

Exploring the Influence of Power in the Dynamics of Customer-Supplier Coopetition in the Case of Supplier Dominance

Éclairage sur l'influence du pouvoir dans la dynamique de coopétition client-fournisseur dans le cas d'une dominance fournisseur

Influencia del poder en la dinámica coopetencia cliente-proveedor en el caso de un proveedor dominante

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Volume 23, Special Issue, 2019

URI: <https://id.erudit.org/iderudit/1068533ar>

DOI: <https://doi.org/10.7202/1068533ar>

[See table of contents](#)

Publisher(s)

HEC Montréal
Université Paris Dauphine

ISSN

1206-1697 (print)

1918-9222 (digital)

[Explore this journal](#)

Article abstract

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Cite this article

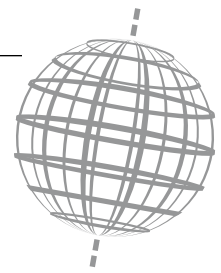
Tréhan, N. & Pourrat, C. (2019). Exploring the Influence of Power in the Dynamics of Customer-Supplier Coopetition in the Case of Supplier Dominance. *Management international / International Management / Gestión Internacional*, 23, 27–41. <https://doi.org/10.7202/1068533ar>

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ABSTRACT

Coopetition combines paradoxical forces: competition and cooperation. Many previous works have examined the forces driving competitors to cooperate. Little research investigates the factors driving competition, in particular the influence of power in the case of client-supplier coopetition. To fill this gap, a longitudinal case study is being conducted in the telecom sector. It concerns the coopetition between the French operator Orange and Apple its device supplier. The study shows that supplier dominance combined with low trust fosters competition in customer-supplier coopetition.

Keywords: coopetition, customer-supplier relationship, dominant supplier, trust, procurement

RÉSUMÉ

La coopétition combine des forces paradoxales : la compétition et la coopération. De nombreux travaux antérieurs ont étudié les forces incitant les concurrents à coopérer. Peu de travaux étudient les facteurs poussant à la compétition, en particulier, l'influence du pouvoir dans le cas de la coopétition client-fournisseur. Afin de combler ce manque, une étude de cas longitudinale est menée dans le secteur des télécoms. Elle porte sur la coopétition entre l'opérateur Orange et son fournisseur de terminaux Apple. L'étude montre qu'une dominance fournisseur couplée à une confiance faible favorise la prépondérance de la compétition dans la coopétition client-fournisseur.

Mots-Clés : coopetition, relations client, fournisseur, fournisseur dominant, confiance, achat

RESUMEN

La coopetencia combina fuerzas paradójicas: competición y cooperación. Muchos trabajos anteriores estudiaron las fuerzas que incitan los competidores a cooperar. Pocos trabajos estudian los factores que empujan a la competición, en particular, la influencia del poder en el caso de la coopetencia cliente-proveedor. Para llenar este vacío se lleva a cabo un estudio longitudinal en el sector de las telecomunicaciones. Abarca la coopetencia entre el operador Orange y su proveedor de terminales Apple. El estudio muestra que un proveedor dominante asociado con una baja confianza fomenta la preponderancia de la competición en la coopetencia cliente-proveedor.

Palabras Clave: coopetencia, relaciones cliente-proveedor, proveedor dominante, confianza, compra

Coopetition, in combining cooperation and competition, is a paradoxical relationship (Lado *et al.* 1997; Raza-Ullah *et al.* 2014). In the literature, types of coopetition are described according to the intensity of the cooperation and competition (Lado *et al.* 1997; Bengtsson and Kock 2000; Luo, 2007; Rusko, 2011). The need to explain the paradoxical dynamics of coopetition is recognized (Akpinar and Vincze 2016; Bengtsson and Kock 2014; Bengtsson *et al.* 2010). As pointed out by Raza-Ullah *et al.* (2014, p. 17) "while coopetition theorists have attempted to explain the unifying character of industrial, relational, and firm-specific factors that propel competitor firms to cooperate, little is known concerning their divergent character that forces partner firms to compete".

To understand the dynamics of coopetition, it helps to think along two-continua because levels of competition and

collaboration can vary independently (Bengtsson *et al.* 2010; Padula and Dagnino 2007). This study is based on this two-continua approach. It aims to identify and explain the dynamics of coopetition toward competition by using the concept of power.

"Power is an endemic part of the relationships" (Akpinar and Vincze 2016, p.54). Yet, in the understanding of the dynamics of coopetition, Akpinar and Vincze (2016) emphasize that "the functioning of power is little understood and even neglected" (p. 54). This research aims to fill this gap.

Admittedly, the literature on coopetition recognizes that interdependencies explain cooperation and competition (Bengtsson and Koch 2000) and that the difference in power, by increasing the risk of opportunism, can lead to conflicts (Bengtsson & Johansson 2014; Tidström 2014). But these studies

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mainly concern coopetition between two competitors (Bengtsson and Raza-Ullah 2016).

The literature on network competition also recognizes the influence of firm leadership on network dynamics (Fautrero and Gueguen 2012) and the influence of firm centrality on competition (Gnyawali *et al.* 2006).

When power is taken into account, its role is mostly explored in the competition between competitors in dyadic competition and in network competition. Its direct influence on the dynamics of customer-supplier coopetition is rarely studied, with the exception of the work of Lechner *et al.* (2016) between small and large firms.

This research aims to fill the gap on the influence of power in the dynamics of coopetition towards competition, in the particular case of customer-supplier coopetition. We will focus our study more specifically on a situation where the supplier is dominant in relation to the customer. This situation of supplier dominance, in a strategic relationship, is “provocative” according to Caniels and Gelderman (2007, p. 227) because, in this type of relationship, the expectation is rather to have a customer-supplier balance or a dominant customer (Lacoste 2012). This atypical situation reinforces the interest of the study.

Given the quasi absence of works dedicated to the influence of power in the dynamics of customer-supplier coopetition, we will see to what extent works on coopetition between competitors and within networks can inform our research question. Our question seeks to identify and understand the influence of power in the dynamics of customer-supplier coopetition towards competition, in the particular case of supplier dominance.

As the goal is to understand a dynamic phenomenon over time, the methodology chosen is a longitudinal case study (Yin 2003). It is a “collaborative research” carried out within the French telecom operator Orange, between a practitioner (co-author of this work), member of Orange’s Top Management Team, and an “engaged scholar” (Van de Ven and Johnson 2006) from early 2010 to September 2013. In accordance with the recommendations of Dumez and Jeunemaitre (2005) for studies on coopetition, the results will be presented in the form of Multidimensional Strategic Sequences with an “analytical narrative”.

The sector chosen is that of telecoms and their device suppliers. Numerous studies have already shown the relevance of work in this high technology sector to study coopetition (Luo 2007; Gnyawali and Park 2009; Gueguen 2009; Johansson 2012; Fautrero and Gueguen 2012). Since the deregulation of telecoms in France, competition has continued to intensify as it crystallizes into an Apple-Samsung duopoly in devices worldwide. The Orange-Apple case is all the more interesting as the dominance of Apple intensifies the complexity of their customer-supplier coopetition relationship.

The research shows that supplier dominance combined with low trust leads to a shift in the dynamics of customer-supplier cooperation towards more competition and that this competition spreads across all levels of their relationship.

