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Frank H. Knight and Ronald H. Coase on the nature of the capitalist firm: An analysis of their seminal contributions (1921-1937)

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Abstract. Ronald H. Coase and Frank H. Knight are usually considered by scholars to be the most influential and pioneering authorsof the modern theory of the firm. However, it isless well known that both of them argue, in a different but often complementary way, that employment relationships and controlling authority are at the core of the nature of the capitalist firm. In this paper, after considering the particular circumstances of the period of the 1920–1940s,we show the close relation between Coase and Knight and analyse the theoretical elements that both connect and distinguish these two main authors from the "Chicago School".

Keywords. Nature and theory of the firm, Frank H. Knight, Ronald H. Coase, employer–employee relationship, authority, uncertainty.

JEL Classification. B25, B52, L 20.

Introduction

Why does a firm exist and why is a firm a durable entity? These questions are at the core of the theory of the firm. Many economists have explored this field of research, and economists generally agree that Ronald Coase[3] is the pioneer in this field. However, what is less well known is Frank H. Knight's contribution to the debate. In this paper, we will demonstrate that Knight's contribution is as essential as that of Coase. Knight (1921, 142) was the first scholar to consider that the essence of a firm lies in employment relations and the specialisation of the function of the "responsible direction of economic life".

Coase's most renowned papers on the subject are "The Nature of the Firm" (1937) and "The Problem of Social Cost" (1960), for which he received the Alfred Nobel Memorial Prize in Economic Science in 1991. Knight's contribution lies in his magnum opus *Risk, Uncertainty and Profit*[4] (1921), which is usually quoted for its distinction between risk and uncertainty. These two authors are on the borderline betweenthe Chicago school of economics and institutionalism. Frank Knight, together with Jacob Viner[5], is considered to be one of the leading figures and founding members of the Chicago school of economics, whereas Coase is considered to be a founding father of the New Institutional Economics (NIE) because of his work on cost and firm. The latter was sympathetic to the earlier Chicagoans, Jacob Viner and authors of Franck Knight's generation; Coase had read Knight's 1921 opus under Robbins' influence[6]. In the 1930s, most of the London School of Economics (LSE)'s research focused on the notion of cost, also under the influence of Lionel Robbins[7]. The two authors share some similarities: they both came accidently to economics (Knight obtained a bachelor's degree in natural sciences and a master's degree in German, whereas Coase pursued a commerce degree at the London School of Economics),they both constructed their ideas at a time when traditional theory was discredited, they both had business experience (Knight as a clerk and Coase from his interviews of American business men), and both were borderline economists (Knight with progressism, Coase with Fabian socialism).

In this paper, we use Knight and Coase's representations of the firm and the entrepreneur to explain how a firm emerges and works. In a world of uncertainty and change, the success or

[3] See, for example, Foss (1993), Foss and Klein (2008) or Loasby (2007, 2009).
[4] In this paper, *Risk, Uncertainty and Profit* is denoted by the acronym RUP.
[5] This school distinguished itself from the neoclassical and institutional schools in several aspects. Their members defend the free enterprise economy, a liberal political philosophy and the application of the price theory to every sphere of life, "making price theory an empirical applied policy science", as noted by Emmet (2009a, 151). Because Knight lectured on price theory and considered economics to be an applied political science that must be used to understand human conduct, he can be classified as a Chicagoan. However, the founding tradition of the Chicago school must be distinguished from the generation of Friedman, Becker and Stigler. For a better understanding of Knight's place in the Chicago school of Economics, see Emmett (2009a).
[6] Coase was also largely influenced by E.A.G. Robinson and his contribution to industrial economics.
[7] According to Coase (1982, 33), Robbins's course was largely influenced by Knight's opus. However, we do not want to discuss the question of the lineage between the two authors; we only want to emphasise that their analysis of firms and their focus on employment relationships as the basis of the emergence of the firm opened the way for further developments of the modern theory of the firm and the analysis of the decision process in an uncertain universe.

failure of a business affairdepends on the capacity of the entrepreneur to make accurate predictions about the future.

Because of contingencies, knowledge of the future is imperfect, and uncertainty is symptomatic of human life. As with everyday decisions, business decisions imply uncertainty:if uncertainty is absent, managers have routines without responsibilities, and no intelligence is required. Faced with uncertainty, individuals have to decide what to do and how to do it. These individuals form a "new class of producer": the entrepreneur. Entrepreneurs have a threefold function: "forecasting the consumers' wants, technical direction and control of production", as noted by Knight (1921, 141). They have to formulate judgements and form opinions about the future. Uncertainty is the source of creative action.

However, men have different capacities to cope with uncertainty and to make judgements. Two types of individuals exist: a small number of individuals who are willing to address uncertainty, take unpredictable risks and decide what to do and how to do it, and the mass of other individuals who prefer to follow what the first types of individuals have decided. The first types of individuals are businessmen, entrepreneurs, and leaders with managerial skills.

