

The Controversy over Offshoring: Power, Resistance and Translations in the French Semiconductor Industry

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Résumé :

Cette communication s'intéresse à la fabrique stratégique d'une décision de délocalisation, en proposant une mise en discussion critique des lectures néo-institutionnelles des stratégies des firmes multinationales (FMN). La remise en cause de la légitimité de ces dernières par un ensemble élargi de parties prenantes, à la fois internes et externes, et l'émergence de controverses publiques touchant tant à leurs stratégies de localisation, et à leur impact sociétal, qu'aux choix technologiques et d'organisation du travail en leur sein, constitue le théâtre du processus stratégique étudié. Le cadre théorique adopté articule l'approche des logiques institutionnelles avec des travaux plus récents dans la mouvance néo-institutionnelle empruntant à la sociologie de la traduction pour expliquer le changement institutionnel. La configuration spatiale de la firme est ici considérée comme une forme organisationnelle institutionnalisée menacée par des pressions à la délocalisation. L'objet du projet de recherche consiste alors à proposer une théorisation enracinée de la controverse entourant l'élaboration d'une nouvelle configuration spatiale. En s'intéressant à la manière dont des acteurs locaux mettent en œuvre des manœuvres stratégiques destinées à éviter la délocalisation, ce travail empirique cherche à enrichir notre compréhension des modalités selon lesquelles des mouvements de résistance tentent de s'impliquer dans le processus de décision stratégique des FMN. Premièrement, nos résultats mettent en lumière la capacité des résistances locales à la délocalisation à redéfinir leurs propres logiques d'action dans le but de légitimer l'ancrage local au regard des logiques institutionnelles dominantes dans le champ organisationnel de la firme. Néanmoins, loin de soumettre la forme organisationnelle de cette dernière aux standards en vigueur dans l'industrie mondiale, ces stratégies discursives sont à l'origine d'un processus d'hybridation dans le cadre duquel de multiples logiques, à la fois anciennes et nouvelles, sont entremêlées au sein du processus de changement institutionnel. Deuxièmement, les résultats de ce travail empirique décrivent la constitution d'une coalition d'intérêts qui, bien qu'elle promeuve l'ancrage local des activités de la firme, interdit dans le même temps l'accès des parties prenantes les plus critiques aux lieux de la prise de décision stratégique. Ces deux idées forces nous invitent à envisager des prolongements à ce travail en direction d'une exploration des processus de changement institutionnel sous l'angle d'un entre-deux entre isomorphisme et comportements stratégiques, afin de déchiffrer les causalités et les articulations complexes entre domination et résistance à l'œuvre dans les processus de changement.

Mots clés : logiques institutionnelles ; traduction ; controverse ; résistance ; industrie des semi-conducteurs

Introduction

*“When it is not necessary to change, it is necessary not to change”
(Lucius Cary, 1641)*

What is the institutional embeddedness of transnational corporations (TNCs)? How do they engage with non-transnational institutional arrangements, in particular when locally grounded stakeholder groups threaten their legitimacy? This paper aims to assess empirically the relevance of these questions on the basis of an in-depth case study of an offshoring decision process. Offshoring decision is defined as the way by which a firm chooses to relocate – either in-house or outsourced – specific production stages abroad. It entails a re-positioning of its operations from the local, or the national scale, to the global scale insofar as they must be from now on coordinated through networks of dispersed activities (Levy, 2005). Whereas several streams of research highlighted the shifts in the spatial organization of firms and the changes in the governance patterns driving them (Coe *et al.*, 2008; Farrell, 2005; Gereffi *et al.*, 2005; McCann *et al.*, 2002; Ghoshal and Bartlett, 1990), the specific rationale underlying the choice of expanding one company’s activities is most of the time ignored, or reduced to economic optimization criteria, in particular transaction costs (Bair, 2008). Thereby, it implicitly naturalized and made the rationality of top management one’s own, as the unique logics of action governing the offshoring decision process. Based on the empirical investigation of one exemplary case of spatial re-ordering within the French semiconductor industry (Balas and Palpacuer, 2011), we challenge the view according to which offshoring decisions results from such undisputed order. On the contrary, we suggest that offshoring relates to a “*contested field*” (Levy, 2008: 948), conflating actors with very different interests and spatial belongings, struggling to influence on the ground the conditions under which the final decision will be taken.

