

## Apresentação

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O texto reproduzido a seguir constitui capítulo inicial do livro da economista inglesa Edith Penrose, publicado em 1959, no qual a autora se propõe a desenvolver uma teoria do crescimento da firma — questão até então praticamente ignorada pela teoria econômica, na qual a firma aparecia basicamente no âmbito da teoria estática de formação de preço em equilíbrio parcial.

Reconhecendo a novidade teórica da questão proposta, Penrose toma como ponto de partida a revisão do próprio conceito de firma implícito na análise de equilíbrio parcial. Nessa análise, a firma constitui uma entidade que toma decisões quanto a preço e quantidade produzida de um produto específico com o objetivo de maximizar seu lucro em um contexto estático; assim, a firma pode ser identificada a uma função de produção e a uma curva de custo. Considerando que o conceito de firma, no âmbito de uma determinada teoria, depende de como essa teoria caracteriza sua função dentro da economia, Penrose conclui pela necessidade de um novo conceito que caracterize a firma como uma “*growing organization*” e não como um “*price-and-output decision maker for given products*”. Assim, a definição de firma que adota enfatiza “seu papel como uma unidade autônoma de planejamento administrativo”, indicando que é “a área de coordenação — a área de ‘comunicação de autoridade’ (*authoritative communication*) — que deve definir as fronteiras da firma para nosso propósito”; assinala, contudo, que “a firma é mais do que uma unidade administrativa: é uma coleção de recursos produtivos, cuja alocação entre diferentes usos e ao longo do tempo é determinada por decisões administrativas”, destacando, dentre esses recursos produtivos, o grupo gerencial, o qual caracteriza como “um grupo

de indivíduos que tem experiência de trabalho conjunto, já que apenas dessa forma o trabalho de equipe pode ser desenvolvido”.

A noção de firma estivera ausente da discussão econômica até então. A exceção notável fora o artigo “The Nature of the Firm”, publicado por R. H. Coase em 1937, que, embora tendo sua importância reconhecida, tivera pouco impacto na produção teórica e não parece ter influenciado Penrose.<sup>1</sup>

Na verdade, a obra desta autora parece aproximar-se antes de alguns desenvolvimentos no âmbito da teoria da organização (fora, portanto, do *mainstream* da teoria econômica), em curso na segunda metade dos anos 1950 e no início dos anos 1960 — notadamente, daqueles que viriam constituir a teoria comportamental (*behavioural*) da firma, à qual se associam sobretudo os nomes de H. A. Simon e de R. M. Cyert e J. G. March. Tais trabalhos questionam a visão de firma implícita na análise do equilíbrio parcial e, em particular, a hipótese de que sua atuação reflete uma política de maximização de lucro. Essa crítica aponta a questão da incerteza que inviabiliza o cálculo maximizador, mas sobretudo focaliza a firma como uma coalizão de grupos com interesses conflitantes que devem ser acomodados, impedindo assim que sua atuação se pautе pela persecução do lucro como único objetivo.

Vale notar que o lucro como objetivo único da firma vinha sendo também objeto de crítica de natureza distinta, que enfatizava a separação entre propriedade e controle da empresa como fonte de poder discricionário dos gerentes, os quais se habilitam assim a substituir a meta dos proprietários do capital — a maximização do lucro — por objetivos próprios. Essa vertente evoluiria, após a publicação do livro de Edith Penrose, para a formulação de teorias gerenciais (*managerial*) da firma, às quais se associam os nomes de W. J. Baumol, O. E. Williamson e R. Marris. Em algumas versões dessa teoria, o crescimento da firma aparece como o principal objetivo dos gerentes. Penrose se posiciona em relação a essa questão para negar a pertinência, em um contexto dinâmico, de opor lucro e crescimento, uma vez que o lucro é necessário para financiar o crescimento e este é requerido para assegurar a expansão do lucro no longo prazo.

