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The correspondence between Baumol and Galbraith (1957–1958) An unsuspected source of managerial theories of the firm[1].

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Abstract: Baumol's impact on the development of managerial theories of the firm is investigated here through material found in Galbraith's archives. In 1957 Galbraith published a paper claiming that the impact of macroeconomic policies varies with market structures (competitive *versus* oligopolistic). That publication prompted Baumol (1958b) to send Galbraith a manuscript dealing extensively with a crucial question of managerial theories of the firm, namely, the trade-off between sales and profits. I argue that Baumol's critiques and Galbraith's answers largely explain the way Baumol (1958a, 1959) framed his alternative model of the behavior of corporations. He reasoned in terms of maximization of sales with a profit constraint as their main objective. In return, *Business Behavior, Value and Growth* fostered the development of Marris' (1964) and Galbraith's (1967) theories of the corporation. While Tullock (1978) provides a narrative in which the sales maximization hypothesis has two main branches – Baumol for the one and Galbraith-Marris for the other – the paper demonstrates that these branches are intimately connected.

Résumé : En se fondant sur des documents d'archives, l'article réévalue l'impact de William Baumol sur le développement des théories managériales de l'entreprise. En 1957, John Kenneth Galbraith publie un article affirmant que l'impact des politiques macroéconomiques varie en fonction des structures de marché (concurrentielles ou oligopolistiques). Cette publication conduit Baumol (1958b) à envoyer à Galbraith un manuscrit traitant d'une des questions cruciales des théories managériales de l'entreprise, à savoir le *trade-off* entre le volume des ventes et le volume des profits. Nous soutenons la thèse que la correspondance entre Baumol et Galbraith expliquent en grande partie la manière dont Baumol (1958a, 1959) décide finalement de formuler son modèle alternatif du comportement des entreprises. Il raisonne en termes de maximisation des ventes avec une contrainte de profit. En retour, *Business Behavior, Value and Growth* favorise le développement des théories de l'entreprise de Marris (1964) et de Galbraith (1967). Alors que Tullock (1978) fournit une narration dans laquelle l'hypothèse de la maximisation des ventes a deux branches principales distinctes - Baumol d'une part et Galbraith-Marris d'autre part - l'article démontre que ces branches sont intimement liées.

Keywords: Baumol – Galbraith – Theory of the firm – Managerialism – Marginalism

JEL Codes: B21 – B22 – D21 – D43.

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Introduction

In the early 1960s, the neoclassical theory of the firm was criticized by managerial theories of the firm and behaviorist ones. William J. Baumol is recognized as one of the leading contributors to the development of managerial theories. He provided a first model based on the hypothesis of the maximization of sales revenue subject to a profit constraint (1958a, 1959) and then a second model, in a more dynamic perspective, based on the "maximization of *the rate of growth* of sales revenue" as the firm's main objective (Baumol 1962). With Adolf Berle (1959), Anthony Downs and Joseph Monsen (1965), John Kenneth Galbraith (1957, 1967), Carl Kaysen (1959, 1965), Robin Marris (1964), Oliver Williamson (1964), and then Adrian Wood (1975), Baumol thus belonged to an informal group of authors which challenged the neoclassical theory of the firm that hinges on the hypothesis of profit maximization. But unlike the behaviorist theories of the firm developed by Herbert Simon (1962) and Richard Cyert and James March (1963), Baumol challenged the idea of profit maximization without challenging the corollary hypothesis of rationality and, consequently, the marginalist framework.[2]

In earlier work I showed that, notwithstanding their specificities, these managerial theories of the firm share many points in common (Chirat 2021). Three are particularly relevant with respect to Baumol's contribution, which focuses on how to model the behavior of the firm and its macroeconomic implications. First, as explained in the pioneering works of Adolf Berle and Gardiner Means (1930, 1932), ownership of the corporation does not necessarily confer control of its activities on owners. The power of control, because of technological and organizational requirements, has gradually and to a large extent fallen into the hands of "managers" or the "technostructure". Second, managers pursue their own interests, which may diverge from those of stockholders or "businessmen" – an equivocal concept used by Baumol (1959, 45). Consequently, profit maximization is not necessarily the objective pursued by a corporation. It might even pursue several goals at once.

To challenge the hypothesis of profit maximization on which the neoclassical theory of the firm is based, these authors needed an alternative explanation for the firm's behavior. Several old institutionalists, from Thorstein Veblen to Galbraith by way of John Maurice Clark, reflected on alternative conceptions of the corporation's behavior. But William Baumol played a crucial role here. Whereas old institutionalist, such as Berle and Galbraith, did not embrace the post-war wave of formalization and mathematization in economics, Baumol did.[3] This is why he provided – and is praised for – one of the earliest formalizations of an alternative. In his static model, large firms maximize growth of sales under a profit constraint rather than simply maximizing profits (Baumol 1958a, 1959). What is less widely known, though, concerns the origins of Baumol's model. Gordon Tullock (1978) argued that "the sales maximization hypothesis in essence has two main branches", namely Baumol for the one and Galbraith-Marris for the other. Thanks to archival material, especially a manuscript by Baumol addressed to Galbraith in 1958, I show that their private exchanges were decisive to understanding Baumol's formulation of his alternative hypothesis. In other words, the aim of this paper is to prove that the two branches distinguished by Tullock are intimately connected.

