

ENGINEERING, BANK AND STATE IN FRANCE :

O.T.H. FACING THE CRISIS OF THE 1970 s-1980s

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The O.T.H. company (Omnium Technique de l'Habitat), established in 1948 by the Bank of Paris and the Netherlands (Paribas), one of the main French merchant banks, exercised its activities in the field of the technical engineering consulting firms, still little studied by the historians. Created after the W.W.II in order to take part in the reconstruction of France, OTH and its subsidiaries constituted the first French engineering group. Management difficulties at the end of the 1960 decade, the collapse of the national real estate market from 1974 and the crisis of international outlets hit it seriously and brought about a new management to rethink the strategy of the company.

The study will be to analyse how this change of background hinged on the internal constraints. O.T.H. history during this period brings an interesting outlook on the innovating process and the relations with its shareholders, the bank then the French state itself, after the 1982 nationalization.

As a privileged tool of innovation within companies, technical research consultancy gradually appeared during the first wave of industrialization and became necessary in the XXth century within the framework of big business. The development of engineering inside large industrial groups, whether it be car-making, chemistry or civil engineering gave birth to important works in various countries¹. Conversely, independent research consultancy was little studied by historians, particularly as regards the French case.

O.T.H. (Omnium Technique de l'Habitat/Housing Technical Omnium) made up the most important French research consultancy dealing with building in the second half of the XXth century. It was specialized not only in the design of housing but also of hospitals, industrial or hydroelectric constructions, razing its field of activity as far as global urban development. Created as an independent firm within a banking group, O.T.H. remained the

¹ See D. Hounshell and J.K. Smith Jr, *Science and Corporate Strategy : Du Pont R&D, 1902-1980*, New York, Cambridge University Press, 1988 ; J.P. Poitou, *Le cerveau de l'usine : histoire des bureaux d'études Renault de l'origine à 1980 : recherche sur les conditions de l'innovation technique*, Aix-en-Provence, Presses de l'université de Provence, 1988 ; A. d'Angio, *Schneider et Cie et la naissance de l'ingénierie. Des pratiques internes à l'aventure internationale, 1836-1949*, Paris, CNRS Editions, 2000.

subsidiary of a private enterprise but since its origins, it worked in a field where public decisions were deciding factors. We will focus our work on the 1973-1987 period during which firms had to face up to an environment of economic crisis and deep transformations in the building field. The aim of our study will be to analyse how this change of background hinged on the internal constraints. Did it speed up structural changes (part one) weigh on the innovating process (part 2) modify the relations with the main share-holders (part 3)