Neo-institutionalism, in particular the institutional logics approach (Friedland and Alford, 1991), provides a theoretical framework capable of mapping such a multiplicity of influences surrounding the decision process about offshoring. It investigates the transnational diffusion of business ideas through the lens of “*contradiction*” (Seo and Creed, 2002), considering that institutional norms and logics are conveyed through a striated space, and that therefore, their adoption, or rejection, depends on the way they match, or mismatch, with preexisting local orders (Greenwood *et al.*, 2010; Lounsbury, 2007; Marquis and Lounsbury, 2007). In line with this theoretical approach, our work intends, however, to move beyond the adoption *versus* rejection debate, to adopt what Frenkel (2005) calls the “*politics of translation*”.

According to this view, institutional change relates more to the transformation and hybridization of ideas, goods and artifacts when they move from one social context to another, rather than to a pure process of “*convergence*” or “*divergence*” between organizational forms and management systems (Frenkel, 2008; Pedersen and Dobbin, 2006; Spicer, 2006; Frenkel and Shenhav, 2003). Inspired by science and technology studies, in particular the actor-network theory (Czarniawska and Hernes, 2005; Callon, 1986), the translation framework provides us with a more political and relational account on institutional change than the now well-known “*paradox of embedded agency*” (Greenwood and Suddaby, 2006: 27). Political first, because against a theoretical background rooted in neo-institutional studies that problematizes the concept of institution as a consequence of *a priori* and asymmetrical power relations, it sees power as an output of a distributed process of institutional transformation (Frenkel, 2005; Czarniawska-Joerges and Sevon, 1996). Relational then, because reacting to the too abstract character of concepts like those of institutions, organization, science or capitalism, the translation approach tries to decipher the concrete social connections according to which any “*poorly connected element*” could become a “*highly connected one*”, or conversely (Latour, 1996: 369). The macro-scale and the micro-scale are not treated as if they were of different nature, and therefore, the analytical work consists in accounting for the way individuals merge into a collective entity.

Accordingly, a translation perspective on offshoring requires to grasp the kind of micro-politics through which (i) the proponents of offshoring draw the attention on its legitimacy; (ii) relevant stakeholder groups try, in return, to legitimate their will to embed locally firm’s activities; (iii) a coalition of interests give rise to a compromise regarding a new mode of organization and/or a spatial configuration. Answering to these questions requires to adopt a political conception of strategic decision-making. Offshoring as a strategic decision is thus seen as the offshoot of a “*coalition of interests and demands emanating from within and outside organizations (...) competing for organizational attention and resources, and resulting in conflicts that are never completely resolved*” (Narayanan and Fahey, 1982: 26-27; March, 1962). The translation perspective enables us to undertake a theoretical dialogue between political approaches to strategic management and neo-institutionalism, and thereby, has the potential to make several contributions to the understanding of the institutional embeddedness of TNCs.

The first part of the paper will review institutional literatures dealing with the topic of diffusion, resistance and translation of institutional logics and organizational forms (i). After having presented the grounded theory methodology adopted to achieve our fieldwork research

(ii), we will then investigate empirically the logics of action intending to promote or resist to an offshoring decision within the French semiconductor industry (iii). Finally, an empirically grounded theorization of institutional change, drawing on discursive and relational dimensions, will be discussed, and its contribution to institutional theory highlighted (iv).

