indeed. It seems that this kind of calculation was already somehow active in the mid-19<sup>th</sup> century as Mill reports: “In the case of fire insurances, the tax is exactly double the amount of the premium of insurance on common risks” (J.S. Mill 1848: p. 859 n.2). While the key element of probabilistic thinking to be able to apprehend risky behaviour is missing, Mill acknowledges risk as a major source of profit.

### KARL MARX AND THE RISKS OF PROFIT MAKING

Risky behaviour, although subordinated, is also present in Marx's *Capital* (vol. III). For Marx, profits are the expression of the surplus-value and have three different forms: rent, interest and industrial profit (Marx 1867: p. 516). In order to explain the sources of profit, Marx rejects the abstinence theory because it tries to replace an economic category such as capital, by a literary expression which simply describes the negative meaning of the action of accumulation: abstaining from consuming is strictly equivalent to accumulating (Marx 1867: p. 1101). In an earlier manuscript, written in 1857-8, but published only in 1939, known as the *Grundrisse*, Marx has made the distinction between entrepreneurial profit and interest, each one remunerating a different species of capitalist. Financial or "money-capitalists" receive a revenue called interest, for lending their capital to the industrial or productive capitalists who are in charge of the labour process that creates the surplus-value. So, in Marxian analysis interest is a dependent part of profit, which historically existed long before the rise of capitalism, and continues to exist because productive capitalists often lack of sufficient financial resources (Marx 1858: pp. 245-6).

These ideas are elaborated in the third volume of *Capital* (Chapter XV, or XXII to XXIV)<sup>6</sup>, where it is constantly repeated that "profits are divided in profits of enterprise and interest" (Marx 1894: p. 879). This is the subject of a special chapter devoted to the "division of profit". To distinguish profit from interest and to underline the dependent character of the latter, Marx says that "interest is regulated through profit" (Marx 1894: p. 1122). Its upper limit corresponds to the profit itself, while its lowest limit may be close to zero. Marx denies the possibility of a natural rate of interest "in the sense that economists speak of a natural rate of profit and a natural rate of wages" (Marx, 1894: p. 1124). During crises, "when money is borrowed at any cost to meet payments", interest rates rise to their maximum (Marx 1894: p. 1123). On the contrary, in periods of prosperity or "extra profit", interest rates are very low. They tend also to be very low in those rich countries where "the class of rentiers" is relatively numerous and also where the development of the credit system is very advanced. So, while there is an average rate of profit, it is absurd to speak about an average rate of interest: "wherever it is competition as such which determines anything, the determination is accidental, purely empirical, and only pedantry or fantasy would seek to represent this accident as necessity" (Marx 1894: p. 1125). In other words, while the general rate of profit is determined by objective causes such as the surplus-value produced by the total capital

and its proportion with the value of the total capital, the market rate of interest fluctuates continuously as a result of the accidental daily movement of the supply and demand of the international money-capital (Marx 1894: p. 1129).

In analysing deeper the division of profit between interest and the profit of enterprise, Marx investigates the role of the money-capitalist and that of the industrial capitalist. To understand how the purely quantitative division of profit into net profit (coming from the labour production process) and interest (arising from capital loan) turns into a social division between two species of capitalists, he introduces the concept of the “profit of the entrepreneur” (*Unternehmergewinn*) to describe business profits, whether there is commercial or industrial. This is the closest notion to the Smithian concept of profit, also adopted by Mill, minus the part that remunerates the capital borrowed. Notwithstanding, Marx is explicitly denying the *raison d’être* of a distinct part of profit to compensate the “superintendence of labour” and declares to be a fiction conceived only in the mind of the capitalists (Marx 1894: p. 1141). For, the capitalist is unable to see that his profit is only the result of unpaid labour creating surplus-value. The same thing applies to the so-called wage of management. Both the work of supervision and management are integral parts of net profit and arise because someone works as a capitalist to extort surplus-value from the labour process (Marx 1894: p. 1143). The fact that this particular task of management and supervision can be entrusted to a different person than the owner of the industrial capital, and even though the “industrial capitalist is a worker, compared to the money-capitalist”, it is always true that he remains “an exploiter of the labour of others” (Marx 1894: p. 1148).

Therefore, where Smith and Mill have seen three distinct parts forming the components of profit (abstinence reward, risk-taking and management wage), Marx accepts only two: interest and the profit of the entrepreneur. The last includes the wage of management as an integral part. But, is there no risk in profit seeking, according to Marx? To find a trace of it, one has to go back in a previous section of the third volume, where Marx discusses “the capitalist’s grounds for compensating” (Chapter VIII or XII). This is done just after having explained how the average rate of profit between different industries is obtained through competition, and before exposing the law of the falling tendency of the rate of profit. To explain the provisional fluctuations of profit in a particular industry “caused by the cycle of fat and lean years” Marx refers to the influence of the market prices of commodities and the “capitalist’s calculations” who are trying to compensate the different



grounds of profit making. Among the grounds that capitalists are claiming to compensate through the average profit, he names the length of the production turnover, the remoteness from the market and the “risk to which the capital is exposed, for instance in shipping” (Marx 1894: p. 998). The capitalist is calculating all these and compensates his losses by raising the price. “As soon as capitalist production, and with it the insurance business, are developed, the risks are, in effect, made equal for all spheres of production. But the more risky branches pay higher insurance rates and recover them in the prices of their commodities” (Marx 1894: p. 999).<sup>7</sup> Hence, Marx is in fact aware of the risk element in business decision making and he consciously and deliberately subordinates it to the only real source of profit, namely surplus-value: “all these grounds for compensation mutually advanced by capitalists in calculating the prices of commodities of different branches of production merely come down to the fact that they all have an equal claim, pro rata to the magnitude of their respective capitals, to the common loot, the total surplus-value” (idem. Cf. Tsaliki 2006: p. 598). A further confirmation of this is given in the volume II of Capital where Marx clarifies that because “insurance concerns the destruction due to extraordinary natural events (fire, flood etc.) it should be taken from the surplus-value” (Marx 1885, p. 608).