I Structural changes to keep the pole position

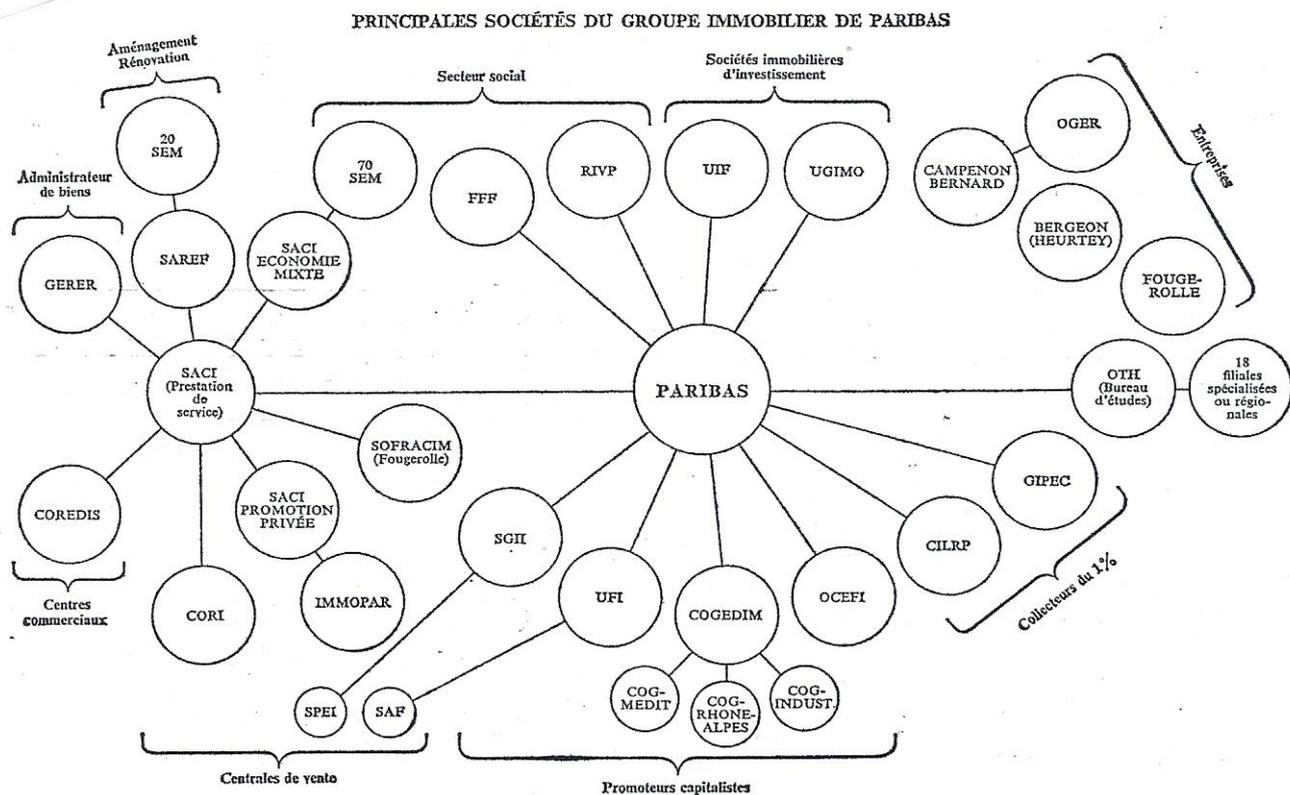
O.T.H. was born out of the will of one of the largest French merchant banks to take part in the policies of housing building. As it had become the number one French firm in building engineering, the firm felt threatened by a mismastered growth. The share-holder then decided to resume control.

1 The key of PARIBAS' real estate policy (1948-1967)

The Paris and Netherlands financial company (PARIBAS) which was founded in 1872 became very early interested in construction field through the intermediary of various industrial, real-estate, commercial contributions². Between the two world wars while real-estate developers did not exist in France, and the construction activity was very weak, it took part in the first attempts of social housing launched by the authorities. Yet, it was above all in the late 1940s, when the housing building policy became a national priority that Paribas played a leading part. Together with the setting up of a major real-estate subsidiary called the SACI, it made up an engineering subsidiary O.T.H. whose aim was to design innovating project (1948)³.

² E. Bussière, « Entre la banque mixte et la banque d'affaires : la Banque de Paris et des Pays-Bas et sa stratégie industrielle, 1900-1930 », in *Entreprises et Histoire*, 1992

³ J.F. Dhuys, *Les promoteurs*, Seuil, 1975, p.69 -74



J.F. DHUYS, *Les promoteurs*, Seuil, 1975

It fulfilled the administration desire to industrialize housing construction processes which had up to then remained mainly traditional. Having succeeded in settling much appreciated techniques (TRACOBA), the OTH teams lauded fat contracts in France, in the French colonies and in a few foreign countries. Being top of the rank of French construction engineering companies, the Paribas subsidiary became a key actor concerning the modernization of the construction industry in the 1950s-1960s.

Part of the bank's industrial department, OTH itself created many subsidiaries while it diversifying towards other specialities such as building schools, hospitals, offices and shopping precincts. OTH was then made up of a group of 1,200 people in 1967. However, after 20 years of continuous growth it proved a victim of its own success.

2 A certain type of growth loses momentum

The reports ordered by the general manager prove that the subsidiaries composing the O.T.H. group were each working apart without the will of a real coordination or even management control of the whole thing⁴. Aware of the problems, the bank undertook, as early as 1967, extensive changes of its subsidiary statutes. So, in 1969 it merged O.T.H. in a recently created general engineering subsidiary with multiple activities which were often far away from the firm's original specialities. The operation proved disappointing in human terms. The O.T.H. staff was reluctant to acknowledge such an abrupt loss of identity. The approach which had made O.T.H.'s reputation since its origin was then questioned. For twenty years its leaders had considered their task as a real public utility mission, i.e. promoting innovation in the construction field without caring about a short term vision. Besides the O.T.H. staff did not have the necessary skills to meet such forceful diversification, which led to numerous setbacks on foreign markets.