<sup>1</sup> É possível, no entanto, apontar uma certa aproximação entre a definição de firma formulada em *The Theory of the Growth of the Firm* e a referência de Coase ao papel do empresário-coordenador em sua caracterização da firma. De fato, Coase, tendo caracterizado o sistema econômico como coordenado pelo mecanismo de preço, enfatiza que “o traço distintivo da firma é a supressão do mecanismo de preço” (Coase, 1937:334) uma vez que, “no interior da firma, essas transações de mercado são eliminadas e a complexa estrutura de mercado, com suas transações de troca, é substituída pelo empresário-coordenador, que dirige a produção” (Coase, 1937:333).

A partir da visão de firma proposta inicialmente, Penrose analisa, nos nove capítulos subseqüentes ao aqui reproduzido, o ritmo e a direção do crescimento da firma, nos mercados em que atua, ou por diversificação em novos mercados, através de crescimento interno ou de fusões e aquisições.<sup>2</sup> A ênfase conferida em sua definição inicial à firma como uma unidade administrativa vai se refletir nessa análise, na qual o ritmo e a direção do crescimento dependem não apenas de sua capacidade de financiar os investimentos requeridos e do ambiente externo (evolução da demanda e comportamento da concorrência), mas sobretudo da capacidade de sua equipe gerencial — cuja atuação afeta inclusive a eficácia e a natureza dos demais condicionantes, a capacidade de financiamento e o ambiente externo.<sup>3</sup>

Penrose não formaliza sua teoria do crescimento da firma. Sua influência sobre a construção de modelos teóricos de crescimento esteve praticamente restrita à sua associação indireta com os modelos desenvolvidos pelas teorias gerenciais da firma, notadamente o modelo de Robin Marris. Seu livro tem fornecido, no entanto, ao longo das décadas subseqüentes, hipóteses e linhas de investigação para os estudos empíricos relativos à dinâmica das empresas e das indústrias e mercados.

<sup>2</sup> O livro compreende os seguintes capítulos: I. Introduction; II. The Firm in Theory; III. The Productive Opportunity of the Firm and the "Entrepreneur"; IV. Expansion Without Merger: the Receding Managerial Limit; V. "Inherited" Resources and the Direction of Expansion; VI. The Economies of Size and the Economies of Growth; VII. The Economics of Diversification; VIII. Expansion Through Acquisition and Merger; IX. The Rate of Growth of Firms Through Time; X. The Position of Large and Small Firms in a Growing Economy; XI. Growing Firms in a Growing Economy: the Process of Industrial Concentration and the Pattern of Dominance.

<sup>3</sup> Penrose sustenta que "a capacidade da equipe gerencial existente na firma necessariamente estabelece um limite à expansão dessa firma em um dado período de tempo, já que é evidente que essa gerência não pode ser contratada no mercado", uma vez que "a equipe gerencial existente fornece serviços que não podem ser supridos por pessoal externo recentemente contratado, não apenas porque essa equipe constitui o núcleo da organização administrativa que não pode ser expandida a não ser por sua própria ação, mas também porque a experiência que os membros da equipe adquiriram trabalhando dentro da firma e em conjunto os qualifica a fornecer serviços que são úteis apenas para as operações desse grupo particular ao qual estão associados" (cap. 4, p.45-46).



## CHAPTER II

### THE FIRM IN THEORY

*Different ways of looking at firms—The firm in the theory of price and production. Limits to size. The 'firm' is not a firm—The firm as an administrative organization. The function and nature of an industrial firm. Size and administrative co-ordination. Industrial firms and investment trusts. Continuity in the 'history' of a firm—The firm as a collection of physical and human resources—The motivation of the firm. The profit motive. Long-run profits and growth.*

In a private enterprise industrial economy the business firm is the basic unit for the organization of production. The greater part of economic activity is channelled through firms. The patterns of economic life, including the patterns of consumption as well as of production, are largely shaped by the multitude of individual decisions made by the businessmen who guide the actions of the business units we call firms. The very nature of the economy is to some extent defined in terms of the kind of firms that compose it, their size, the way in which they are established and grow, their methods of doing business, and the relationships between them. In consequence, the firm has always occupied a prominent place in economic analysis. It is a complex institution, impinging on economic and social life in many directions, comprising numerous and diverse activities, making a large variety of significant decisions, influenced by miscellaneous and unpredictable human whims, yet generally directed in the light of human reason.<sup>1</sup>