[2] For Baumol's critical views on behaviorist theories of the firm, see Baumol and Stewart (1971).

[3] On Baumol's conception of economic modelling and the relationship between models and realism, see Baumol (1959, 1-10) and Baumol (1961, 1966).

To this end, the first section gives an account of Galbraith's paper, "Market structure and stabilization policy" (1957). The second presents the content of Baumol's 1958 manuscript, "Price behavior, stability and growth", written largely in response to Galbraith's paper. The third section presents the main issues of their correspondence in order to attest how they go to the heart of the managerial theory of the firm set out by Baumol in *Business Behavior, Value and Growth*. The fourth section highlights the pivotal role of Baumol's contribution for subsequent developments of managerial theories of the firm. By putting their 1958–1959 exchanges in the broader context of the history of theories of the firm since the thirties, the final section highlights the main differences between Baumol's and Galbraith's managerial theory of the firm.

1. Galbraith's challenge to the hypothesis of profit maximization and its macroeconomic implications

Although it is not widely known, John Kenneth Galbraith, influenced by the works of Berle and Means (1932) and Edward Chamberlin (1929, 1933), quickly expressed doubts about the relevance of the hypothesis of rationality and profit maximization in accounting for the behavior of firms, especially in the oligopolistic sector (Galbraith 1936, 446).[4] The long-term horizon of big corporations, the role of average rather than marginal cost in pricing behavior, and the tacit collusion preventing cutthroat competition in oligopolistic markets are the three main explanations he put forward. In *American Capitalism* – a book based on the development of industrial organization written after his return to Harvard in 1948 (Chirat and Guicherd 2021) – Galbraith added that "one of the seemingly harmless simplifications of formal economic theory has been the assumption that producers of consumers' goods sell their products directly to consumers"; a simplification that blinds us to the role of retailers. Yet retailers are mainly interested in the volume of their sales (1952, 117). Five years later, Galbraith published "Market Structure and Stabilization Policy" in the *Review of Economics and Statistics*. He aimed foremost at highlighting the different sensitivities of the competitive sector and the oligopolistic sector when confronted with macroeconomic public policies. He postulated that whereas increasing or decreasing demand engenders price adjustments in competitive sectors, it generates quantity adjustments in oligopolistic sectors. His conclusion was that public policies to curb inflation, especially restrictive monetary policies, are inefficient with regard to oligopolistic pricing behaviors. They need to be more drastic than is conventionally supposed in models relying on the profit maximization hypothesis.

Galbraith argued, for the three reasons already set out in his 1936 paper, that corporations have a preference for price rigidities in order to reduce uncertainty, so the pricing behavior of corporations does not aim at maximizing (short-run) profits. Consequently, there could be, after an increase in demand which is not matched by price increases by oligopolistic firms, "unliquidated monopoly gains". Galbraith introduced this concept in the case of an inflationary context, where the demand addressed to a firm and an industry is regularly increasing. The "unliquidated monopoly gains" are generated by a lag in the reaction of firms, since he considered that oligopolists adapt their prices "by deliberate and discrete steps" (1957, 129). He put forward two explanations of this

[4] Mongin (1992, 335) explains that Chamberlin's analysis (1933) had reinforced the importance of the profit maximization hypothesis, but it had at the same time changed the time horizon (long-run rather than short-run maximization). It is only by combining Chamberlin's insights, especially his hypothesis of the recognition of mutual dependence when sellers are few, with Berle and Means's thesis on the separation between ownership and control, that Galbraith gradually departed from the profit maximization hypothesis. For more details, see Chirat (2021).

delay between the constant shifts in demand and the discrete adaptation of prices: the imperfection of collusion between oligopolists and the trade-off between short-run and long-run maximization.