1. Theorizing the Offshoring Decision-Making

1.1 Offshoring as the Transnational Diffusion of Global Institutional Norms

The issue of offshoring epitomizes a globalization rhetoric, rising from academic debates, which brings forth a common cognitive assumption about the spatial organization of production: global markets seem to impose their rationale all over the planet, in every industrial sectors and national economies. For functionalist strategic management literature, globalization is a reality that expands the competitive landscape on a world scale, and therefore reinforces the need for continuous expansion and relocation in order for both firms and places to reach or maintain competitive advantage (Farrell, 2005; Rugman and Verbeke, 2003). Institutional theorists have stressed the socially constructed character of this phenomenon. They argue that globalization of organizational fields involve a tendency towards “*institutional isomorphism*”, term coined from DiMaggio and Powell (1983: 147) to depict the growing convergence between organizational forms at the global scale (Geppert *et al.*, 2006; Banerjee and Linstead, 2001; Meyer *et al.*, 1997). Coercive, normative as well as mimetic pressures would thus prompt organizations to adopt institutionalized spatial configurations in order to appear legitimate by conforming to emergent norms emanating from their headquarter (DiMaggio and Powell, 1991), industry-level standards (Sturgeon, 2009), or the transnational diffusion of managerial rationalized myths (Meyer and Rowan, 1977). From a more critical standpoint, an emerging set of authors asserts that globalization of production systems give rise to renewed social movement activism, challenging the power of multinational corporations (Palpacuer, 2009; Levy, 2008; Levy and Egan, 2003), and thus, embodying potentially new modes of political regulation of offshoring strategies. Whatever aspect of contemporary capitalism one wishes to emphasize – *i.e.* corporate strategies or activist movements – both functionalism and institutional approaches consider that everything could be understood as the development of global institutions, or a reaction against it. They are held together by a common understanding of space as a supra-national pattern, disconnected from traditional social embeddedness and physical locations.

1.2 Offshoring as a Strategic Trade-off Between Multi-Layered Institutional Logics

Recent critics pointed out, however, a neglect of the multiplicity of spatial scales in these approaches (Taylor and Spicer, 2007; Spicer, 2006; Fligstein and Freeland, 1995). In other words, organizational analysis should pay greater attention to the symbolic interactions between actors and institutions located at the global scale and those anchored to other levels of space (national, infra-national, *etc.*), in the very process of globalization of management systems, as well as struggle over it. Several streams of literature have thus highlighted that the transnational diffusion of institutional norms was not frictionless, but rather repeatedly interacted with pre-existing local institutions, explaining why “*organizational forms*” (Greenwood and Suddaby, 2006: 30), “*business systems*” (Whitley, 1999), “*worlds of production*” (Salais et Storper, 1997) or “*varieties of capitalism*” (Hall and Solskice, 2001), still resist to homogenizing tendencies, and therefore, continue to strongly diverge (Tempel and Walgenbach, 2007; West, 2002; Whittington *et al.*, 1999; Fligstein, 2001; Guillén, 2001; Biggart and Guillén, 1999). The empirical insights provided by these authors suggest that actors and organizations could have different attitudes towards the idea of offshoring, depending on the institutional realm(s) they are embedded in. The concept of “*institutional logics*” (Freeland and Alford, 1991: 238; Jackall, 1988: 112) describes properly the availability, in a given organizational field, of a multiplicity of “*material practices and symbolic constructions*” upon which actors and organizations could draw to struggle with homogenizing forces. Within each field, the very existence of “*institutional contradictions*” or “*conflicts*” (Purdy and Gray, 2009; Seo and Creed, 2002; Friedland and Alford, 1991) between a diversity of such logics – coming from the realms of science, capitalist market, bureaucratic state, local community, family, profession, corporation, religion, *etc.* – thus appears antithetical with the deterministic view of institutional isomorphism. The original contribution of institutional logics approach lays, indeed, in its ability to go beyond the somehow passive view of actors of conventional institutionalism *à la* Meyer and Rowan (1977) and DiMaggio and Powell (1983), to highlight the complex interplay between structure and agency within institutionalization processes (Thornton and Ocasio, 2008). Within this line of inquiry, a recent strand of new institutionalism explored the way in which the feeling of belonging to a particular spatial scale, or community, impacted the capacity of actors to protect their autonomy in the face of external pressures to conformity (Greenwood *et al.*, 2010; Lounsbury, 2007; Marquis and Lounsbury, 2007). The identity, the culture, and