3 The 1973 watershed

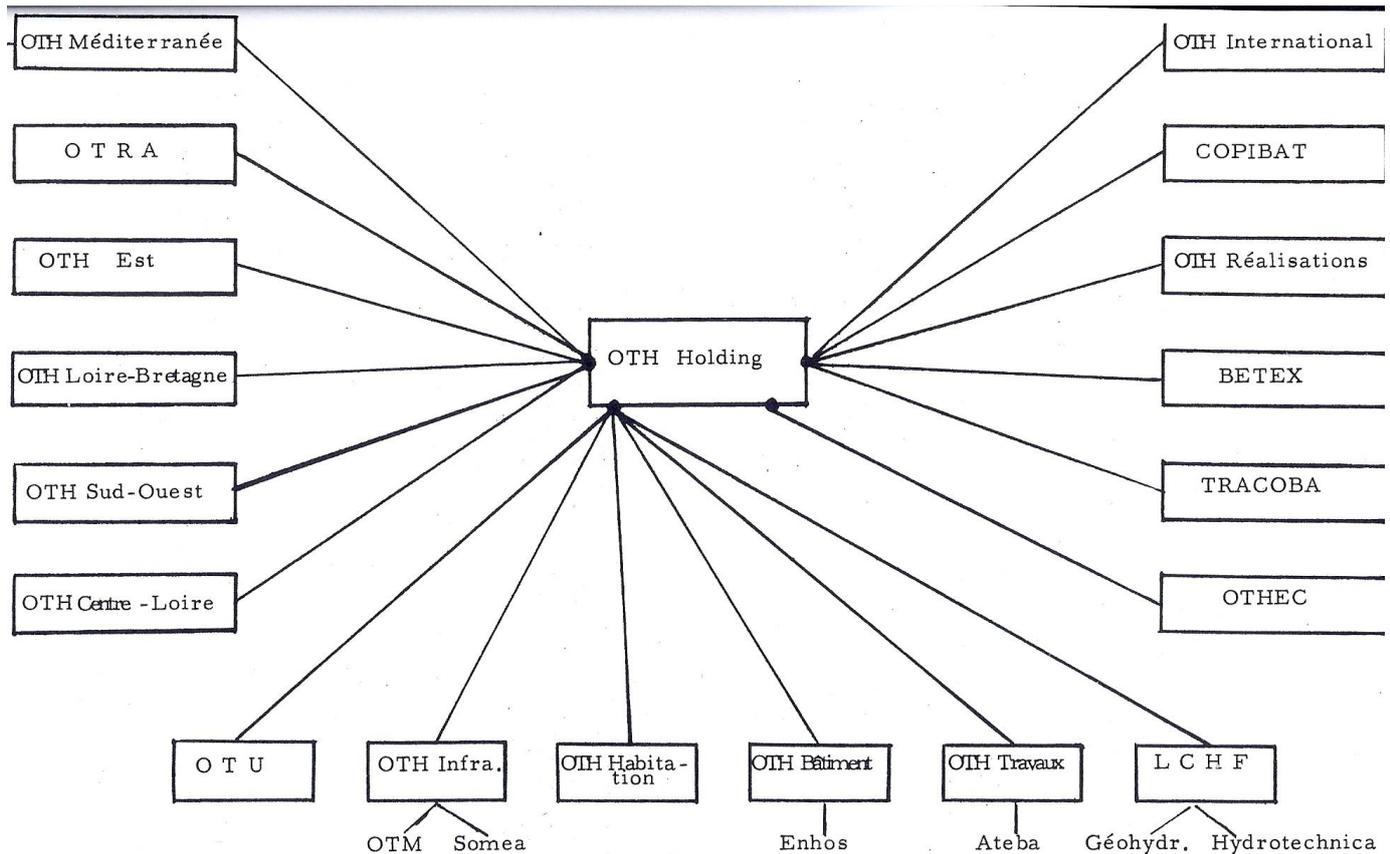
Once again Paribas decided to make a direct intervention. In January 1973 the general engineering group came to an end and O.T.H. was independent once more. Jean-Gérard Claudon who was up to then the real estate manager of the bank was assigned to clean up the situation. Within a few weeks he went through a thorough structural transformation of the firm. O.T.H. became Omnium Technique Holding, a group made up of technical research consultancies linked to a parent company which was itself the nearly exclusive bank's subsidiary. Each research consultancy specialized in a particular market (housing, offices, commercial and industrial buildings, urban development and town planning, hydraulics), a technique (industrialized building, processes in wood construction, finishing work, building-yards running) or a geographical area (regional subsidiaries sharing out the French territories). As to the holding, it supervised the running of the whole thing and controlled the management⁵.