In our first part, we present our theoretical framework. The second part is devoted to the methodology. The third part presents and discusses the results.

Theoretical Framework

We first present the concepts of customer-supplier coopetition and of supplier dominance before studying the influence of supplier dominance in the dynamics of customer-supplier coopetition.

THE CUSTOMER-SUPPLIER COOPETITION

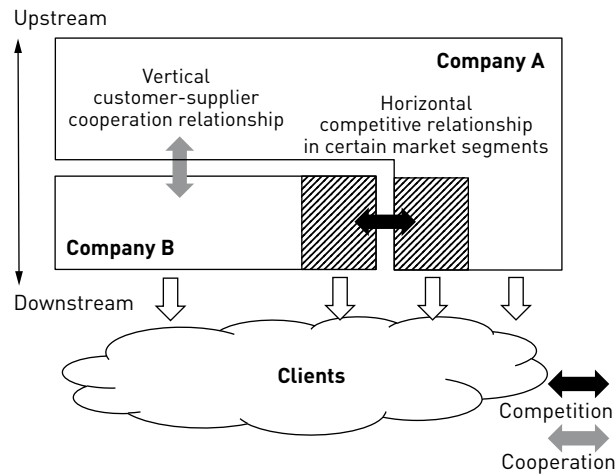
There is no consensus on the definition of coopetition (Chiambarretto and Dumez 2016; Bengtsson and Raza-Ullah 2016), even if all the authors agree on a mixture of cooperation and competition. Bengtsson and Raza-Ullah (2016) identify two schools of thought:

The “Actor School” in which coopetition is understood in a broad sense between customers, suppliers, complementary firms, and competitors in a network logic.

1. The “Activity School” in which the definition is more restrictive: firms cooperate in a simultaneous manner (and not sequentially) on certain activities and are in competition with one another. In this view, Bengtsson and Koch (2000), Le Roy *et al.* (2010) define coopetition as a collaborative relationship between competitors in the same markets, the same products.
2. With regard to customer-supplier coopetition, there is also no unanimity on the definition. Dowling *et al.* (1996) were among the first to study it and call it “vertical multifaceted relationship under coopetition”. This notion of vertical coopetition covers very different realities. For Lechner *et al.* (2016, p. 67) “Vertical coopetition can take the form of buyer, supplier, or subcontractor relationships with a direct competitor, where the competitors are simultaneously involved in both non-competitive and competitive relationships with each other”. Lacoste (2012) limits vertical coopetition to a situation where a key customer attempts to simultaneously combine relational and transactional benefits with its supplier. According to Depeyre and Dumez (2010), Fernandez and Le Roy (2010), Johansson (2012), Chiambarretto and Dumez (2016), customer-supplier coopetition incorporates a dual horizontal and vertical dimension. Many studies refer to situations where suppliers, that are in direct competition, cooperate to win a customer’s call for tender (Fernandez and Le Roy 2010; Johansson 2012), where cooperation is the result of a request from the customer (Depeyre and Dumez 2010). More frequent is the case where a customer is looking for an integrated system or a first tier supplier. This is not the case in the relationship between Orange and Apple, its devices supplier. In an attempt to clarify the debate, Chiambarretto and Dumez (2016) propose a multilevel typology crossing the level of activities concerned (purely horizontal/purely vertical/ combining horizontal and vertical i.e. two entities compete horizontally on a given market and cooperate vertically on another market) with the organizational level concerned.

In reference to Dowling *et al.* (1996), to Chiambarretto and Dumez (2016), we define customer-supplier coopetition as a relationship where a supplier and a customer cooperate vertically on a given market and compete (or will be competing) horizontally on another market. In reference to Chiambarretto and Dumez (2016), this coopetition can be schematised as follows (figure 1).

FIGURE 1
Customer-supplier coopetition



SUPPLIER DOMINANCE

Supplier dominance systematically refers to the notions of power/dependence and to the seminal work of Emerson (1962) and Blau (1964). For Emerson (1962) “the power of A over B is equal to, and based upon, the dependence of B upon A” (p. 33) and “the dependence of actor A upon actor B is (1) directly proportional to A’s motivational investment in goals mediated by B, and (2) inversely proportional to the availability of those goals to A outside of the A-B relation” (p. 32). In addition to the existence of alternative sources and availability of strategic resources, Blau (1964) adds the possible modification of the needs of A, and the ability to use coercive power on B. From the same perspective, Pfeffer and Salancik (1978) determine the dependence of an organization according to the importance of the resource exchanged, the number of actors controlling it, and the extent of the power of the controller of the resource.

Regardless of the period or the research field, supplier dominance is understood as a high degree of dependence/power. The same variables are used to characterize it. We propose a table summarizing these key variables (table 1). Only the terminologies differ: Cox (2001), Caniels and Gelderman (2007) speak of “supplier dominance”, Heide (1994) of a “unilateral dependence”, Bensaou (1999) of a “captive buyer”, Donada and Nogatchewsky (2005) of a “vassal customer”, Pazirandeh *et al.* (2014) of “low-power buyer”...

We will use these variables to characterize Apple’s dominance and propose complementing them.

INFLUENCE OF POWER ON THE DYNAMICS OF CUSTOMER-SUPPLIER COOPETITION

Works on coopetition between competitors show that access to complementary resources encourages collaboration (Gnyawali and Park 2009; Gnyawali *et al.* 2006; Luo 2007; Bengtson and Kock 2000; Raza-Ullah *et al.* 2014). A high level of complementarity and heterogeneity of resources leads to a form of mutual dependence between firms (Bengtsson and Kock 2000; Raza-Ullah *et al.* 2014). “Superior and complementary resources are critical for firms to develop their relationship in a more balanced way” (Gnyawali et Park 2011, p. 658). For Lechner *et al.* (2016), this situation should be all the more significant in a relationship where the competitors are customer-supplier, since the search for complementary resources is all the more intense between customer-supplier.

In a coopetition between competitors, the decline of dependency on resources (Luo, 2007) will promote the increase of competition. This decline of dependency can be consecutive to an appropriation of resources/competences of one of the competitors to the detriment of the other, or to an imitation of the competences of the other (Hamel, 1991). Complementarity is no longer (or less) sought. The competition begins.

In coopetition within a network, in particular in the telecom sector, technological mastery affects the control of the

TABLE 1
Measurement variables of supplier dominance

The variables most frequently cited in the literature		References
1.	Existence of alternative sources	Frazier and Summers (1984); Heide (1994); Andaleeb (1995); Bensaou (1999); Donada and Nogatchewsky (2005); Pazirandeh and Norrman (2014)
2.	Specificity of the assets (technological, human, design reputation, IS...)	Heide (1994); Bensaou (1999); Donada and Nogatchewsky (2005); Fernandès (2007); Pazirandeh and Norrman (2014)
3.	Criticality of the service/product	Andaleeb (1995); Bensaou (1999); Cox (2001); Fernandès (2007)
4.	Number of suppliers on the market/level of concentration in the market	Heide (1994); Bensaou (1999); Cox (2001); Donada and Nogatchewsky (2005); Fernandès (2007); Pazirandeh and Norrman (2014)
5.	Annual volume of purchases made with these suppliers	Heide (1994); Cox (2001); Donada and Nogatchewsky (2005)
6.	Contribution to the turnover or to the margin	Frazier and Summers (1984); Cox (2001); Pazirandeh and Norrman (2014)
7.	The degree of ease to change supplier/level of switching costs	Heide (1994); Andaleeb (1995); Lusch and Brown (1996) Bensaou (1995); Cox (2001); Donada and Nogatchewsky (2005); Fernandès (2007); Pazirandeh and Norrman (2014)
8.	Perception of the level of dependence on the supplier (on a scale of 1 to 5 or 6)/perception of the supplier’s level of power	Lusch and Brown (1996); Donada and Nogatchewsky (2005); Gelderman <i>et al.</i> (2008)

network (Battistella *et al.* 2013). The search for leadership, through technological standards, can encourage competition as well as intense collaboration. (Gueguen, 2009). According to Gnyawali *et al.* (2006), the centrality of a firm in a network will encourage it to engage in competition. In the sector of operating systems, the dominant firm, by capturing the essential part of the network value, causes a decrease in the cooperation of the other members, leading to the end of coopetition (Fautrero and Gueguen, 2012).