That concept of "unliquidated monopoly gains" allowed him to account for an empirical observation that prices rose in some industrial sectors, such as steel, in spite of there being excess supply relative to demand. He argued that prices rose because of wage increases. These were accepted by corporations as long as their market power enabled them to increase prices to capture some of these "unliquidated monopoly gains" – and consequently to pass on the wage increases to consumers. With this model, Galbraith swept aside the profit maximization hypothesis and thought he had provided "the first wholly satisfactory integration of the wage-price spiral with aggregative demand and price analysis" (1957, 129). On December 5th, 1957, Baumol asked Galbraith for a copy of his "very interesting article". Galbraith sent him one on December 9th, 1957.[5] A month later Baumol sent Galbraith a draft written for a publication for the Joint Economic Committee entitled "Price Behavior, Stability and Growth". This draft would become a part of *Business Behavior, Value and Growth*. In the enclosed letter of January 6th, 1958, Baumol told Galbraith that he did not "fully agree" with his "position" but considered his analysis as "important and cogent enough" to discuss it at length.[6] This draft and the following exchanges between Baumol and Galbraith are a so far unknown source of managerial theories of the firm.

2. Baumol's comments and Galbraith's reply

In his draft, Baumol was concerned with the linkage between business behavior, growth, and inflation, which "probably acts as a stimulant to growth", as well as oligopoly theory (1958b, 5). Baumol praised Galbraith for calling attention "to the fact that the process by which price changes occur is dependent on the nature of the market structure" (1958b, 8). In other words, he praised Galbraith's efforts to combine macroeconomic analysis with microeconomic foundations. These latter are based on the amendments of neoclassical theory that had been fostered since the thirties by the development of theories of imperfect and monopolistic competition as well as the development of industrial organization.[7] However, Baumol tempered Galbraith's argument that oligopolistic firms are "conductors of inflationary pressure" and "relatively immune to counter inflationary influence of monetary and fiscal policy". Baumol agreed with Galbraith that oligopolies do "not normally set a price that maximizes profits". However, he reproached him for providing no alternative. Whereas the *behavior of prices* is explained by the idea of a preference for price rigidities, in order to reduce uncertainty, nothing in Galbraith's model explained the *level of prices*. Moreover, Baumol argued that, rather than Galbraith's "preference for price rigidity", the fact that corporations do not maximize their profits could be directly explained by their pricing behavior. He suggested an alternative hypothesis: the management of the firm seeks to maximize the "sales volume measured in money terms" (1958b, 11). Because of this hypothesis, Baumol claimed that restrictive macroeconomic policies, as well as wage increases, could affect oligopolistic

[5] These letters are in John Kenneth Galbraith's Personal Papers, JFK Library, Series 3, Box 13.

[6] This was their first correspondence. They respectively address each other as "Professor Baumol" and "Professor Galbraith". Three years later, when Galbraith sent Baumol a transcript of a talk he gave on "Economics, Art and the Environment", they addressed each other by their first names. As president elect of the American Economic Association in 1971, Galbraith entrusted Baumol with organizing a session on the Economics of Arts. See JKGPP, Series 3, Box 21 and Series 5, Box 500.

[7] Baumol's interest and knowledge of this literature is also one root of his famous work on contestable market in the eighties. See for instance Baumol (1982).

corporations far more than Galbraith's 1957 analysis suggested. Such variations "hit the oligopolist where it hurts him most – not in his profit but in his sales volume" (Baumol 1958b, 12).

Reading Baumol's draft with "genuine interest", Galbraith sent him an answer five days later, on January 13th. After conceding some minor revisions suggested by Baumol, Galbraith told him that his paper "involves a major contradiction". On the one hand, Baumol argued that businessmen are interested in the volume of sales. Galbraith agreed with that postulate, even if Baumol wielded it to challenge his own claim that oligopolists, when confronted with an increase in demand, adjust backlogs rather than prices. On the other hand, Baumol, dealing with the issue of investment behavior by the firm, looked to profits rather than sales as the criterion determining firms' decisions. Although the profit motive is still important, Galbraith highlighted that Baumol could not sweep aside his thesis on the asymmetric effects – depending on market structure – of public macroeconomic policies. He concluded that Baumol had provided "a skillful but altogether too flexible adjustment of [his] assumptions to the needs of [his arguments]".[8] Stimulated by Baumol's draft, Galbraith sent him another letter two days later, on January 15th, in support of his rejection of the hypothesis of profit maximization thanks to the distinction between "short-run and long-run profit calculation". He argued that the crux of the matter was to understand "the events that change the relation between the two". This suggested "that we have price increases following wage increases" precisely because these price increases do not "jeopardize" long-run perspective of profits. On January 17th, Baumol admitted that "*sales and profits cannot both be more important than the other to the oligopolist*" (emphasis added) and that "the nature of the compromise varies from firm to firm". Pursuing his aim of providing an alternative to the neoclassical formalization of the firm's behavior, he finally wrote that "the best approximative generalization [he has] been able to come up with is that it is a constrained maximization in which the value of sales is maximized subject to the condition that profits do not fall short of some prestated minimum acceptable level". This formed the core of his theory of the firm first proposed in *Economica* in August 1958 and the following year in *Business Behavior, Value and Growth* (Baumol 1958a, 1959).