the material practices of a community – in other words its own institutional logics – could thus allow its members to legitimate incumbent organizational form against new foreign models, supported by industry-level schemes. Accordingly, the institutional logics approach provides us with a multilevel framework capable of mapping the multiplicity of influences and incentives surrounding individuals and organizations. Nevertheless, though the principle of “*embedded agency*” (Greenwood and Suddaby, 2006; Seo and Creed, 2002), at the heart of this approach, states that individuals, organizations, and institutions are enmeshed within the process of institutional stabilization and/or change, it is still unclear how such process occurs. It becomes then critical to decipher how mechanisms of institutionalization thread one’s way through different level of analysis, from the micro-levels of individuals and local community to the more macro-levels of the state and global institutions. Such an attempt implies to avoid two pitfalls of the institutional logics approach. First, it obliges us not to characterize individuals, social groups, and their respective logics of action according to *a priori* theoretical (field, institution, organization), functional (community, corporation, manager, worker, social movement, *etc.*) or spatial (local, national, global, *etc.*) categories, but on the contrary, to adopt an empirically grounded approach deciphering the concrete political and relational mechanisms of coalition formation between different kinds of individuals. As Greenwood *et al.* (2010: 535-536) suggest: “*analytical abstraction, intended to better capture contextual influences, has resulted in a relative blindness to how communities (regions) and their interaction with state logics affect organization (...). We need to know much more about (...) how community identities form (...) mechanisms by which norms and expectations are learned and diffused*”. Second, while neo-institutional theory has traditionally focused on the way by which one particular logics comes to dominate, it is all the more necessary to investigate processes of hybridization between different institutional logics, through which resistance or promotion to external isomorphic forces – *i.e.* pressures towards offshoring – is achieved.

1.3 Offshoring as a Process of Translation between a Multiplicity of Logics

Avoiding the pitfalls highlighted above implies to depict offshoring as a controversy-based process. Controversy could be defined as an act of rebellion *vis-à-vis* an instituted order (Callon, 1981; 1986). As Patriotta *et al.* (2011: 1807) point out: “*institutional arrangements are periodically subject to legitimacy tests during which the status quo needs to be justified vis-à-vis social audiences*”. The legitimacy of TNCs, traditionally based on discourses on

technical and competitive efficiency, could indeed be “dislocate” (Böhm *et al.*, 2010: 7), when the case for mutual benefits they draw on is challenged. In this line of inquiry, Levy (2005) suggests that offshoring has more to do with a shift in relations of power between TNCs and the national state, between lead firms and suppliers within global value chains, as well as between shareholders and other social groups, rather than mere efficiency gains. According to this, consumers, workers and/or politicians could contest offshoring for its inconsistencies with common-sensical principles of justice, *i.e.* ethical trade, job creation, local economic development, *etc.*

In accordance with the institutional logics approach, controversy studies analyze institutional change/stabilization through the lens of contradiction and political struggle, recognizing that individuals are capable of rationality and mindful behaviors (Thornton and Ocasio, 2008). Nevertheless, it differs from it in significant ways. In addition to the focus on inter-institutional contradictions of Friedland and Alford (1991), controversy studies take into account the intra-institutional contradictions at stake within organizations. It is thus in line with the definition of ‘institutional logics’ provided by Jackall (1999), or with what Spicer and Sewell (2010 : 913) coined as “*organizational logics*”, that is: “*a meso-level construct that lies between institutional theory’s field-level of logics and the sensemaking activities of individual agents in organizations*”. Thereby, they adopt a more micro focus on institutional change/stabilization than the supra-organizational level of analysis of the institutional logics approach. Whereas the latter assumes that action results from the embeddedness of individuals within existing institutional orders, the former takes the assumption according to which institutions are, on the contrary, the output of actor’s strategies and interactions, building on local understandings about what is legitimate in a particular situation. The interplay between locally grounded individuals’ logics of action thus becomes the micro-foundations of organizational and institutional change/stabilization (Powell and Colyvas, 2008). The notion of ‘logics of action’ is here understood as a sensemaking construct mobilized by actors to justify their on-going micro-practices (Barley and Tolbert, 1997; Fligstein, 1990).