In customer-supplier coopetition, the relationship is more complex because the competitors are also customer-supplier and a dependency remains in their vertical relationship. For Dowling *et al.* (1996), by purchasing from a competitor a company is automatically in a position of vulnerability and suffers the risk of opportunism on the part of its supplier. It sends the signal that the risk of upstream integration is very low, because it does not have the resources or the cost is prohibitive. However, the risk of disclosing strategic information is high. In other words, the company signals its strong dependency to its supplier.

In the case of a strong asymmetric dependence between client-supplier, Kumar *et al.* (1995) show that the most powerful firm no longer has as much incentive to preserve the trust of the other to cooperate, since it can obtain what it wants from the other through power. "Overdependence is an open invitation for opportunism and conflicts" (Lechner *et al.* 2016, p. 72). An increase in conflicts and competitive actions will therefore appear in the vertical customer-supplier relationship.

With regard to their horizontal relationship, as competitors, the greater the overlap in their multiple markets ("market commonality"), the less there is likelihood of attacks by fear of retaliation (Chen, 1996). This multi-point competition will foster a "mutual forbearance" (Edwards, 1955). In the case of customer-supplier coopetition, in contrast to coopetition between competitors, the very fact that the players are customer-supplier further limits their market commonality. The probability of attack is therefore greater. Moreover, if one of the players perceives himself in a position of strength, in a global way, he will hesitate less to be opportunistic to take advantage of the other (Akpınar and Vincze, 2016). The more remote the representation of mutual positions of the players on their markets, the greater the intrusion of competition into coopetition (Padula and Dagnino, 2007).

Proposition 1: In a customer-supplier coopetition, the dominant position of the supplier will favour its involvement in more competition whether vertically in its customer-supplier relationship or horizontally in its relationship of competition

With regard to the customer, from the perspective of the resource dependency theory, it will seek, by all means, to maintain the relationship with its supplier because of the rarity and/or non-substitutability of resources purchased (Andaleeb, 1995). In this type of relationship, trust can moderate the harmful effects of dependency. It may deter the more powerful actor from acting in an opportunistic way or even from interrupting the relationship (Andaleeb, 1995; Donada and Nogatchewsky, 2005; Pazirandeh and Norrman, 2014). As it cannot impose its conditions upon the supplier, the customer will attempt to foster trust and develop relational strategies (Frazier and Summers, 1986; Heide, 1994; Donada and Nogatchewsky,

2005). It will strengthen the relations, "to befriend the supplier" (Pulles *et al.* 2014, p. 31), to ensure the suppliers' cooperation. A customer with little power will thus facilitate the cooperation with its powerful supplier. But, in the case of very strong power asymmetry, Kumar *et al.* (1995) observe that the trust of the customer decreases sharply. A customer that is very dependent on a supplier, in whom it has little trust, generates a situation that is difficult to sustain. The lack of trust can then lead the customer to adopt a hard line regardless of its level of dependency (Andaleeb 1995).

The link between cooperation and dependency is discussed. For Lusch and Brown (1996), Pulles *et al.* (2014), a customer dependent upon its supplier should not necessarily be cooperative, or "befriend" the supplier. In reference to Reactance theory, Andaleeb (1995) explains that dependency generates a feeling of vulnerability and loss of control. The more this dependency is perceived as strong, the more the dependent organization will wish to regain control. According to Reactance theory, an individual who sees his freedom constrained is more likely to resist and to act to improve his condition. Thus, low trust combined with the perception of high dependency will certainly induce the customer to engage in aggressive actions, in its vertical exchange relationship with its supplier. If the more powerful actor is also engaged in an aggressive competition at the horizontal level, Grimm and Smith (1997) show that the response of the other will be aggressive to preserve/conquer its market or simply to survive.

Proposition 2: In a customer-supplier coopetition, the perception of a strong dependency combined with low trust will favour the commitment of the customer to competitive actions, whether vertically in its customer-supplier relationship or horizontally in its relationship of competition

The analysis will focus on competitive actions. Borrowing their definition from Gnyawali *et al.* (2006, p. 511): "We define competitive actions as purposeful and observable moves undertaken by firms in order to improve their competitive position vis-à-vis their competitors in the industry".

Methodology

A COLLABORATIVE RESEARCH WITH A LONGITUDINAL CASE STUDY

Coopetition is by nature complex and dynamic, so an exploratory case study, over a long period of time, seems appropriate to understand it (Yin, 2003).

The results will be presented in the form of Multidimensional Strategic Sequences (Dumez and Jeunemaitre, 2005) in order to take into account this complexity and this dynamic nature. The succession of actions and strategic reactions of firms are identified, over time, by the Strategic Sequences. The multidimensionality of the strategies is examined at three levels: (1) pure market strategies of the firms (2) redefining market boundaries strategies (3) non market strategies (regulatory decisions, lobbying...). The "analytical narrative" (Dumez and Jeunemaitre 2005; Dumez 2016), structured according to critical stages, is applied. An analepsis (a leap in the past) helps to better understand the dynamics of coopetition. The "analytical narrative"

recommends accounting for the thoughts and interpretations of the actors. The choice of collaborative research, research “with” rather than “on” practitioners, favours this approach. It not only facilitates access to internal documents, to all the actors involved, but, above all, to the thoughts, feelings and interpretations of Orange’s Top Management Team. The co-author of this research was indeed Vice-President of Indirect Corporate Procurement at Orange in January 2009. In October 2010, he was appointed Vice President for Transformation and Merger Project Leader for the joint-venture between Orange and Deutsche-Telekom. In 2011, he became Senior Executive Vice-President for Procurement Excellence at the core of this joint venture. He left the company in September 2013. This collaborative research lasted from January 2010 to September 2013. The researcher-practitioner interactions started as early as 2009.