In the literature of economics, the firm of the 'real world' has long lived in that uncomfortable no-man's-land between the high and dry plateaus of 'pure theory' and the tangled forests of 'empiric-realistic' research. Border skirmishes between the natives of the two areas have been common, supplemented by formal jousts in the medieval manner between noble knights of the opposing allegiances, each warmly defending his faith. These encounters have one remark-

<sup>1</sup> I hope I shall be forgiven if, on occasion, I endow the firm itself with human attributes, considering it, not as a 'legal person', but, by analogy, as an 'economic person' (although not necessarily as the 'economic man'). This fiction permits me to speak of the 'firm', rather than its managers or executives, acting in this way or that, and facilitates exposition in those cases where no distinction is required between the firm and the men who run it.

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able characteristic—it seems strangely difficult for any participant ever to discover precisely where his antagonist stands, with the result that an uncommon number of thrusts seem to be made in one direction but countered from an entirely different direction, broad swords and rapiers forcefully cutting the air, without really clashing. When such difficulties occur in the world of thought one is likely to find the source of them in the meaning of words, and indeed so it is with the present problem of the 'firm'. A 'firm' is by no means an unambiguous clear-cut entity; it is not an observable object physically separable from other objects, and it is difficult to define except with reference to what it does or what is done within it. Hence each analyst is free to choose any characteristics of firms that he is interested in, to define firms in terms of those characteristics, and to proceed thereafter to call the construction so defined a 'firm'. Herein lies a potential source of confusion that it is essential to deal with at the very outset of this study.

Because of its complexity and diversity, a firm can be approached with many different types of analysis—sociological, organizational, engineering, or economic—and from whatever point of view within each type of analysis seems appropriate to the problem in hand. Within economics itself there are several different approaches to the study of the firm, and one type—the so-called 'theory of the firm'—continues to hold the field in spite of vigorous attacks; of all the approaches it is probably the most often misunderstood and misapplied by both its defenders and its attackers.

Educated laymen as well as economists studying the vagaries of actual business behaviour often show an understandable impatience with the 'theory of the firm', for they see in it little that reflects the facts of life as they understand them. It is therefore worth a little trouble, perhaps, to discuss at the very beginning the nature of the 'firm' in the 'theory of the firm', to indicate why it provides an unsuitable framework for a theory of the growth of firms, but at the same time to make clear that we shall not be involved in any quarrel with the theory of the 'firm' as part of the theory of price and production, so long as it cultivates its own garden and we cultivate ours. Much confusion can arise from the careless assumption that when the term 'firm' is used in different contexts it always means the same thing.

## THE FIRM IN THEORY

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## THE 'FIRM' IN THE THEORY OF PRICE AND PRODUCTION

The 'theory of the firm'—as it is called in the literature—was constructed for the purpose of assisting in the theoretical investigation of one of the central problems of economic analysis—the way in which prices and the allocation of resources among different uses are determined. It is but part of the wider theory of value, indeed one of its supporting pillars, and its vitality is derived almost exclusively from its connection with this highly developed, and still basically unchallenged general system for the economic analysis of the problem of price determination and resource allocation.<sup>1</sup> In this context only those aspects of the behaviour of firms are considered that are relevant to the problems that the wider theory is designed to solve.

Since the theory of value is concerned with the factors determining the prices of particular products or productive services, the appropriate model of the 'firm' is a model representing the forces determining the prices and quantities produced of particular products in the individual firm; the 'equilibrium' of the 'firm' is, in essence, the 'equilibrium output' for a given product (or given group of products) from the viewpoint of the firm. It does not pretend to be an 'equilibrium' of the firm if the firm is represented in any other way, or if any other considerations affect it than those permitted in the theory of price and output.<sup>2</sup> Hence if we become interested in other aspects of the firm we ask questions that the 'theory of the firm' is not designed to answer. In that theory the 'growth' of a firm is nothing more than an increase in the output of given products, and the 'optimum size' of the firm is the lowest point on the average cost curve for its given product; the question what limits the size of a firm is the question what limits the amount it will produce of the given product or products with respect to which the cost and revenue schedules apply that are used to represent

<sup>1</sup> Consequently the various attacks on the theory of the firm, whether they come from theorists emphasizing the effect of uncertainty or from investigators of the actual behaviour of firms, have failed to dislodge it from its key position in economic theory. To do so, even for the competitive case, would, as Hicks has pointed out, involve the 'wreckage' of 'the greater part of general equilibrium theory', which can hardly be accepted until something better has been evolved to take its place. J. R. Hicks, *Value and Capital* (Oxford: Clarendon Press, 2nd ed., 1946), p. 84.