3. Baumol's theory of the firm and the implications of the sales maximization hypothesis

In the preface to *Business Behavior, Value and Growth*, Baumol did not thank Galbraith or even mention their correspondence. However, he indicated that the first part of the book, especially its chapters on the sales maximization hypothesis (chapter 6), its implication for the oligopoly model (chapter 7) and macroeconomic policies (chapter 8), was written "after the rest of the manuscript – about two months before it was sent off to the publisher". That is why his prior correspondence with Galbraith, between December 1957 and January 1958, matters. After reviewing the variety of theoretical solutions proposed by economists to tackle oligopolistic markets, Baumol provided his own alternative, that is to say the sales maximization hypothesis under a profit constraint. He argued that "this hypothesis can help to explain a number of well-known features of oligopolistic behavior" (1959, 14). In chapter six, Baumol explained that by sales, he did not refer to physical output but to the "total revenue obtained by the firm from the purchases of its customers", expressed in nominal dollars. Many arguments supported the hypothesis that "sales volume ranks ahead of profits as the main object of the oligopolist's concern" (1959, 45-47). First, Baumol

[8] Letter from Galbraith to Baumol, January 15th, 1958, JKGPP, Series 3, Box 13.

claimed that "declining sales bring with them all sorts of disadvantages", in particular the shrinking of market power and the disaffection of customers, retailers, and capital suppliers. Second, Baumol endorsed the thesis that modern corporations are characterized by the separation of ownership from management.[9] Yet managers, who pursue their own interests, have many reasons to prefer an increase in the size of the corporation, which, contrary to an increase in profits,[10] directly impacts their wages and the scope of the activities they control. This echoes one basic feature of traditional theory of bureaucracy. Galbraith (1967, 1983) would latter argue that every group controlling an organization, public or private, is first and foremost interested in its growth, since such an organization is the source of its power. Baumol's thesis that sales maximization ranked as the manager's primary objective was also informed by "his role as an economic consultant" (Sawyer 1979, 93) with corporations acting on concentrated sectors, such as railroads, telecommunications and electricity (Krueger 2001, 226).

In chapter 8, on the welfare implications of his oligopoly model[11], Baumol did not mention Galbraith but developed an argument recalling his concept of *unliquidated monopoly gains* (1957). Baumol argued that an oligopolist faced with an increase in his overhead costs will shift this burden onto consumers. This shiftability, Baumol added, is only possible if "the profit non maximizer has a reserve of *unclaimed profits* to fall back on when he is driven to do so by what he considers to be an unsupportable increase in his costs" (emphasis added). But contrary to Galbraith, Baumol insisted that this shift through a rise in prices is made "at the sacrifice of sales which mean so much" for the oligopolist (1959, 77-78; 1958a, 198). Explicit references to Galbraith's 1957 paper appeared immediately after this section, when Baumol reshaped the argument he presented in his 1958 manuscript in order to deal with the monetary and fiscal implications of his model. He described Galbraith's contribution as "important" but providing "no alternative explanation of the price setting process" (1959, 78-79). Thus, Baumol put forward the hypothesis of sales maximization as an alternative both to neoclassical theory and to Galbraith's theory.

> It follows from [the sales maximization hypothesis] that Professor Galbraith is indeed right in asserting that the oligopolist's profit will not normally be maximized. But the reason is not that he is dominated by fear of making price adjustments, although such fears may also play their role. He will fail to maximize profits because he has another partially overriding purpose to which he is willing to sacrifice some profits. If this is correct, we must expect only under extraordinary circumstances to encounter the backlog of orders which Galbraith considers to be a normal feature of oligopolistic operation during an inflationary period. A firm which tries to maximize dollar sales will not hold back on production which can be sold without price reductions unless either the expansion of its capacity has been unable to keep up with demand or management is so fearful of the future that it hesitates to undertake required investment commitments. (Baumol 1959, 80)

Despite their private exchanges, Baumol offered an interpretation of Galbraith's vision that Galbraith would have rejected. Galbraith did not refer to any "fear" of the oligopolist but rather

[9] In his book on *Welfare Economics*, Baumol had already considered the separation between ownership and management and discussed its potential consequences, especially the fact that the corporations "may not always be run in accord with the direct interests of owners" (1953, 119).
[10] A trade-off for managers would arise whenever they hold shares of the corporation. On this issue, Robin Marris argued that the development of stock-options was fostering "neoclassical behavior" by managers (1964, 72).
[11] On this subject see also Baumol (1964, 46-47) and Tullock (1978).

to a “preference” for rigidity, precisely because the management of the corporation has other purposes – the stability and security of its activities – ahead of profit maximization.