New structures were accompanied by the implementing of very strict rules concerning financial management as well as commercial action. O.T.H. backed out of some specialities or some markets deemed little cost-effective, as a case in point in Germany or the United State. It became refocused where its competence was unquestioned i.e. its original profession, building engineering⁶.

⁴ J. G. Claudon, *Notes sur O.T.H.*, 18-7-1973, archives BNP-Paribas

⁵ *Actualités O.T.H.*, n°5, mai 1973, archives BNP-Paribas

⁶ *Réflexions sur l'O.T.H.*, 17 nov. 1972, archives BNP-Paribas



The restrictions hit the staff hard since 450 people (26% of the workforce) were laid off. Each consultancy became totally responsible for the business it was in charge of, the final result being tightly controlled by the parent company. This very decentralized structure was enforced to motivate staff. It proved to be very adapted due to its flexibility and led to a swift recovery of the accounts as early as 1975. It also allowed OTH to experiment new gaps without taking any risk for the whole group by creating new specialized subsidiaries. Thus 10 years later O.T.H. gathered 22 subsidiaries, 7 of which being regional ones with 1,100 employees.

II Innovation as a counterattack against the crisis

Technical innovation was the reason for the firm to be here. Yet it also very quickly assumed the shape of a marketing adapted to foreign markets. It was at the origin of many a success. However it sometimes proved to be risky.

1 Conceiving innovation, a tradition for O.T.H.

During the 1950s-60s its managers considered that its mission was to make French construction evolve by educating master builders to the new techniques. 3 main ideas were to encourage industrialized building construction, they were then very popular with French leaders: the spreading out of the techniques so as accelerate the carrying out of the main building work; the standardization of mass produced fixtures (doors, windows, plumbing); the use of new materials such as aluminium⁷. 1959 was a landmark in the O.T.H. history with the creation of its TRACOBA subsidiary which was at the root of out of the way building processes meant to be widely spread. Within 20 years the TRACOBA processes allowed to build more than 100 000 dwellings. Over the same period other subsidiaries developed original techniques like that of SIPROBOIS for wood construction. In 1970 the take-over of LCHF's capital (the French hydraulics central laboratory) allowed O.T.H. to be present in a new field, that of the engineering of major hydraulics infrastructures.

However as we have already pointed out, an excessive will to diversify led to a drop in technical performances. The new areas were sometimes ill-mastered. O.T.H. competence was henceforth questioned. So, as from 1973 the firm based its recovery on a streamlining of construction engineering and town planning. After wavering a while they kept the hydraulics sector where LCHF had very entrenched positions. Made stronger by the previous years' hardships the management considered that from then on O.T.H. had to be to the forefront of construction techniques without retaining a role of experimental firm for the whole profession. It was really too much concerning financial matters⁸. Innovation kept its key role in the firm's strategy since in the middle of the 1980s. Research and development accounted for 5% of the turnover. However designing fields evolved. Henceforth efforts will be particularly made on data processing investments deemed vital to increase its performances. It is way ahead of its competitors in computer-assisted design (CAD) thanks to which it could benefit from a regular help from the state through the CODIS (strategic industries development Committee). O.T.H. got interested in the field of energy savings for which it created a specialized subsidiary. Remaining faithful to its traditions it took an active part in the Construction Plan launched by the French authorities in order to promote innovations concerning housing. It designed new quality products: so, in the hotel trade the Arcade chain won many international markets. In the same way its LCHF subsidiary lauded orders internationally in hydraulics. These successes easily proved that innovation also occupied that innovation also occupied a central position in its new orientation beyond the nation's borders.