<sup>2</sup> It is not surprising, therefore, that this firm is '... a strange bloodless creature without a balance sheet, without any visible capital structure, without debts, and engaged apparently in the simultaneous purchase of inputs and sale of outputs at constant rates'. Kenneth Boulding, *Reconstruction in Economics* (New York: Wiley, 1950), p. 34.

the 'firm'. The model is not designed for the analysis of a 'firm' free to vary the kind of products it produces as it grows.

*The Limits to 'Size'*

The conditions of equilibrium analysis require that there be something to prevent the indefinite expansion of output of the individual 'firm' defined in the above manner. In the model of the firm in 'pure' competition, the limit to output is found only in the assumption that the cost of producing the individual product must rise after a point as additional quantities of it are produced; in the model of the firm in 'monopolistic' competition, the limit is partly found in falling revenue as additional quantities of the product are sold. Without some such limit to the output of a given product—which, in this context, means to the size of the firm—no determinate 'equilibrium position' can be posited in static theory.

Thus, regardless of the specific framework of their particular theories, economists have looked to the limitations of management (causing increasing long-run costs of production) or of the market (causing decreasing revenue from sales), or to uncertainty about future prospects (causing both increasing cost of larger outputs and decreasing revenue from larger sales because of the necessity of making allowance for risk) to provide a limit to the size of firm.<sup>1</sup>

The whole problem has been the source of much controversy, especially the question whether managerial diseconomies will cause long-run increasing costs; to establish such a result management must be treated as a 'fixed factor' and the nature of the 'fixity' must be identified with respect to the nature of the managerial task of 'co-ordination'. This identification has never been satisfactorily accomplished and many theorists have given up the task, preferring to rely on other limits to size.<sup>2</sup>

The notion that the market limits the size of firms follows from the assumption that a firm is tied to given products, that a specific

<sup>1</sup> The effect of uncertainty is not always put in these terms—see, for example, M. Kalecki, 'The Principle of Increasing Risk,' *Economica* Vol. IV (New Series) Nov. 1937, pp. 440-447—but most formulations can usually be expressed in terms of 'corrected' cost and revenue estimates. See Chapter IV for further discussion of this point.

<sup>2</sup> Chamberlin attempted to meet the problem by abandoning entirely the principle of a fixed factor and argued that mere increased complexity of organization would lead to the requisite rise in costs as the firm expanded. E. H. Chamberlin, 'Proportionality, Divisibility and Economies of Scale', *Quarterly Journal of Economics*, Vol. LXII, No. 2 (Feb. 1948), pp. 229-262—This does not get to the root of the matter, however, since complexity is a problem only if the capacity of men to deal with complexity is limited. Hence we are again back to the same point.



group of markets governs its possibilities of expansion. If this assumption is dropped, however, one is dealing with a different concept of the 'firm' and a different type of analysis becomes more appropriate. With a different concept of the firm one can recognize that a 'firm', when appropriate resources are available, can produce anything for which a demand can be found or created, and it becomes a matter of taste or convenience whether one speaks of the 'market' or of the resources of the firm itself as the consideration limiting its expansion. The fact that demand curves for given *products* can be assumed to be tilted downward does not mean that the expected net revenue from additional units of *investment* need ever become negative. Net revenue may well be rising as investment—and therefore total production—increases. To say that the expansion of a firm which can produce unspecified new products is limited by 'demand', is to say that there are no products that the firm could produce profitably. This, of course, is not what is meant in the theory of the firm, simply because its 'firm' is not a firm.