4. From Baumol (and Marris) back to Galbraith

In a paper on the “Welfare effects of sales maximization”, Gordon Tullock (1978) argued that “the sales maximization hypothesis in essence has two main branches”: Baumol on the one hand and Marris-Galbraith on the other. First, Tullock claimed that Baumol “presents his arguments largely in the context of an oligopolistic company.” This statement is true, but for both Baumol and Galbraith. Second, Tullock states that Baumol “presents sales maximization not as an effort to criticize the capitalist system”, contrary to Galbraith and Marris, but “simply as an effort to improve the realism of models” (Tullock 1978, 113-114). However, Galbraith and Marris also presented their works as attempts to improve the realism of the neoclassical model of the firm. As shown in the previous sections, the origin of Baumol’s alternative hypotheses was Galbraith’s attempt to provide a more realistic model of the effect of macroeconomic policies on firms’ pricing behavior. Moreover, I show in this section that Baumol’s alternative hypothesis would lastingly influence the research agenda on managerial theories of the firm, and especially Marris (1963, 1964) and Galbraith (1967).[12] Ultimately, Tullock’s distinction seemed to be based on a political criterion alone – Galbraith and Marris were more critical of “capitalism”. As Galbraith and Marris, Baumol had never hidden that his “goals for society always derived from the left” (Baumol 1984; Krueger 2001, Baumol & al. 2003). But Baumol showed greater confidence in market mechanisms to achieve these goals. Moreover, contrary to Galbraith, he was far more inclined to present himself in the idealized posture of the economist as a neutral expert - rather than the economist as a public intellectual.

Alongside Baumol, Robin Marris (1963, 1964) is considered as “the principal architect” of the theory of the managerial corporation (Weinstein 2012, 89). In “Model of the ‘managerial’ enterprise”, a paper published in 1963 in *The Quarterly Journal of Economics* as a synthesis of his forthcoming book *The Economic Theory of Managerial Capitalism* (1964), Marris thanked Baumol and referred to his 1959 essay. He refined Baumol’s static model in terms of “maximum revenue subject to a minimum profit constraint” by reasoning with “maximum growth rate of revenue, subject to the same constraint” (Marris 1963, 205). Marris acknowledged the proximities between his version and Baumol’s 1962 dynamic model in which profits, formerly a constraint in his 1959 model, appear as an instrumental variable, that is, a means to achieve the main objective of maximizing growth of sales revenues (Baumol 1962, 1085). One main difference is that Marris considered the rate of “growth of the corporate capital” rather than “growth of sales”. Consequently, Marris put greater emphasis on the role played by retained earnings to finance that growth.[13] Notwithstanding the differences in their models, it is worth recalling that both Baumol and Marris “broke with the neoclassical theory of the firm on two points” related to “the objective function” of the firm (Weinstein 2012, 90). First, they concentrated on the growth of the firm. Second, they produced theories of the firm that were free-standing, instead of being bound up with traditional market structure analysis. Without a doubt, the managerial theories of the firm of Baumol, Galbraith and

[12] See also Kaysen (1960) and Williamson (1963).

[13] Marris also introduced into his model the risk of take-over as a constraint on managerial decisions. For a summary on the issue, see Marris and Mueller (1980, 41-42). Adrian Wood (2017) recalls that Marris’s theory of the firm was developed largely independently, even if he paid attention to the developments of Baumol (1959,1962) and Penrose (1959).

Marris were built as models of oligopolistic large corporations controlled by their managers rather than competitive small firms.

Baumol and Marris formalized their reasoning and came up with a hypothesis of rational maximizing behavior, making their managerialism compatible with marginalism as stressed by Fritz Machlup (1967, 29) and Frederic Lee (1984, 1108). Galbraith, with his background in original institutional economics, was not committed to such an approach (1967, 213). Nevertheless, the works of Baumol and Marris were one of the two main additions that shaped his theory of the corporation between *The Affluent Society* and *The New Industrial State*.[14] Galbraith considered that Baumol and Marris belonged, as Kaysen (1957, 1965) did, to a "small group of scholars" who "accepted the separation of ownership from control in the mature corporation and its implication for profit maximization" (Galbraith 1967, 158). Galbraith's theory of the corporation was based on the concept of the technostructure to characterize the group ruling the corporation as a planning entity transcending the market. So the objectives of the firm are the objectives pursued by the members of the technostructure.[15] The decision-making power of the technostructure is directly dependent on the control of the corporation as an organization. Thus its autonomy is a goal cherished by its members. Galbraith argued that "low earnings or losses" make it vulnerable to "outside influence" whereas, "above a certain level, more earnings add little or nothing to its autonomy". That is why the managerial corporation does not seek to maximize profits.[16]

When stating that the technostructure requires a minimum of profits, rather than their maximization, Galbraith explicitly referred to the works of Baumol (1959) and Marris (1964). He added that once such a minimum is guaranteed, then the technostructure tries to pursue "the greatest possible rate of corporate growth as measured in sales" (1967, 213). Galbraith's theory of the corporation and of its objective fostered many controversies. It was at the heart of the controversy between Galbraith (1967b), Marris (1968a, 1968b), and Solow (1967, 1968) that featured in the columns of the journal *Public Interest*.[17] Harold Demsetz (1974) tried to implement an econometric test in order to empirically challenge the "Baumol-Galbraith hypothesis" of sales maximization. But what is a particular matter of interest here is the reasons for which Galbraith decided to follow the path opened by Baumol's alternative explanation a decade earlier. He explained in a letter to Paul Sweezy dated January 31st, 1973.