⁷ O.T.H., *Historique, 1983, archives BNP-Paribas*

⁸ J.G.Claudon, *op.cit.*

2) International marketing a dimension of O.T.H.'s innovation

From the very beginning, O.T.H. took an interest in the French empire's markets. In 1950 the Africa-OTH subsidiary which then became OTM (Morocco's Technique Omnium) was created in Casablanca while in Algeria OTA (Algeria's Technique Omnium) was born in 1954. Their main activity followed that of the parent company with the construction of dwellings launched on a great scale with the Constantine Plan (1959). Conversely the Sahara's Technique Omnium (OTS) developed new activities, topographic and touring surveys.

After decolonization O.T.H. turned to new markets located in Western Europe (Germany, Italy, Spain, The United Kingdom), ventured on the American continent while keeping markets in Africa (Algeria). These new outlets often made up a daring experimental field for new products. Thus in the beginning of the 1960-70's, O.T.H. endeavoured to develop the building of cheap individual houses in Latin America (Equator, Brazil). Led without a sufficient commercial ad technical mastery, the operation which was thereafter dubbed as "adventurism" failed and the firm had to withdraw after heavy losses⁹.

On the other hand, from 1973 a more careful policy led by the new management enabled some subsidiaries to impose in the exporting field. TRACOBA was long used to sell its technology on foreign markets. It led an intense surveying activity aimed at developing countries and landed fat contracts particularly thanks to its prefab factories delivered on a turnkey basis to Iraq and Egypt. LCHM as to it exported its know-how in the field of mathematical models applied to hydraulics. A new subsidiary which saw the light of day in 1975, O.T.H.-International won fat contracts for the construction of public and private buildings. 2000 dwellings were thus built in Kuwait and also luxury hotels in Saudi Arabia. 1981 saw the creation of a new subsidiary OTH-development. It was in charge of looking for outlets in the so-called deemed promising sectors. This strategy aiming at cornering new markets and based on a well-targeted technical mastery led to remarkable breakthroughs, like in 1980 when LCHF joined forces with EDF and secured a majority interest in a tidal plant contract in South Korea¹⁰.

The cornering of foreign markets also meant a considerable adaptation to working methods and more widely to cultural references. In order to make a breakthrough in the Middle East where up to then Anglo-Saxon engineering was number one, O.T.H. had to adopt the America rules of introducing the projects so as to meet the clients' expectations: that was the case so as to obtain the town-planning survey of the new town of Yanbu in Saudi Arabia. Concerning architecture, the group defined the basic elements of an Islamic

⁹ *Ibid.*

¹⁰ O.T.H., *Conseil*, 2 mars 1984, archives BNP-Paribas

architecture together with its Saudian partners. The try proved to be a hit, since, thanks to the collaboration of Ricardo Bofill the architect who was notoriously famous at the time, O.T.H.'s project was endorsed for the construction of a big mosque in Baghdad, a real feat for the firm.

In a more lasting way probably, foreign markets requirements forced O.T.H. to involve deeply from the narrow concept of a research consultancy "à la française" to a much wider one which was necessary on an international level. Particularly in developing countries projects managers demanded from an engineering firm a much wider range of services than O.T.H.'s traditional field. They wanted to deal with consultants able to meet all their needs, for instance in the field of fiscal or judicial consultancy.

O.T.H. managed to do that most successfully, like for instance in Iraq, which had become one of the firm's main markets where the firm had at their disposal a permanent representative for the Baghdad council.

3 Exportation, a risky business

The results were noticeable: in 1977 O.T.H. got the highest level of distinction at the Export Oscars of the foreign trade French Centre. Some businesses were making big profits, contributing to fast recovery of the firm's accounts. From 1978 to 1982 exports rose by 475% securing more than half the group's turnover, especially in the Middle-East and Africa. The developing of international markets made up one of the main sides of O.T.H.'S innovation. Significantly Jean-Gérard Claudon held concurrently his position as O.T.H.'s CEO with that of manager for the Middle-East within Paribas' real estate and industrial department. This clearly showed the new direction given to surveying international markets. Facing the crisis of building prospects which had been raging in France since 1974, exploring foreign markets became vital for keeping activity and jobs. Like for the rest of the profession the first oil shock seemed to offer considerable opportunities in the OPEC countries which undertook ambitious equipment programmes. The surveying method developed by Claudon proved efficient. It consisted in accepting a first market so as to capture all developing opportunities on the spot. It was the case in Cairo and Baghdad where O.T.H. managed to stand out with the authorities as a nearly indispensable actor in the field of urban engineering.