The introduction of 'uncertainty' or 'risk' as a limit to size merely underlines the fact that the expected cost and revenue calculations of firms reflect their expectations about the future course of events; these expectations are held with varying degrees of uncertainty which increase as output increases (thus increasing the risk of loss) and allowances must be made in a firm's calculations for the possibilities of disappointment. It in no way alters the nature of the analysis.

#### *The 'Firm' is not a Firm*

When the 'theory of the firm' is kept in its proper habitat there is not much difficulty with any of the explanations of the 'size' of firms. Difficulties arise when an attempt is made to acclimatize the theory to an alien environment and, in particular, to adapt it to the analysis of the expansion of the innovating, multi-product, 'flesh-and-blood' organizations that businessmen call firms. It makes little difference in the theory of the firm whether changes in the characteristics of the individual firm, for example its managerial ability, or changes in the expectations of the entrepreneur about the future course of events, are treated as causing changes in the size of a single firm or as causing the creation of a series of 'new firms'.<sup>1</sup> The theorist is free to adopt the technique most

<sup>1</sup> Kaldor, for example, has defined the firm as a 'productive combination possessing

suiting to his problem. But how such changes are treated makes a great deal of difference to the theorist concerned with the growth of the firm defined, say, as an administrative organization in the real world. For the latter purpose it becomes necessary to use a very different concept of the firm and little is gained by tortuously trying to force an adaptation of the theory of the firm merely because it has proved to be a valuable concept for a different purpose. To some extent the adaptation can be forced, as we shall see, but we shall be dealing with the firm as a growing organization, not as a 'price-and-output decision maker' for given products; for this purpose the 'firm' must be endowed with many more attributes than are possessed by the 'firm' in the theory of the firm, and the significance of these attributes is not conveniently represented by cost and revenue curves. Furthermore, not only is it inconvenient so to represent them, but it is also misleading, for it only compounds the confusion involved in a failure clearly to distinguish the 'firm' in price theory from the 'firm' as it is looked on by businessmen as well as by many economists dealing with the behaviour of firms—a confusion which has unnecessarily marred the reputation of the 'theory of the firm' and done its credit in this world much wrong.<sup>1</sup>

a given unit of co-ordinating ability', and holds that 'all the theoretically relevant characteristics of a firm change with changes in coordinating ability. It might as well be treated, therefore, as a different firm'. N. Kaldor, 'The Equilibrium of the Firm', *Economic Journal*, Vol. XLIV, No. 173 (March 1934), pp. 69-70. And Triffin explicitly states that for (his) theoretical purposes it is 'better to say that a new firm has been created' when the producer's appraisal of cost and revenue conditions changes. Furthermore 'each innovation modifies the level of profit opportunities attached to a firm or rather creates a new firm, provided with profit opportunities of its own . . .'. Robert Triffin, *Monopolistic Competition and General Equilibrium Theory* (Cambridge: Harvard Univ. Press, 1940), pp. 169-171.

<sup>1</sup> It is for this reason that I would reject the attempt of Andreas G. Papandreou to construct a concept of the firm which takes into account the firm as an organization without 'doing violence to [the economist's] main conceptual schema'. He holds that 'organization theory and the economist's theory of the firm are seen to converge, in fact, as soon as we introduce organizational techniques as data into the latter, side by side with the technological data'. Andreas G. Papandreou, 'Some Basic Problems in the Theory of the Firm', in *Survey of Contemporary Economics*, Vol. II, B. F. Haley, Editor (Homewood: Irwin, 1952), pp. 187-188.

The economist's 'main conceptual schema' is designed for the theory of price determination and resource allocation, and it is unnecessary and inappropriate to try to reconcile this theory with 'organization theory'. E. S. Mason in his *Comment* (*Ibid.*, pp. 221-222) is justified in confessing a 'lack of confidence in the marked superiority, for purposes of economic analysis, of this newer concept of the firm, over the older conception of the entrepreneur'. If the study of the process of growth of firms is a legitimate purpose of economic analysis, however, then I think it can be shown that the 'newer concept of the firm' is of importance, but it should be clearly defined as a concept to be used for a different purpose from that of the traditional one.