Collaborative research is “a collaborative form of inquiry in which academics and practitioners leverage their different perspectives and competencies to co-produce knowledge about a complex problem [...] It allows bridging the gap between theory and practice [...] By leveraging their distinct competencies, researchers and practitioners have the potential to ground and understand complex problems in ways that are more penetrating and insightful than they would be were either scholars or practitioners to study them alone” (Van de Ven and Johnson, 2006, p. 803). Collaborative research implies that practitioner and researcher are capable of high “reflexive monitoring” and “rationalization” (Giddens, 1984). We recognize that researcher-practitioner interaction causes a change in actors’ vision, their stories and their actions. But according to Emery and Trist (1969), it is only possible to access the knowledge of a social system by inducing a change in it. For David (2000, p. 5), this should not be considered “as a bias to limit but, on the contrary, as a principle of knowledge production”. However, a clear mode of functioning should be adopted between researcher and practitioner. As advised by Van de Ven and Johnson (2006), we respected an alternation of phases of knowledge co-production and phases of arbitrage. The points of view between researcher and practitioner were systematically confronted, in a logic of “constructive conflicts” (Van de Ven and Johnson, 2006). Data from outside of Orange were collected with a concern for triangulation. Lastly, we respected alternating phases of immersion and of distancing from the subject studied in order to have regular means of decontamination.

DATA COLLECTION

The first level of collection was the direct collection by the practitioner during his participation in all purchasing management committees, and all project meetings between Orange and Deutsche Telekom... A simple grid distinguishing facts and impressions serves as a base. In reference to Pettigrew (1990), the themes are: (1) What (2) Who (3) When (4) How (5) Why. (1) What are the events, the critical stages. What are the feelings (of whom) in relation to the events (2) Who are the actors (3) When events occur. What is the temporal feeling in the sequence of events (emergency/wait-and-see...) (4) How it happened. What are the feelings (of whom) about how it happened? What tools are used. (5) What elements of context (markets, technologies, regulations ...) explain the event. How does the TMT explain

the event. A logbook was tested and then abandoned because it was too cumbersome for the practitioner. On the basis of this grid, a semi-directed interview (from 30 minutes to 2 hours) was carried out, on average one time per week, between February 2010 and November 2013, between practitioner and researcher, to transcribe facts and impressions. In total, 138 interviews were conducted. These pages were the subject of a thematic coding (Huberman and Miles, 1991). The most important material was the memo, written every 2 to 3 months. “The memo is a communication on the ideas, emerging codes and the relationships between these codes [...] They express the ideation that the researcher has come up with from the data” (Huberman and Miles 1991, p. 122). In total, 15 memos were written. They serve as a basis for “constructive conflicts” (Van de Ven and Johnson 2006) between researcher and practitioner. They favour the back-and-forth between field and theory.

In addition to direct observation within Orange, directive interviews were conducted with 11 buyers/managers to gauge the perception of Apple’s domination (table 3). In order to multiply the points of view within Orange, 6 of them participated in semi-structured interviews, from the beginning of 2010 through the end of 2012, on the basis of the ideas issuing from the memos. Conducting interviews spaced out over time provides access to the evolution of individuals’ mental patterns (Vandangeon-Derumez and Garreau 2014).

The second level of data collection concerned interviews outside Orange, with 4 telecom consultants and 2 purchasing Directors from other operators (Bouygues Telecom and T  lindus - Belgacom Group). 6 open interviews were conducted in an exploratory approach, at the end of 2009-early 2010, in order to understand the sector and its issues. Semi-structured interviews were also conducted twice with the 4 consultants, at the end of 2010 and mid-2013, in order to compare the researcher’s point of view on the ideations stemming from the memos. These 8 semi-structured interviews were used as “a form of double coding” (Mbengue *et al.* 2014). They allowed the researcher to compare his intuitions, concerning the relationship between variables, with the point of view of specialists outside Orange. They have avoided becoming too locked in early modelling and were effective sources of decontamination (Van de Ven and Johnson, 2006).

The third level of data collection relates to the secondary data (table 2).

TABLE 2
Secondary data collected

Secondary data collected	Annual activity reports
	Strategic Plans
	Procedures for supplier selection, supplier performance measurement tools, types of contracts (All Non-Disclosure Agreements were strictly respected)
	Records of lawsuit between Apple and Samsung
	Annual reports of the ARCEP in France
	Directives of the European Commission
	Consulting firm studies
	Press articles

DATA ANALYSIS

Three analyses were performed in a concern for description and explanation, the two being inseparable (Mbengue *et al.* 2014).

The first analysis was a thematic coding of our 324 pages of notes (Huberman and Miles 1991). Prior to this, a general reading of the notes was carried out to have an overall vision and avoid considering, a priori, one element rather than another (Dumez 2016). At the first level, we assigned descriptive codes to the segments of text (sentence or paragraph). At the beginning, no interpretation was made. It was merely to assign a class of phenomenon to a segment. Moving forward, some codes became more interpretative, while others were sub-segmented, or even deleted. At the second level, we grouped the first-level codes in more analytical, more explanatory meta-codes, trying to make “patterns” emerge. Some thematic codes were derived from the literature; other emerged from the field (Annex 1). To limit the bias, but also to pollinate their ideas, the thematic coding was the subject of debate between researcher and practitioner. Discussions about the memos also helped refine the codes and helped progression in the classification and the inference of the data.

The second analysis was a chronological analysis. In longitudinal studies, Peterson (1998) recommends viewing time as a succession of events, thus it helps to understand the sequence. Each key event was the subject of a detailed monograph. The process, reconstructed from the monographs, was then decomposed analytically. We were inspired by the chronological matrix of Huberman and Miles (1991). In the columns we placed the sequences and in the rows, the categories of the analysis: context of markets/ regulations/ actors/ actions of actors/ actor's feelings. Particular attention was paid to the feelings of the actors, to their representation of events (enactment), because this conditioned their actions (Grimm and Smith, 1997). In our case, the perception of their dependency on Apple was crucial. The chronological matrix, although descriptive, “can be used to develop explanations that we can test by referring to the coded field notes” (Huberman and Miles 1991, p. 182).

Finally, to help us understand the “local causes”, their inter-relationships, we built a matrix of causation (Annex 2) inspired by the causal diagram of Huberman and Miles (1991). We

transformed our thematic codes into variables likely to increase or decrease. For example “Interpersonal Relations” became “low/high trust” and “weak/strong conflict”. The perception of the actors was retained.

In a concern for external validity, a return to the actors was undertaken. “The individuals interviewed or observed constitute one of the most logical sources of corroboration” (Huberman and Miles 1991, p. 442)

THE FRENCH TELECOM SECTOR

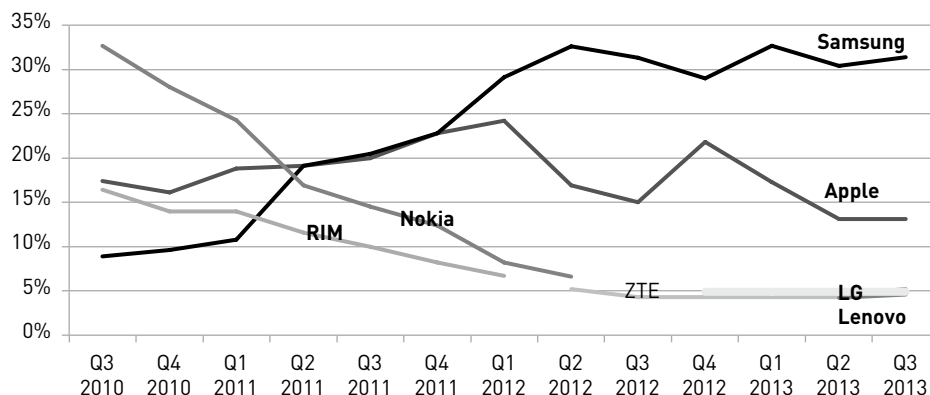
Telecom deregulation fostered the emergence of new actors compared to the former state monopoly France-Télécom-Orange. As early as 2012, four operators coexisted (Bouygues Telecom, Orange, SFR, Free) and there were roughly forty mobile virtual network operators. The market was saturated as of 2010 with a penetration rate (number of SIM cards/population) of 101% and 117% in 2013. Free obtained the right to intervene in mobile telephony, by committing itself to the Regulatory Authority on advantageous packages. The tariff war had been very fierce since 2012. Concerning devices on the supplier side, the market was upset in 2007 by the launch of the iPhone®. “*The iPhone has revolutionized the market*” emphasized a manager. Samsung responded in 2009 with the Galaxy. As early as 2011, Apple and Samsung shared the worldwide smartphones market (figure 2).