> I didn't really intend to juxtapose growth and profit maximization. But I do give the paramount role to growth because then, so it seems to me, everything fits. One has an explanation as to why the public doesn't live in a continuous state of revolt against monopolistic exploitation. One has an explanation for the comparative overdevelopment in the major areas of industrial concentration. One has a consistent view. It is growth that rewards the bureaucracy of the corporation with higher salaries, greater prerequisites and easier promotions. Growth is obviously tied to power. And, perhaps most important of all, we have an explanation as to why the society, including

[14] In the revised edition of *Business Behavior, Value and Growth*, Baumol add a reference to *The Affluent Society*, agreeing with Galbraith's social imbalance thesis, that is to say that "there has been a substantial lag in the provision of public services relative to the increasing influence of our society" (Baumol 1967, 112).

[15] For more on Galbraith's theory of the corporation, see Baudry and Chirat (2018), Dunn (2011), and James Galbraith (1984).

[16] While stressing conflicts of interests between the technostructure and the owners of the corporation, Galbraith remained largely silent on the conflicts of interests between the various members of the technostructure or between the technostructures of competing corporations.

[17] On this debate, see Halsmayer and Hounshell (2020) and Chirat (2021).

the economists, make an all-but-religious obeisance to economic growth. (Letter from Galbraith to Sweezy, January 31st, 1973)[18]

Since Baumol's 1959 model of the firm had a lasting impact on managerial theories of the firm, it is particularly interesting to examine how he considered his own work. A year after the publication of *The New Industrial State* by Galbraith, he reflected on the subject in "Entrepreneurship in Economic Theory". He argued, as Schumpeter (1942) and Galbraith did (1967), that one should distinguish between the managerial function – "[to oversee] the ongoing efficiency of continuing processes" – and the entrepreneurial function – "to locate new ideas and to put them into effect". Baumol aimed at contrasting the vital role of the entrepreneur in fostering economic growth with his absence from "formal theory" in economics. "The theoretical firm is entrepreneurless – the Prince of Denmark has been expunged from the discussion of Hamlet" (Baumol 1968, 65-66). He then implicitly referred to his 1959 attempt to model the behavior of the firm. Like the neoclassical theory of the firm and many formal models, his 1959 model had been built as an "instrument of optimality analysis of well-defined problems". "In all these models", he added, "automaton maximizers the businessmen are and automaton maximizers they remain". That is why these models are inadequate to grasp the dynamic and unstable features characterizing entrepreneurship. Baumol's growing interest in the historical rather than formal analysis of the entrepreneur and the process of growth toward the end of his career (Baumol 1990, 2002).

5. The main differences between Baumol and Galbraith through the lens of the history of theories of the firm[19]

So far, we have focused on the correspondence between Baumol and Galbraith to explain how they produced an alternative to the profit maximization hypothesis characterizing the neoclassical theory of the firm. It is worth resituating their 1957–1958 exchanges in the broader context of the development of theories of the firm since the thirties. The profit maximization hypothesis had been the subject of several attacks, especially during the full-cost pricing controversy. But like Philippe Mongin (1992) I have not been able to establish a significant historical connection between this controversy and Baumol's or Galbraith's views. The contributions of Baumol and Galbraith were first and foremost a part of the attempt to describe and analyze the behavior of oligopolistic firms. Galbraith's theory of the firm was built on the integration of the insights of Berle and Means (1932) and Chamberlin (1933), which both fostered the development of industrial organization at Harvard. Galbraith then supplemented his theory with the insights of Baumol (1959) and Marris (1964) into the objectives of the firm and that of March and Simon (1958), especially their organizational theory of motivations (Chirat 2021). Committed to mathematical economics, Baumol's static theory of oligopoly was based on the duopoly models of Cournot and Edgeworth, Chamberlin's monopolistic competition, and the tools of game theory. However, they shared a common purpose of connecting their theory of the firm with macroeconomic issues. Hence Baumol's interest for Galbraith's 1957 paper. This also explains why they deliberately ignored Coase's now famous paper on "The nature of the firm" (1937). During their exchange, Baumol and Galbraith did not try to answer the question "Why do firms exist?" They attempted to analyze the consequences of change in the macroeconomic environment for firms' behaviors.