The theoretical distinction between the micro-level of ‘logics of action’, the meso-level of ‘organizational logics’ and the field-level of ‘institutional logics’ sheds a new light on the institutional embeddedness of TNCs. Offshoring as a controversy-based process implies to decipher how actors seek compromise between such a multiplicity of logics after the disruption of prevailing institutional arrangement, *i.e.* existing spatial configuration of the TNC. It invites us to grasp the complex interplay between those three levels of analysis,

starting from the ‘drivers’ mobilized by actors to justify their actions *vis-a-vis* others (Patriotta *et al.*, 2011). In line with the theoretical assumptions of the translation theory (Czarniawska and Hernes, 2005; Callon, 1986), such an approach entails to trace how institutional change/stabilization occurs through “*skein of networks*” (Latour, 1993: 120), allowing some logics of action to influence organizational logics, and thus, to trigger change/stabilization at the field-level (Callon et Latour, 2006). According to this approach, the performativity of one particular logics does not depend on existing relations of power within an organizational field, but conversely, results from the capacity of one actor to build on equivalence chains to form network links – “*associations*”, in the vocabulary of Teil and Latour (1995) – giving birth to large coalitions of interests, and to name appropriate “*spokespersons*” in order to ensure the legitimacy of the discourse supporting such a coalition (Callon, 2007; Ackrich *et al.*, 1988: 21).

Moreover, the so-called translation theory states that the formation of a compromise has less to do with the dominance of one particular logics over others, than with the ‘translation’ of what relevant stakeholder groups desire and claim within one homogenizing discourse. The idea of translation echoes a more recent stream of research highlighting that globalization entails a “*transformation*” or an “*hybridization*” of logics when they circulate from one spatial context to another (Pedersen and Dobbin, 2006: 903; Spicer, 2006; Frenkel, 2005; Czarniawska-Joerges et Sevon, 1996). Frenkel (2005: 278) develops an “*interpretive glocalization*” approach to account for the way American managerial models were submitted to several transformations when they have been introduced in Israeli organizations, in order to comply with local contingencies. Buck and Shahrim (2005: 42) draw the same conclusion from their empirical exploration of the introduction of stock-based executive pay, interpreted as a ‘*US-style governance*’ pattern, within the corporate governance of German listed firms. Relations of power are not, however, evacuated from the analysis of translation processes, inasmuch as hybridization is considered as the output of “*micro-politics*” (Morgan and Kristensen, 2006: 1468), or “*politics of translation*” (Frenkel, 2005), between local stakeholders using symbolic as well as material resources coming from their organizational and institutional environment to make their own interest prevail (Callon and Latour, 2006; Latour, 1986).

In this paper, we address these concerns by putting under scrutiny the politics of offshoring, that is, the way translation processes between logics of action occur when a TNC decides to “*rescale*” its operations from the local to the global scale (Spicer, 2006). Building on one exemplary case of spatial re-ordering within the French semiconductor industry – The

CROLLES 2 ALLIANCE breakdown – we investigate how local stakeholders articulate logics of action, organizational and institutional logics within a controversy-based process, in order to rescale and to fix the spatial configuration of the firm at a scale that serves their own interest.

2. Research Methods

2.1 Case Selection: Controversy over Offshoring in French Semiconductors

The fieldwork research reported in this paper takes as a starting point the breakdown of the *CROLLES 2 ALLIANCE* (*C2A*), an inter-organizational arrangement contracted between three lead chip manufacturers of the global semiconductor industry – *STMICROELECTRONICS*, *NXP* (formerly *PHILIPS SEMICONDUCTORS*) and *FREESCALE* (formerly *MOTOROLA SEMICONDUCTORS*) – over the period 2002 to 2007. The empirical material was collected between 2007 and 2010 during a PhD project, which aimed at investigating historically (1955-2009) the development of R&D activities in semiconductors in the South-East of France (Grenoble area) through the lens of public, industrial and technological controversies. The case selection rests on the exemplary nature of the local industrial base in terms of economic, technological as well as scientific development (Lawton Smith, 2003; Druilhe and Garnsey, 2000; De Bernardy, 1999). Coined as French Silicon Valley, the Grenoble cluster counted more than 160 companies and a workforce of more than 20,000 individuals in 2009 in the semiconductor industry. It reproduces locally the various segments of the semiconductor value chain: vertically integrated firms that design, manufacture, and market integrated circuits; firms specialized in the design of subcomponents; suppliers of design and manufacturing tools, as well as suppliers of materials and associated services. The organizational arrangements driving the social fabric of the cluster draw on an old tradition of cooperation between the scientific, industrial and political communities, which dates back to the early 1960s. Since the *C2A* agreement in 2002, which represented at that time the largest industrial investment in France for the last ten years, the Grenoble area became one of the main flagships of the French cluster policy.