The multiplication of competitors, the high penetration rate and the bipolarization of the supplier market contributed to the power imbalance between Orange and Apple. Apple's domination is primarily explained by its ability to truncate Orange's value creation, as an OTT (Over The Top) actor.

THE ORANGE-APPLE CASE

An OTT (such as Apple, Google, Amazon...) is an actor using the network of the operator, without remuneration, to sell its own services. It captures the greatest share of value “on the back” of the network. Since the iPhone® revolution, consumers primarily purchased an ecosystem of services (applications, music, videos, games...). Operators found themselves reduced to a role of data carrier for which many customers were not willing to pay. Access became a convenience. Content is valued.

FIGURE 2
Market share of smartphone manufacturers from 2010 to 201



Source: IDC

In addition, Apple affected Orange's revenues on its core business, by competing with iMessage (for SMS), Facetime (for audio, video)... In 2012, social media messaging resulted in a \$23 billion loss of revenue for operators (source: Ovum).

OTT offers generate an exponential increase in data traffic versus voice traffic (figure 3). Carrying data requires high speed internet, requiring costly investments, which are difficult to make profitable because operators are not able to charge OTTs for the use of their network.

Over the period considered (between 2010 and 2013), Orange recorded a 9.95% decline in turnover and 19.13% in EBITDA. To compensate for this decline, Orange is diversifying in services for which customers are willing to pay (videos, TV series, music, on-line payments...). It thus enters into frontal competition with Apple and its powerful ecosystem.

As an OTT actor, Apple impacts Orange's *business model*, that is to say, the way in which Orange "creates, delivers and captures value" (Osterwalder and Pigneur 2010, p. 14).

Results

PERCEPTION OF APPLE'S DOMINANCE

To measure the perception of their dependence on Apple, the eight variables most used in the literature were extracted and submitted to 11 Orange buyers/managers at the beginning of 2010 (table 4). Without exception, all note very strong dependency (5/5). Many respond with a 6 (the scale only going from 1 to 5)! We asked the same thing, but with regard to Samsung, the other leader. The dependence was considered strong (average of 4 - value min. 3, max. 5). In order to better understand the difference between Samsung and Apple, we submitted a new variable "ability of the supplier to impact the *business model* of the customer and its value chain", measured on a scale of 1 to 6 (from very weak to extremely strong). The difference was clear: the average for Samsung was "low" (2/6); it was "extremely strong" (6/6) for Apple. This variable differentiates between the perception of a strong dependence and an extreme dependence. It is what we will refer to as domination. Apple sells a device, masters its operating system, inserts itself "above" the network,

and confiscates the value via the associated services. Samsung sells a device but does not master either the operating system (Gueguen 2009), or the associated services. It is not an OTT: its power is limited.

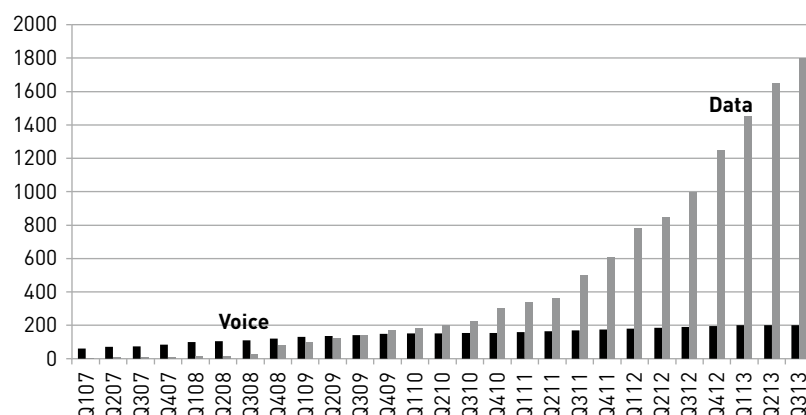
OCTOBER 2007- EARLY 2009: PREPONDERANCE OF COOPERATION

On June 29, 2007 the first iPhone® was marketed in the United States. Customers embraced this revolutionary product. In France, Apple decided that it would be distributed exclusively by the leader Orange. Although new on the market, Steve Jobs required a subsidy 20% higher than that of other mobile phones, a rebate of 10 million euros for advertising costs, and a totally new demand, 30% of the revenue from the subscription packages. Orange ceded to Apple's requirements in the hope that the agreement (signed in October 2007) would bring new customers in a market that would soon be saturated. The Group was also threatened with a significant loss of turnover. To foster competition, the European Commission asked the Group for a functional separation into two separate entities. One would be responsible for network infrastructures, the other for service offers. Orange strived to remain fully integrated. Its challenge was to recruit new subscribers with a unique service offer, encouraging them to consume bandwidth with its own for-pay content. The services/contents were intended to enhance its network. The challenge was all the more important as noted by its CEO: "The customers no longer worry about data package of their provider, but rather about the quality and richness of the services that it offers"(Les Echos April 7, 2008). In 2008, Orange launched a strategy named "Content Everywhere".

If Orange counted on exclusivity with Apple to boost its turnover, the agreement was short lived. In September 2008 Bouygues Telecom and SFR filed with the French Competition Authority to denounce the anti-competitive character of the agreement. After much legal conflict, the exclusivity ended in February 2009.

The end of exclusivity marked the beginning of competition between Orange and Apple.

FIGURE 3
Comparative voice/data consumption on mobile from 2007 to 2013



Source: Ericsson

TABLE 3
Estimation of the degree of dependence between Orange, Apple and Samsung

Variables of dependence most frequently cited in the literature measured on a scale of 1 to 5 (very weak to very strong) The note corresponds to the average of the responses		Estimation by 11 buyers/managers of Orange	
		APPLE	SAMSUNG
1.	Existence of alternative sources	1 And very strong end customer prescription	2 And strong end customer prescription
2.	Assets specificity (technological, human, design, IS...) Reputation	5 5	4 4
3.	Criticality of the service/product	5	4
4.	Number of suppliers on the market	1	1
5.	Annual volume of purchases with these suppliers	5	5
6.	Contribution to the turnover and/or margin	5	4
7.	Ease of changing supplier	0!!!! according to the majority of interviewees	1
8.	Perception of the degree of dependence	5 Many say 6!!!	4
9.	Ability of the supplier to impact the business model of the customer and its value chain (as a result of the first answers we introduced a 6th level for "extremely high")	Extremely high 6/6	Weak 2/6

EARLY 2009 - END OF 2013: PREPONDERANCE OF COMPETITION

The dynamics of cooptation switched to competition both in their vertical customer-supplier relationship and in their horizontal relationship of competition.