### **CONCLUSION: RISK AND PROFIT IN UNCERTAIN CONDITIONS**

We have attempted to endeavour the analysis of risk in profit theory in the work of Smith, Mill and Marx, and briefly to that of Say and Senior. Even if “the distinction between insurable risks and non-insurable uncertainty” as Schumpeter (1954, p. 894) has observed, is unclear before 1921, it is true that substantial evidence of it is indeed perceptible long before. The main hindrance in comprehending measurable risk was the deterministic nature of economic theory in the 19<sup>th</sup> century. Because, as Keynes has remarked, to be able to “distinguish between risks which are properly insurable” and other risks which are related to the uncertainty of the future, you need to be in a position to estimate their probability “between comparatively narrow numerical limits” (Keynes 1921, p. 23). Keynes belonged to the tradition which associated risk with an objectively known probability distribution (Lawson 1985; Dequech 2000, p. 51). In contrast, the much older tradition of subjective probability that goes back to Daniel Bernoulli in the beginnings of the 18<sup>th</sup> c., associated the objective probability of an outcome with the individually estimated material gain resulting from it. Jevons and Marshall

were the first to endorse Bernoulli's ideas in Economics, still only occasionally, in order to explicate the maximisation of the satisfaction which an investor derives from his future income, inaugurating thus a new mode of thought that will be fully developed only after 1944 (Cf. Zouboulakis 2014, pp. 94-97). Keynes was opposed to the Bernoullian project of grounding probabilities on statistical inference, since he believed that the probability of an event is always relative to a given ensemble or set of propositions (Lawson 1988, p. 43; Runde 1990, p. 278). When an outcome is recognized to be as highly probable, it is relatively to the total evidence. Therefore, a valid inductive argument should take into account all the data, which is an impossible task due to the Humean predicament related to the 'problem of induction'. To deal with subjective probabilities Keynes suggested random sampling as a means to overcome the logical impossibility of statistical inference from individual prospects (Keynes, 1921, p. 281).

Independently from Keynes, Knight distinguished a priori (objectively known in advance) and statistical (ex post) probabilities. As we have seen very briefly above, the probabilistic concepts were absent from Classical Political Economy and its Marxian critique. Yet, Knight granted a large space to "estimates" which are not measurable in order to comprehend profit seeking activities in uncertain conditions, very much alike the Classics: "Profit arises out of the inherent, absolute unpredictability of things, out of the sheer brute fact that the results of human activity cannot be anticipated and then only in so far as even a probability calculation in regard to them is impossible and meaningless" (Knight 1921, p. 311). As Arrow (1951, p. 427) has remarked in this regard, the very existence of uncertainty is fundamental in making business, since "if all risks were measurable, then risk-aversion would not give rise to any profit". For that reason, Knight recognized a special role to intuition, as a source of knowledge of the uncertain (Frantz 2005, p. 107). Contrary to the Neoclassical maximization process based on the certain knowledge of the future, Knight believed that in order to evaluate an uncertain prospect "we act upon estimates rather than inferences, upon 'judgement' or 'intuition', not reasoning for the most part" (1921, p. 223). In that sense, there is a clear conjunction with many Classical Political Economists and Keynes, since the existence of real-world uncertainty is a vital concept in explaining business profit seeking activities.

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### *Notes*

- 1 Knight's own example is quite enlightening: "no one would assert confidently that the chance of a particular building burning on a particular day is 'really' of any definite assigned value" (Knight 1921, p. 217).
- 2 Schumpeter (1954, p. 646), Hébert and Link (2009, p. 11). Smith has developed Cantillon's ideas already in his "Glasgow Lectures" in 1763. See Meek (1956, p. 47). Cf. Aspromourgos (2014).
- 3 Aspromourgos (2014) also examines the ideas of Cantillon, Quesnay, Turgot and Stewart concerning entrepreneurship as risk bearing activity. Cf. Hébert and Link (2011, pp. 24-33).
- 4 I thank the editor for this reminder.
- 5 According to Schumpeter (1954, p. 556) Mill was the first major economist "who brought the term entrepreneur into general use among English economists". On Say's contribution on the subject see Hébert and Link (2009, pp. 17-20), who fail to see Mill's distinction between the capitalist and the entrepreneur. Fontaine (1999) offers a genuine account of Say's idea of the entrepreneur.
- 6 The French variorum edition of the works of Marx, edited by Maximilian Rubel (1965-1968) is based on the translation from the original manuscripts conserved in the International Institute of Social History in Amsterdam and follows a different organization of the chapters, from the German edition made by Engels. But, as far as the English translation of the text we have consulted the Soviet edition of 1959, based on the translation of Charles Kerr, Chicago, 1909.
- 7 The English translation uses the words "hazards" and "hazardous" instead of "risque" in the French one.

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