Getting its name from its localization in the small city of Crolles, near Grenoble, the R&D facility and the manufacturing pilot line of the *C2A* were dedicated to the production of advanced integrated circuits. Though the consortium between the three partners was based on a five-year agreement, the size of the initial investment – approximately three and a half

billion euros – as well as the fact that only three other similar sites existed worldwide¹, suggested that the *C2A* might have been the beginning of a more ambitious and longer-term program of technological development between the three partners, as the production director of *FREESCALE* at Crolles argued:

“Our objective was to draw on this alliance to build something, not yet defined at that time, which could have been more perennial and more important (...). For us, it was the main objective. I don’t know if it was the same thing in the mind of our partners... but you can’t have this amount of investment, on such strategic assets, if you have in mind a short term objective or if you think this is just temporary”.

However, in December 2006, *NXP*’s CEO announced the withdrawal of its company from Crolles, scheduled for the end of the following year, imitated by its *FREESCALE* counterpart one month later. The offshoring decision process that has been put under scrutiny concerned mainly the strategic trade-off faced by *STMICROELECTRONICS* after the departure of its two R&D partners. Through this case study, we sought to give a deeper understanding of how and why the offshoring of *STMICROELECTRONICS*’ operations has been avoided, starting from the perceptions and meanings of a large set of stakeholders both inside and outside of the firm. The controversy over offshoring put under scrutiny ran from December 2006 to September 2008 with the help of a new agreement between *STMICROELECTRONICS* and public authorities defining a new organizational form and spatial configuration for the firm.

2.2 Research Design

To do so, a “*constructivist grounded theory*” strategy was adopted as the main method of inquiry (Corbin and Strauss, 2008; Charmaz, 2006). Grounded theory approach enabled us to capture complex social phenomena – multi-actors, multi-scalar, long-ranging... – and prevented us from being “*contaminated*” by existing theoretical frameworks (Gioia and Pitre, 1990: 588). Indeed, we decided to prevent our analysis from being biased by *a priori* theoretical constructs and to start our inquiry from the main issues identified on the ground – *i.e.* ongoing restructuring within *C2A* – before accounting for existing theories and concepts. Accordingly, in line with grounded theory principles, the case study presented here does not formally test the theoretical framework presented above, and our theoretical constructs were derived from qualitative analysis of empirical data. Moreover, as Suddaby (2006: 636) noted: “*the purpose of grounded theory is not to make truth statements about reality, but, rather, to elicit fresh understandings about patterned relationships between social actors and how these*

¹ Moreover, the *C2A* R&D and manufacturing facilities have been unveiled by the French President Jacques Chirac the 27th of February 2003, arguing that the Grenoble area reached at that time an international stature.

relationships and interactions actively construct reality". Thus, it enabled us to account for logics of action, organizational and institutional logics as social constructions, collectively produced by different sets of actors engaged in political struggles, trying to "*rescale*" and to "*fix*" production stages in an advantageous level of space (Spicer, 2006: 4).

2.3 Data Collection

Data were collected from semi-structured interviews and an extensive review of "*non-technical*" literature (Corbin and Strauss, 2008: 38), including press releases, specialized press, annual reports, semiconductor technology dedicated studies, and trade union archives dealing with *STMICROELECTRONICS*' history and the industrial development of the Grenoble area. Data collection followed a "*theoretical sampling*" method (Corbin and Strauss, 2008: 143) and was organized according to the following steps: (i) identifying the problems at stake for a complete set of actors involved, directly or indirectly, in the *C2A*; (ii) mapping the local semiconductor value chain, its division of labour, and its relevant stakeholders; (iii) collecting their interpretations about the antecedents, internal dynamics and consequences of the *C2A* in accordance with a "*principle of symmetry*" (Bloor, 1976). Data collection ended when "*theoretical saturation*" was reached (Glaser and Strauss, 1967: 61), that is, when the process of controversy over offshoring – its drivers, its sub-controversies, and the interactions leading to its closure – had been broken down into interrelated "*conceptual categories*" (Corbin and Strauss, 1990: 7), and that, until no new category emerged from additional respondents and non-technical literature.