Tipping Toward Competition in the Customer-Supplier Relationship

In order to support relations with strategic suppliers, Orange's Procurement Department put in place Key Supplier Coordinators, a homogeneous selection procedure (QREDIC® Quality, Reactivity, Environment-Ethics, Delivery, Innovation, Cost) and introduced quarterly PSP (Product Portfolio Selection Process) with its key suppliers in order to share market trends, technology roadmaps...

Apple, from the beginning, had rejected the QREDIC®, and the PSP. *"Even with Samsung upon whom we are also dependent, the exchanges are plentiful and rich, in particular, during the PSP. Apple doesn't care, it is an OTT actor and has its own information channels thanks to its user community or its Apple Stores. "They by-pass us at every level" explained a manager. Another manager added "No exchange is possible with Apple. They are very arrogant". "The choice of supplier is dictated by customers. Apple knows it". Apple used its power to impose its requirements: it imposed its contract over three years with commitments for volumes. The contract imposed penalties in case of non-compliance. Apple required a subsidy of the iPhone that was more than 20% higher than that of other smartphones, financial participation in its advertising campaigns, systematically giving the iPhone priority, and making repairs if necessary. "Can you imagine a supplier who imposes upon you their contract and penalties? What are you going to tell me about relationship or cooperation!" grumbled a purchasing manager. Certainly, the iPhone permitted selling*

new subscription packages, that were, in general, a bit more expensive, because they were richer in data. But, the required compensations decimated the financial gains realised on the subscriptions. For some operators, an increase in sales of iPhones weighed on their margins. On a market where Average Revenue Per User continues to decline (-24% between 2010 and 2013), where the churn rate is very high (up to 29%), *"not proposing the iPhone would mean excluding ourselves from the market in terms of customer attractiveness"* emphasized a manager.

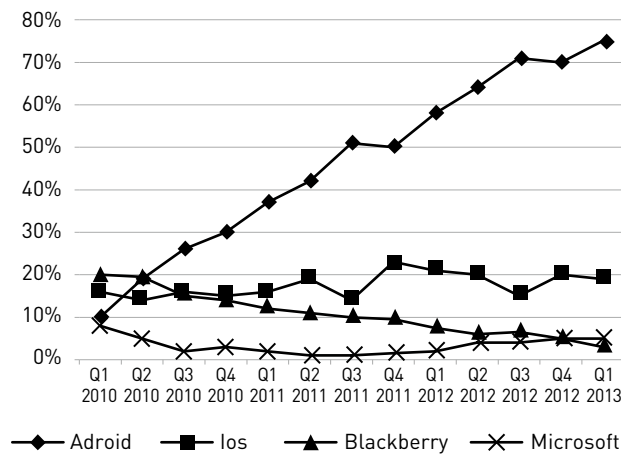
What Orange had accepted in return for exclusivity became now difficult to support. The noted level of trust in Apple among 11 buyers/managers was unanimously very weak (1/5 on a scale of 1 to 5 - very weak to very strong). Stéphane Richard, the CEO of Orange, said of Steve Jobs *"[he] has no qualms about using his position of force"*.

The combination of all these elements tipped the cooptation toward competition in the vertical customer-supplier relationship. The matrix of causation (annex 2) makes it possible to visualize these chains, particularly the important role of the variable "weak trust".

As early as January 2010, Orange indicated to the French Competition Authority (without filing a complaint!) that the Apple contracts were likely to be in violation of the right to competition... SFR, Samsung and LG supported these remarks... but nothing came of it...

From mid-2010 Orange's TMT started considering a counter-offensive action aimed at offsetting the perverse effects of Apple's dominance in their customer-supplier relationship. A joint-venture purchasing project was envisaged with Deutsche Telekom, the lead operator in Germany and 4th in Europe. In 2010, Orange was the French leader and 3rd in Europe. The ambition was to globalise the fragmented European market to have greater strength when confronting Apple. In spite of many governance

FIGURE 4
World market share of OS (%)



difficulties, BuyIn, the 50/50 purchasing joint-venture was created in October 2011. BuyIn represented 400 million subscribers and 8.5 billion euros in devices. It covered Apple's three largest European markets (England, France, Germany) and 35 other countries. *"The challenge is not so much to save money!!! But to be considered as a customer who counts!"* explained a manager. This willingness to be considered as an important customer is a key variable in the matrix of causation (annex 2).

Apple's reaction was abrupt: It did not recognize BuyIn. It continued to contract with each operator independently. Apple forbade communications sharing information about allocated quantities. Apple's reaction generated major stress at the level of the TMT of the two operators. Tensions were high.

Confrontation was also dominant in their horizontal competitive relationship.

Predominance of Competition in the Customer-Supplier Relationship

In October 2010, Steve Jobs frontally attacked Orange on its core business. We consider this attack as a cumulative epiphany (Dumez, 2016). It was a major shock for Orange, definitively transforming its vision of Apple. Coopetition swung to paroxysmal competition. This shift was, in fact, preceded by many accumulated shocks in their customer-supplier relationship.

One of Steve Jobs' obsessions was to control the customer: In a 2010 email to his TMT (mail entered as evidence in the lawsuit with Samsung) he explained: *"Further lock customers into our ecosystem"*. Apple already had strong direct links with customers via its applications and Apple Stores. But the operators had a privileged relationship thanks to the SIM cards. In October 2010, Jobs announced the development, with G  malto, of its own integrated SIM card. He would bypass the operators. He would reinforce their disintermediation. A Telecom consultant shared: *"This is a true war which will start. If the operators lose the link with the customer, they sign their own death warrant"*. This "strong need to reinforce client relation" is a key variable in the matrix of causation (annex 2). Orange's response was immediate: it reminded Apple of the power of its distribution

network. In 2010, Orange had 1200 shops in France versus four Apple Stores. Apple sold 14% of all iPhones via its Apple Stores. 86% were sold by operators. To have more weight, some European operators (Vodafone, Orange and Telef  nica) spoke as one voice in the press. They threatened to stop subsidizing the iPhone and to desist from orders with G  malto which totalled 50% of the turnover. Clearly, Apple was dominant in smartphones and applications, but not (yet) so in distribution. Jobs withdrew his project.

This action reaffirmed, for Orange, the need to diversify by strengthening the link with the customer in order to avoid, at all cost, disintermediation. It increased its content and service offers: purchasing Deezer, Daily Motion, developing Orange Money... It intensified the horizontal competition with Apple...

If Orange's TMT had known in advance of Apple's frontal attack, it would certainly have hesitated less to enter Microsoft's ecosystem to restrict Apple's power. On the smartphone market, competition existed for devices, but also for Operating Systems (OS). In 2010 Microsoft launched a new OS: *Windows phone 7*[®] to counter that of Apple (IOS) and Google (Android).

Orange decided to be a premium partner. Orange hoped that *Windows Phone 7*[®] would shatter the duopoly both in OSs (Apple/Google) and in devices (Apple/Samsung). To have some weight in the agreement, Orange's Purchasing Department leveraged the volumes of purchased Microsoft licenses. The agreement gave satisfaction: *"We killed two birds with one stone: we developed new opportunities and limited Apple's advancement."*

But the *Windows Phone*[®] did not take hold. After a promising launch, its market share declined and then stagnated below 5% (figure 4). In contrast with Apple, Microsoft failed to *"lock customers into (its) ecosystem"*. Ultimately, the attack was inconclusive.