However in spite of these fine successes international markets brought along multiple hardships. In a near past, decolonization had been the source of difficulties due to the progressive loss of markets such as Algeria and to the dimming pout of Africa subsidiaries which until then had been relevant in the group's activities. After 1973 technical mastery and an active market surveying were no longer enough to stand out. Facing competition, French engineering salary costs proved very high, higher by more than 50% than those of

British firms for instance¹¹. Above all O.T.H.'s leaders complained they were the victims of generalized protectionist practices. In the case of industrialized countries, projects financed by different states which accounted for a large majority of engineering markets were attributed according to national preferences while on the French markets, according to O.T.H.'s leaders, the firm couldn't enjoy the same advantages. In the Middle East it was necessary to make up local companies with a local consultant, like in Saudi Arabia, and often subcontract a substantial share of the contracts to local firms, that was the case in Libya or Iraq.

In spite of all those efforts, the new markets proved particularly fragile owing to very restless geopolitics. The Iranian revolution (1979) then The Iran/Iraq war from 1980 froze many contracts. The fall in the world rates of raw materials and energy starting in 1982 confirmed the risks run on the markets of most emerging countries. Successes like the Grand Cairo development plan entrusted to O.T.H. which benefited from the BIRD's financing and was showered with praise by the Egyptian government in 1984, didn't prevent exports from falling in the Middle East and Africa and from stagnating in Latin America hit by hyperinflation. Only the markets of Asia's newly industrialized countries seemed to be still strong, but O.T.H. was little established there. So, in the middle of the 1980 decade surveying the national market became prominent again in O.T.H.'s turnover. This situation made weaker of the firm's exports was to be found at every level of French engineering having to face a harder competition. It seemed threatened in its rank of third engineering power in the world. These hardships probably accounted for Paribas' decision in 1987 to withdraw from this field of activities.

III Firm, bank and state

Being the founder of O.T.H., the Paribas bank long remained its almost unique shareholder. Hence, its nationalization led indirectly to that of O.T.H. until a final change of statute in 1982.

1) Up to 1982 the subsidiary of a big merchant bank

For nearly its whole capital O.T.H. depended on Paribas during most of its history. Only some other industrial partners and Omnium's high officials owned a modest share of about 10% of the capital. This situation accounted for the relations between the firm and the bank as well as for the vision that most of the O.T.H. staff had. As common opinion had it

¹¹ O.T.H., *Conseil*, 2 mars 1984, archives BNP-Paribas

Paribas was earning lots of money thanks to its subsidiary but as a counterpart the latter could rely on its help in case of financial difficulties. This way to consider things was at the origin of loose practices concerning management, practices against which he tried to fight as soon as he was appointed in 1973.

Indeed, O.T.H.'s near bankruptcy decided Paribas to take things in hand. After having unsuccessfully tried the formula of getting closer to other subsidiaries, the bank put its subsidiaries under a strict administrative supervision imposing, as we saw already, a radical reorganization and appointed at its head, not a technician as would have been logic for an engineering firm but a man of finance. The latter got a free hand to redress the situation but the bank deemed it necessary to appoint one of its CEOs as O.T.H.'s board vice-president . In fact Claudon's strong personality and his successes quickly gave O.T.H. its management autonomy. However, the share-holder set very clearly the new relations which were to take place with its subsidiaries. As from January 1, 1974 a memo stated that O.T.H. must no longer resort to Paribas' financial help and in return, O.T.H. must be expecting from Paribas only the dividends which were normally given to a share-holder¹². Real facts seemed more complex. It seemed that the very serious hardships which befell the subsidiary in 1973-1974 made it necessary to resort to a help for several years¹³. Paribas thus went on offering privileged conditions of financial help during the recovery period initiated by Claudon, conditions taking in particular the form of unpaid overdraft authorizations, a help which extended as late as 1978. Even more, the share-holder as he was being a banker as well also played an indirect, yet basic part in his strategy of exploring markets abroad. Facing competition, Paribas' international notoriety brought O.T.H. irreplaceable assets concerning financial credibility.