Interviews (N: 35) were conducted between May 2007 and January 2010 with managers, R&D engineers and union leaders of *STMICROELECTRONICS* in Crolles and Grenoble, corporate executives located in its headquarter of Geneva, former managers of *FREESCALE* and *NXP*, several suppliers from the semiconductor value chain located in the Grenoble area, as well as heads of local government and research agencies. Respondents were invited to comment on any aspect related to the antecedents, functioning and consequences of the *C2A*. The interviewer had the task of leading the interviewee to refine the factual elements provided (name-dropping, technical objects, figures, anecdotes), to express his own judgements (justifications, critiques), as well as his feelings (joy, anger, misunderstanding), in line with the "*information-reflexivity-emotions*" framework elaborated by Charmaz (1990: 1167). Interviews were run face-to-face, except for four by phone, recorded and re-written for systematic coding. The data collected from the non-technical literature were analyzed using the same coding procedures than interview data, insofar as written documents draws

necessarily on particular discourses and meanings, and therefore highlight strategic intents, political stances, judgements or predictions (Charmaz, 2006: 35).

2.4 Data Analysis

Grounded theorization rests on an abductive rationale *à la* Peirce (Reichert, 2007), intertwining abductive, inductive as well as deductive modes of reasoning (Corbin and Strauss, 2008: 56). As Suddaby (2006) stated, it calls for identifying relevant concepts from the empirical material collected (abduction), evaluating the power of explanation of those concepts as regards emerging interpretations (deduction), validating that the additional data collected match with the on-going theorization (induction). This rationale enabled us, after having achieved the recursive processes of “*open*”, “*axial*”, and “*selective*” coding (Corbin and Strauss, 2008; Charmaz, 2006; Strauss and Corbin, 1990), to identify relevant conceptual categories and to construct a grounded theory accounting for the central phenomenon that emerged from our fieldwork, *i.e.* offshoring decision process as a controversial issue. The following quotation, extracted from an interview with *STMICROELECTRONICS* former Chief Technology Officer, illustrates our coding procedure through the example of the conceptual category “*logics of action*”:

“Actually, [the new Chief Technology Officer] came about with a renewed ambition. He helped us to develop something we couldn’t achieve if we sought to get over the cultural hurdle between small-scale manufacturing and mass production. This is a big issue, because the nuance is important. With small-scale manufacturing, you have to develop a new technology or a new product, you have to show the extent to which you have the skills to make it work, that you have all the sub-components for the assembly. Mass production is something really different because, in addition, you have to watch out for how much it costs. With mass production, the performance criterion is not only associated with technological efficiency. The prevailing criterion is that it has to be low cost”.

The quotes underlined had been subject to what Corbin and Strauss (2008: 46) call “*microanalysis*”. For instance, “*get over the cultural hurdle between small-scale manufacturing and mass production*” depict a significant shift in the local R&D practices. Such shift had axiological implications inasmuch as it introduced an economic rationale within the traditional realm of science and technology. While our interviewee suggests that the logics of “skills” and “costs” are not mutually exclusive, he describes, however, a radical inversion in the order of worth upon which local practitioners draw to give legitimacy to their work and the organizational form within which it is enmeshed. This kind of microanalysis invited us to refine our theoretical sampling to understand what might explain the shift from “*manufacturing*” to the “*production*” logics and, more particularly, the role that the new CTO played in this process.

To achieve the analysis of the controversy over offshoring, we implemented Clarke's "*situational analysis*" as a heuristic analytical method (Clarke, 2005). The mapping tools of its methodological framework provided us with visual representations capable of laying out the major human, non-human and discursive dimensions of the controversy. The method rests on four clearly defined steps, which are listed hereafter: drawing a "*situational map*" (Clarke, 2005: 87) where actors, non-humans, material, symbolic and discursive elements, enunciated by respondents, are positioned; tracing the interrelations between those elements, whatever their nature could be (cooperation, conflict, influence); gathering the human and non-human elements within relevant "*universes of discourse*" in order to represent the multiplicity of groups and political stance within the controversy as well as highlighting their mutual contradictions (Strauss, 1978: 121); the last step consists in disconnecting individuals and groups from the discourses they contribute to produce to account for the internal contradictions of one universe of discourse, and therefore, to prevent our analysis from being bounded by *a priori* analytical categories (local vs. global; managers vs. workers ; shareholders vs. stakeholders; *etc.*). These four steps guaranteed the construction of an empirically grounded conceptualization, as well as the traceability of the equivalence chains through which a compromise over a new spatial configuration emerged.