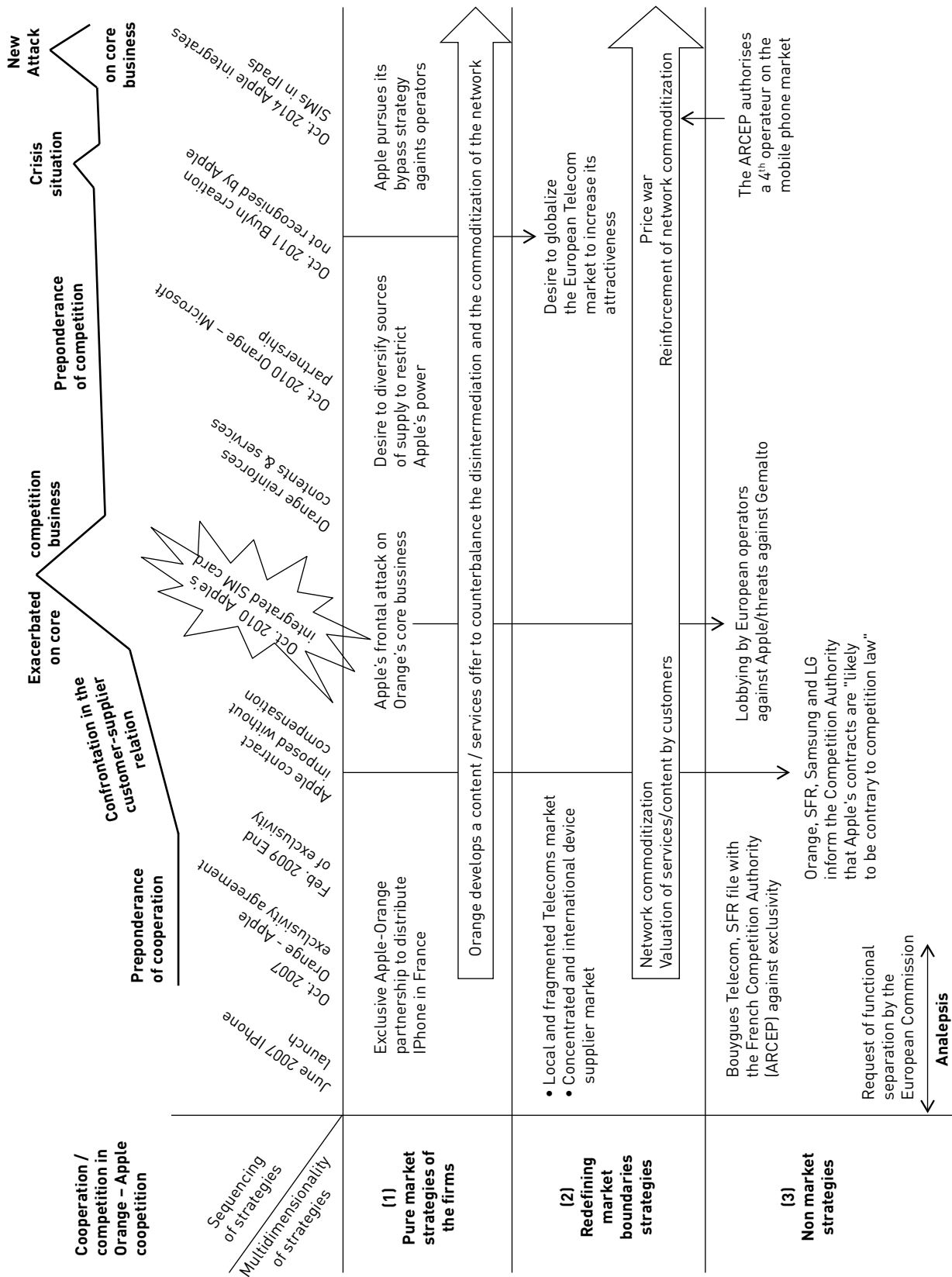
All of the sequences are presented in figure 5. It appears that our two propositions are validated: supplier domination will tip coopetition toward competition for both actors, whether vertically in the customer-supplier relationship or horizontally in the competition relationship.

In the guise of a prolepsis, we note that Apple did not abandon its ambition to bypass the operators in order to *"own the customer"*... In October 2014 it released an integrated Apple SIM in iPads, pending their use in iPhones... The competition continued...

Discussion

This study has aimed to identify and understand the influence of power, in particular of a dominant supplier, on the dynamics of customer-supplier coopetition, toward competition. To illuminate the dynamics of this type of coopetition, we show that it is necessary to understand the influence of power on the vertical and horizontal dimensions. Our results reinforce works supporting this dual dimension of customer-supplier coopetition (Depeyre and Dumez 2010; Fernandez and Le Roy 2010; Johansson 2012; Chiambaretto and Dumez 2016), as opposed to those which focus only on the vertical dimension (Lacoste 2012) or those which do not distinguish between the two (Lechner *et al.* 2016). We show (1) that supplier domination

FIGURE 5
Multidimensional Strategic Sequences



favours competition at the heart of the initially cooperative vertical customer-supplier relationship (2) that it intensifies the competition in the horizontal competition relationship; beyond the markets initially concerned, the competition extends to the core business, (3) that the two dimensions are in interaction (the aggressive behaviour of Apple, as the supplier, encourages Orange to ally with Microsoft and therefore to attack Apple on its core business, OS and devices).

It appears that the representation of customer-supplier coopetition evolves under the influence of power (figure 6).

Three points allow better understanding of our observations: the accuracy of the notion of domination, the difficulty in protecting resources, and the role of trust.

ENRICHING THE CONCEPT OF DOMINATION

Our case shows that the variables most used to measure the power of a supplier prove insufficient to characterize its dominance. We propose complementing them with the variable “ability of the supplier to impact the business model of the customer and its value chain”. This variable differentiates between the perception of a strong dependence and an extreme dependence. It is what we refer to as domination. This clarification of the concept of domination allows one to better understand Apple’s aggressiveness. On the customer-supplier dimension, the fact that Apple makes use of its strength to impose its conditions and reject BuyIn, corroborates the work of Kumar *et al.* (1995). On the other hand, it may be surprising that Apple frontally attacks Orange with the integrated SIM when it was not in a position of strength in this market. The fear of retaliation should have had a self-limiting effect (Frazier and Summer 1986) and, in the coopetition between competitors, low market power does not favour a frontal attack (Bengtsson and Koch 2000). In fact, if Apple did not hesitate to attack frontally, without fear of retaliation, it is precisely because its power was much more extensive than a market power in a situation of coopetition between competitors. In this customer-supplier coopetition, Apple’s power arises from its ability to compress Orange’s upstream value chain by imposing its supplier conditions, and downstream, in

capturing the value of the services. In addition, in a situation of customer-supplier coopetition, unlike coopetition between competitors, the fact that a company buys from its competitor signals its weakness (Dowling *et al.* 1996). The most powerful actor will then be encouraged to engage in competition. The signalling of this weakness is all the more important because Apple knows that it impacts Orange’s business model, that it breaks down barriers to imitation (Mahoney and Pandian, 1992).