Entrepreneurs engage workers and tell them what to do. The employer provides a certain wage and a certain position to the employee in exchange for his productive services. Employees are specialised in executing activities, whereas employers are specialised in making decisions. The former follow routines and habits, whereas the latter are creative and assume responsibility. Capitalist firms arise out of the contractual relationship between employees (followers) and employers (leaders). Thus, "in organized activity the crucial decision is the selection of men to make decisions" (1921, 158). Entrepreneurs and employers make judgements about the ability of employees to execute orders. Employees usually execute routines and only make judgements if changes have occurred: "as far as the lowest man in the scale is concerned, he is freed from all responsibility beyond the ("routine") duty of using his best judgement as occasion requires. His superior is responsible for him, and he accordingly receives a fixed wage" (1921, 157).

Arguably, Knight and Coase can be considered to be the two founding fathers of the research on the theory of the firm. Alfred Marshall has proposed real elements of theoretical and empirical progress toward a substantial definition of the firm. Knight and Coase follow this path and propose a substantial analysis of the nature of capitalist firms.It is worth noting that some of Knight's arguments are similar to Coase's arguments; both of them believe that because of radical uncertainty, some firm members have to devote themselves to the function of authoritative coordination. To some extent, their writings were the first to direct attention to the crucial dimension of the employee–employer relationship in the analysis of the nature and boundaries of the capitalist firm. In the view of Knight, this competence is akin to a qualitative coordination of production activities (Langlois, Yu and Robertson, 2003). According to Knight, the quest for the good entrepreneur "is perhaps the most important single problem of economic organisation on the efficiency side" (ibid., 149).

The Coasian view of the firm is based on a strong argument: the neoclassical theory is unrealistic and based on *ad hoc* axioms and premises that assume that price systems and Smithian market-based regulations are the best mechanisms of resource allocation[8]. Indeed, if the neoclassical theory is accurate and compelling, how can we explain that our economic systems do not include markets only? How can we explain the existence of firms? Because firms do exist, a better theory must be sought. Based on this critical argument, Coase (see Medema 1994 for an exhaustive review of the literature on the complete works of Coase) identifies a research question that is crucial[9]: What is the nature of the firm?

The period we consider includes three major intellectual stages. As Coase (1972, 62) noted: "If you go to a library, you will find shelves of books written in the 1920s and 1930s dealing in detail with the organization of particular industries". First, the publication of J. M. Keynes' General Theory in 1936 and the subsequent Keynesian revolution disrupted academic research. Second, American economists developed mathematical economics[10].The third important stage was initiated by the development of the theory of imperfect competition by Edouard H. Chamberlin and Joan Robinson[11] in 1933 and the publication of *Modern Corporation and Private Property* by Adolph Berle and Gardner C. Means in 1932, which opened a vein of research on the theory of the firm, imperfect competition and antitrust policy. A decade earlier, Frank Knight had already explored the relation between control, responsibility and entrepreneurship. It is thus interesting to consider the circumstances that sparked his analysis.

To better appreciate Knight's idea of the capitalist firm, it appears necessary to consider the circumstances of the emergence of these ideas. Knight's analysis of the capitalist firm appears for the first time in *RUP*. Questioning the intellectual context and the American history of economic thought, we will underscore the specificity of Knight's vision of the capitalist firm. Subsequently, we will explain why we believe that Knight's contribution is seminal, building a bridge to Ronald Coase's concept of the firm that completes the work of Knight. This paper is organised as follows: Part 1 describes Knight's theory of the firm as a response to uncertainty, and Part 2 presents and analyses the very influential work of Coase that appears to be a response to market and price mechanisms.

[8] Coase's theory of the firm is certainly opposed to the neoclassical concept of the firm, which was not really his intention. He used the opportunity of a Cassel Travelling Scholarship to visit industrial factories and businesses to gain a better understanding of the structure of American industries. This experience helped him develop the concept of transaction costs and draft his theory of the firm.

[9] Note that Coase occupied a peculiar place at the LSE. He did not complete an economic degree but rather a commerce degree. As a result, he was more interested in accounting and firms than in solving equilibrium problems. Because of his focus on transaction costs, Coase was particularly aware of the different debates that animated the economic community, especially the socialist calculation debate (Coase 1946).

[10] In the US, interest in this type of research arises only later, and the process of dissemination of mathematical economics is slow.

[11] It is interesting to note that Austin Robinson (J. Robinson's husband) is often quoted by Coase as among the major authors who addressed the question of the determination of the size of the firm and, more generally, industrial organization. For more details on the influence of Robinson on Coase, see Jacobsen 2008.