2) O.T.H., a public firm

Like other merchant banks Paribas was nationalized after the 1981 change of political majority and the coming to power of a leftist government. Subsidiary of a group in which the state was henceforth share-holder, O.T.H. therefore became a public firm on 30 June 1982. Yet it appeared that in this situation of making up a public group, Paribas' new leaders appointed by the state were above all careful to maintain the existing checks and balances. It was a must for them not to do anything which might compromise the exportation efforts of engineering ranking as a strategic industry and receiving, as such, public help taking the form of subsidies and loans. So it seemed that O.T.H. could keep a management independence as far-reaching as the one it had available when the reference share-holder was a private bank. Keeping the same managers, O.T.H. remained true to the

¹² J.G. Claudon, *Evolution financière de l'O.T.H. de 1973 à 1980*, archives BNP-Paribas

¹³ *Ibid.*

broad lines defined nearly 10 years before. The 1982 nationalization was therefore not at all a break in the firm's history. Besides its leaders adopted their new role in an amazingly natural way. In a statement he made for the economic newspaper "Les Echos" in 1984 Jean Gérard Claudon went even as far as declaring that "the nationalization is extremely positive". "We are in the public sector and wish to stay where we are"¹⁴. In close collaboration with the administration, he acted in order to implement the official instructions concerning construction. According to him O.T.H. thus found its original vocation i.e. defending public interest through its experimental action concerning the modernization and industrialization of the department.

In his argumentation O.T.H.'s CEO finally underlined that belonging to a nationalized group made it easier to have an access to contracts since in 1982 the share of public markets accounted for 63% in France and 83% abroad¹⁵. The fact was that nationalizing the firm did not seem to have turned foreign customers away. On the opposite it contributed to reinforcing its image as a flagship French engineering firm whose action was backed up by French administration action particularly commercial assignments abroad.

On the other hand O.T.H. did not benefit from preferential orders from the public share-holder, contrary to what it could expect. O.T.H. got but little room in the great works launched under François Mitterrand's presidency (The Finance Ministry at Bercy, the Orsay museum, the Institute of the Arab World). But for the Grand Louvre building site, O.T.H. was absent from these prestigious markets while private engineering firms, sometimes foreign ones landed substantial contracts. Finally the 5 years during which O.T.H. had the statute of a public firm changed very few things to the relations that the firm used to have with its shareholders or reference whether it be public or private.

3) A new change of statute in 1987

The last transformation of O.T.H. statute for the period studied could be explain by Paribas' will. Privatised in January 1987, it restructured its group by abandoning a rather little cost-effective activity, even if it accounted for 2 to 3% of French construction activity. Claudon was endowed with that new assignment, he then left O.T.H. after 15 years spent at his head to take Polliet's leadership, another subsidiary of the group's building department. The operation was carried out in an original way since Paribas decided to yield its share to the firm's top executives. The transfer took place on April 1st 1987, the 7 main share-holders being chosen amid the managers of O.T.H. subsidiaries. They were given 70% of the shares; the rest was shared out among the other salaried people¹⁶. The aim was clearly to make up a

¹⁴ *Les Echos*, 16-2-1984

¹⁵ O.T.H., *note interne*, 1982, archives BNP-Paribas

¹⁶ OTH, *note interne*, 20-2-1987, archives BNP-Paribas

grouping of partners copied after the American fashion which was the thing done at the time. The new statute had to make it possible to adapt to the new deal by meeting the clients' requirements who desired more and more that henceforth, engineering contracts and follow up should be personalized.

The period studied shows a new step in O.T.H.'s development. After the 1950-60's a time of massive construction of dwellings marked by a growth of the group but also by a progressive erosion of the results, the 1970-1980's are marked by deep internal restructurations and a concentration on quality productions. The opening onto foreign markets mainly the OPEC countries reinforces these changes. This is no surprise that the outlet crisis which is typical of the period constitutes a source of numerous difficulties for the firm but also a factor for multiple innovations together technical, managerial and commercial. O.T.H. history reveals that the changes of statute (from the private sector to the public one) have proved to be in its case less important than the strategy implemented itself a consequence of the results. The latter give the firm the means to be independent even if the construction industry cannot be understood without the weight of public decisions and the structural relations with the banking sector.