[18] JKGPP, Series 3, Box 163.

[19] The addition of this section has been prompted by a stimulating discussion by a referee to whom I am most grateful.

Because they tried to connect their theory of the firm with the theory of resource allocation, one might wonder how far Baumol's and Galbraith's theories departed from the neoclassical framework. The neoclassical theory of the firm is often described as a "black box" because it reduces the firm to a production function. Similarly, Baumol's so-called "managerial theory of the firm" is a model of resource allocation rather than a model of the corporation as an organization. Indeed, his theory provide no analysis of its internal functioning nor of the relationship of the corporation with other organization of the socio-economic system. This claim calls for two comments. First, such a judgment cannot apply to Galbraith's theory of the firm (1967, 1972). His theory is based on an analysis of the technological requirements imposed on production, the internal coordination of the firm, and the means implemented by the firm to reduce the uncertainty surrounding its environment. In this respect, like the transactionalist theories of Coase (1937) and Williamson (1970), the problems of horizontal concentration, vertical concentration, and long-term contracts are within the scope of his analysis. Moreover, his analysis is directly connected with an analysis of the effects of marketing activities at three levels – the firm, the industry, and the macro levels. In contrast, neoclassical theory of advertising, because it focuses exclusively on the industry level, considers sales expenditures to be a zero-sum game (Chirat 2020). Thus, unlike Baumol, Galbraith did not treat firms "in isolation" from "other firms" and "the environment within with they operate" (Sawyer 1979, 141).

The second comment concerns Baumol's managerialism, which is perfectly compatible with marginalism. That is why Lee (1984) includes the managerial theory of the firm under the "neoclassical price theory". But this is relevant only if Berle, Galbraith and Means are excluded from the group of economists who contributed to the managerial theory of the firm. As a defender of the neoclassical theory of the firm, Machlup (1967, 1974) often argued that its critics missed their target. The neoclassical theory of the firm aims to be "only a theoretical link" not to explain the behavior of firms but to predict change in prices "as effects of particular changes in conditions" (Machlup 1967, 9). Although Machlup told full-costers and behaviorists that they missed their target, he could not criticize Baumol for doing so, because Baumol's managerial firm, like the neoclassical one, is a "theoretical link", as a production function, designed to study how variations in the environment – a restrictive monetary policy for instance – affect firms' pricing policies. As Machlup did, Baumol and Stewart (1971, 119) criticized behaviorist theories of the firm for providing "few interesting analytical implications" and no explanation about how pricing rules "will vary according to changes in the value of exogeneous variables", such as the "level of interest rates" with which Galbraith (1957) dealt. Retrospectively, Oliver Williamson recognized that Baumol, Marris and himself "all remained within the resource allocation tradition" (Williamson 2008, 247).[20]

There is another isomorphism between neoclassical theory and some managerial theories of the firm. It concerns the conflict between shareholders and management. In neoclassical theory, "since profit maximization is assumed", Kenneth Arrow (1971, 70) stressed that "the conflict of interest" between the management of the corporation and the owners "is assumed always to be resolved in favor of the owners". In managerial theories, such conflict is, more or less explicitly and rigidly, assumed to be resolved in favor of the management.[21] A final piece of evidence that the neoclassical model and some managerial models of the firm serve the same function in economic theory is that Machlup argued that he was perfectly willing to endorse the sales

[20] Williamson here refers to his PhD dissertation (1964).

[21] In this regard, some managerial models of the firm could be seen, in modern terms, as complete contract models. This could explain why the relationship between the members of the corporation or the organizational forms it takes are put aside.

maximization hypothesis if it provided better predictions than the profit maximization hypothesis (1967, 17). In a controversy with Galbraith (1967b) and Marris (1968a, 1968b), Solow (1967, 1968) endorsed the same rhetoric. He made explicit the epistemological criterion on which his critique of *The New Industrial State* was based. The model proposed by an economist, as a "simplified description", must contribute to "yield valid predictions about behavior" of the economic system (Solow 1967, 100-103). He conceded that real firms do not seek to maximize profit. But he added that this is not "a fundamental objection" to neoclassical theory "if businesses merely *almost* maximize profits" (1967a, 106). Since the reactions of Machlup and Solow toward managerial theories of the firm echoed Friedman's methodological stance (1953), it is worth presenting how Baumol and Galbraith considered the instrumentalism of the latter.

Business Behavior, Value and Growth opened with a chapter on methodology. Baumol agreed with Machlup that the role of general models is "to provide the analytic equipment for investigation of particular problems" (1959, 3). He then declared that his own view could appear unreceptive to Friedman's. However, he acknowledged being confused by the *Essay in Positive Economics*. If Friedman's argument is "taken as an injunction to look for good correlations and make no attempt to judge whether or not they are spurious", Baumol stated that he would "part company". He added that "the most convenient instruments for judging the appropriateness of our necessarily imperfectly realistic model is the examination of *the plausibility of their assumptions*" (1959, 5) (Emphasis added).