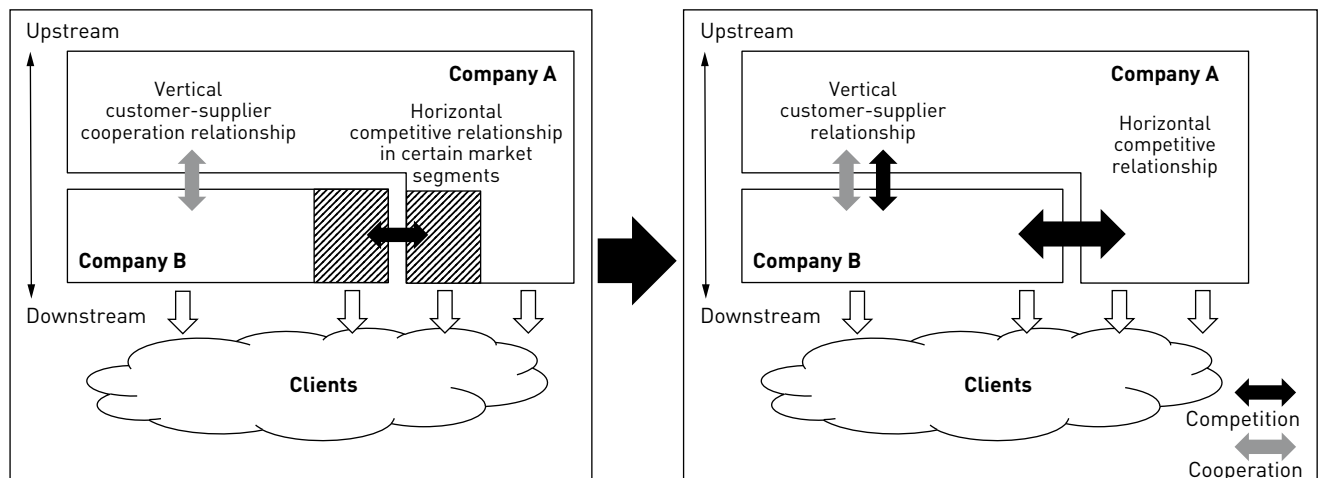
THE DIFFICULTY OF PROTECTING ITS RESOURCES

For Orange, its infrastructure network and its link with the customer by its stores and SIM cards are key resources. “Owning the customer” is an essential resource, but difficult to protect. Apple’s ambition is to lock the customer within its ecosystem. By developing its Apple Stores and its SIM card, it breaks down barriers to imitation. Remains the internet network, which Apple needs. This complementarity in terms of resources (network versus iPhone) should foster cooperation (Gnyawali and Park, 2009; Raza-Ullah *et al.* 2014). But the network, by the fact of the strategy of OTTs, of the deregulation of the Telecoms, and virtualisation technologies (Software Defined Network), is also difficult to protect. This difficulty in erecting “isolating mechanisms” generates a very strong sense of vulnerability for Orange, inciting the aggression. Our results corroborate the work of Andaleeb (1995) comparing this strategy to psychological reactance. For Gnyawal and Park (2009), Raza-Ullah *et al.* (2014), vulnerability encourages coopetition, but it is not identified as a factor favouring competition. In our case, the perception of a very strong vulnerability tipped the coopetition toward competition. The temporal projection is important. Even though there was still a complementarity of resources at the time of the study (the network was not -yet?- a commodity), nonetheless, competition was preponderant. Trust is an explanatory factor.

THE ROLE OF TRUST

Even before the integrated SIM project, trust in Apple was already very low, due to its behaviour as a dominant supplier. In accordance with Kumar *et al.* (1995), we observe that the

FIGURE 6
Evolution of the representation of customer-supplier coopetition



perception of a very high degree of dependence by the customer reduces his trust in his supplier. This lack of trust encourages Orange to undertake aggressive actions in its customer-supplier relationship (notifying for example the French Competition Authority). These observations are consistent with the work of Andaleeb (1995). The important point is that this lack of trust will ultimately creep into their horizontal relationship. Its decline coincides with the SIM project. Already very low in the historical customer-supplier relationship, trust could hardly contribute to the quality of the relations of coopetition (Johansson, 2012). By generating a very low level of trust, Apple's domination fostered an escalation of competition on the two dimensions.

For Akpinar and Vincze (2016), a great difference in power between actors allows nuance in the two continua approach (Bengtsson *et al.* 2010; Padula and Dagnino 2007). With reference to this approach, a strong asymmetry of power should not necessarily lead to a decrease in the level of cooperation. According to Akpinar and Vincze (2016), it is the case unless the powerful actor exploits this power difference by compromising trust between the two firms. In the continuity of Akpinar and Vincze (2016), our results qualify this approach. In effect, we observe that domination combined with a loss of trust increases the level of competition, to the detriment of cooperation whether vertically or horizontally.

Conclusion

The first contributions of this work are theoretical. It helps fill the gap on the influence of the power of the actors in the dynamics of customer-supplier coopetition. Previous research has neglected the explanatory potential of power in coopetition (Akpinar and Vincze 2016), and the works that do consider it are mainly concerned with coopetition between competitors (Gnyawali *et al.* 2006; Bengtsson and Johansson, 2014; Fautrero and Gueguen, 2012). Our work shows that supplier domination tips customer-supplier coopetition toward greater competition, whether horizontally or vertically. This work also allows enriching the variables most used in the literature to define supplier dominance. We propose adding the variable "ability of the supplier to impact the business model of the customer and its value chain" in order to better discriminate between very strong dependence and domination. This new variable allows one to better understand the influence of power.

The second contribution of this work is methodological. It follows from the choice of collaborative research (Van de Ven and Johnson, 2006) with one of the members of Orange's TMT over the course of three and a half years. This method allows one to better understand the complexity and the dynamics of coopetition by being at the heart of the phenomenon. It also stimulated new elements of reflection for the managers at Orange. We recognize that with this approach, there is a transformation of the subject being studied. "All research of this kind constitutes, to a certain degree, social action" (p. 5) "but that is potentially the most favourable position for the production of knowledge" (p. 21) (David, 2000).

The main limitations of this work concern its external validity. First of all, we were not able to query Apple's TMT. The phenomenon is studied only from Orange's point of view. Apple remains one of the most secretive companies in world, as Lashinsky explains in "Inside Apple". Further, it is a single case study. Other empirical studies are necessary. These studies

would help to understand how other companies interacted with Apple. Apple's movements do not exclusively affect Orange and the Telecom sector.

The strong development of OTTs (Google, Apple, Facebook, Amazon...) will intensify the need for new researches on these polymorphous suppliers (suppliers-competitors-customers) that are transforming the global economy.

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ANNEX 1 Retained thematic codes	
1.	History
2.	Key events
3.	Market context
4.	Regulations
5.	Power
6.	Transformation of business model
7.	Resources/Skills
8.	Mode of strategic decision making
9.	Mode of supplier governance
10.	Interpersonal relations (among individuals)
11.	Actors in play (at the Organisational level : clients/suppliers/competitors/new entries/ ARCEP/European Commission ...)
12.	Conditions of change
13.	1Perceptions of change
14.	Strategy of attractiveness
15.	Competition
16.	Cooperation
17.	Temporal dimension

ANNEX 2

Matrix of causation