To my knowledge, Galbraith did not explicitly challenge Friedman's instrumentalism. But his challenge would be complete when two features are recalled. First Galbraith's epistemology was rooted in original institutional economics. Consequently, his theory of the corporation derived from a double movement of theorization of history and historicization of theory (Baudry and Chirat 2018). Second, he produced "pattern models" rather than analytical models like Baumol's.[22] These pattern models are holistic, systemic and evolutionary (Harrison and Wilber 1979). Their systemic nature explained why he could not endorse the view that the model-maker could modify assumptions about the firm's behavior at will. In addition to a requirement in terms of realism, Galbraith considered that a principle of unity in social phenomena should be respected. Indeed an example can be taken from his correspondence with Baumol. He reproached him for "a skillful but altogether too flexible adjustment of [his] assumptions to the needs of [his arguments]".[23] In another context, he argued against Samuelson that "no one can ask [a firm] to be an oligopolist for the purposes of capital investment, organization and technology and to be small and competitive for the purposes of prices and allocative efficiency" (Galbraith 1967, 184).

Epistemological differences are often the source of persistent controversies in economics. This paper demonstrates that a theoretical cross-fertilization went on between Baumol and Galbraith on the issue of the objective of the firm. Nevertheless, their respective managerialism theories of the firm did not follow the same paths. Galbraith could not endorse Baumol's managerialism because its ambition to increase realism was combined with a rejection of situational determinism. Situational determinism, in a broader definition than that of Latsis (1972), refers to models of the firm considering that the behavior of a firm is entirely determined by the objective characteristics of its environment – namely the market, without concern for what happens inside the firm as an organization. As Galbraith explained in his 1957 model, a monopolistic firm that makes a discretionary decision to raise its prices in response to a wage increase could have chosen

[22] Within Baumol's (1966, 90) tripartition between descriptive models, predictive models, and analytical models, Galbraith's pattern models would be considered descriptive ones.

[23] Letter from Galbraith to Baumol, January 15th, 1958, JKGPP, Series 3, Box 13.

to raise its prices upstream. It was such an option, the possibility of a discretionary choice, that led Galbraith to reject the profit maximization hypothesis. Yet, the managerial models of Baumol (1959) and Marris (1963) were also committed to situational determinism. Stressing the heterogeneity of real firms, Galbraith, like Monsen and Downs (1965) before him, rejected the tendency to explain the behavior of all firms on the basis of a single standard of behavior – either profit maximization or sales-maximization. "Scholars who have admitted to the possibility of other goals than profit maximization – who have conceded that the firm seeks, for example, some combination of security and growth – have continued, nonetheless, to seek a single explanation of how the firm behaves. This is a serious error." (Galbraith 1973, 108). In the wake of the challenges toward the neoclassical theory of the firm, Marris and Solow decided to organize a conference in New York on September 18th and 19th , 1969, on the theme "Technology, Social Policy and the Role of the Business Firm". It led to the publication of a collective volume (Marris and Wood 1971). Baumol accepted the invitation by Marris, but Galbraith declined. He told his friend he was not interested in "narrower work of greater technical or mathematical exactitude".[24]

Conclusion

The aim of this chapter has been above to highlight how the exchanges between Baumol and Galbraith, during the years 1957–1958, formed an important step in the early development of managerial theories of the firm. Contrary to Tullock (1978), who aimed at distinguishing two branches of the sales maximization hypothesis, I demonstrate that these branches are deeply connected at the theoretical level. The final section has put this exchange into the broader history of theories of the firm and has highlighted the epistemological differences between Baumol and Galbraith. Within the so-called managerial theories of the firm, one should distinguish between those compatible with marginalism and those that are not. But these differences regarding their relation to formalization, as well as the scope and aims of their models, did not prevent Baumol and Galbraith from pursuing common goals. Both tried to make their models of firms' behavior more realistic to account for the macroeconomic trends characterizing post-war U.S. capitalism. In this regard, the relationship between Galbraith and Baumol can be viewed as one of several examples that support the thesis of the perpetuation, in the postwar period until the sixties, of certain forms of pluralism, especially among the economists trained during the interwar period.[25] Even their different conceptions of the role of the economist – a public intellectual *versus* a neutral expert – did not prevent them from a fruitful dialogue. This was possible because Baumol, contrary to some hegemonic pretensions in post-war economics (Morgan and Rutherford 1998), claimed his belief that "there is no right method" (Krueger 2001, 224).

[24] Letter from Galbraith to Marris, October 18th, 1968, JKGPP, Series 3, Box 138.
[25] This thesis is defended in Chirat (2021).

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