3. The Politics of Offshoring: a Controversy Based on Three Narratives

In order to fully understand the socially constructed and controversial nature of the offshoring decision-making process in the C2A case, we sought to reconstruct the chronology of events using the notion of "*big narrative*" as defined by the post-structuralist philosopher Lyotard (1979). For him, a narrative aims at "*legitimizing institutions and political and social practices, legislations, ethics, ways of thinking. Yet unlike myths, they ground this legitimacy not in an original founding act, but in a future to be brought about, that is, in an idea to realize*". Accordingly, we organized the case study into four sub-sections: the first three depicting the main narratives – the universes of discourse to which they belong and the logics of action they are embodying – struggling each other to shape the spatial configuration to come; the last one tracing the negotiations through which a compromise emerged between the most relevant stakeholders. The comparative analysis of these three narratives reveals two main axis, or sub-controversies, within the controversy over offshoring: the organizational form governing R&D operations (in-house vs. outsourced); and the spatial organization of firms' value chain (local embeddedness vs. global network). The construction of the

compromise to be made about the future spatial configuration will be analyzed according to this framework.

3.1 The ‘There-is-no-Alternative-to-Offshoring’ Narrative

The *C2A* breakdown results from the demonstration that an alternative organizational model to geographical clustering had proven superior economic performance. However, in the beginning of the 2000s, the localization of the *C2A* within the Grenoble area met firms’ needs to share growing capital costs and reach complementary competences in the face of a significant increase in the complexity of new integrated circuits (IC) design and of their manufacturing processes. Progress in miniaturization along the Moore’s law curve triggered, indeed, an extreme specialization of tasks within the industry. This made it uneasy for a single actor to control the whole value chain. Co-operation between IC makers, in the form of consortium agreements, then became a necessity, as was the case for their localization within an area associating public laboratories, specialized equipment suppliers and dedicated services, as *FREESCALE*’s country manager stated:

“Once your R&D process comes to an end, you want to transfer the corresponding know-how to mass production stages. It is always easier when you transfer individuals to support the know-how transfer. So, once the R&D process is completed, the following stages are easier to achieve if your production unit is close from the R&D center. People talk the same language and they have the same rules, thus it makes sense to keep these operations close from each other”.

But five years later, at the onset of the next technological node, *NXP* and *FREESCALE* chose to offshore their operations from Grenoble, while *STMICROELECTRONICS* was facing an internal struggle to decide, whether or not, to follow the same trajectory than its ex-partners. How could we account for the justifications according to which some stakeholders decided so suddenly to promote offshoring? How did they manage to grab public attention? A thoughtful examination of the offshoring decision process shows us that such a decision could be much less driven by the conscious search for economically efficient answers by firms than by the result of multiple actors’ strategies, embodying different logics of action. Nevertheless, in line with our constructivist grounded theory strategy, the purpose of our fieldwork was not about invalidating the reality of economic assumptions. It was about dealing with economic performance as a specific discourse produced by a specific set of actors, in order to apprehend through which power relations and legitimating processes the final decision about offshoring emerged. The particular discourses upon which rests the ‘there-is-no-alternative-to-offshoring’ narrative will be presented in the following paragraphs.

SUB-CONTROVERSY 1: INTEGRATED DESIGN MANUFACTURING VS. FABLESS/FOUNDRY MODEL After two years of partnership experience, *NXP* and *FREESCALE* began to change their attitude towards the make-or-buy dilemma. An organizational restructuring questioning the rationale of the *C2A* organizational model was undertaken. It was triggered by the arrival of new actors in the industry – ‘foundries’ and ‘fabless’ firms – enabling large integrated firms – coined as ‘integrated design manufacturers’ (IDMs) – to find alternative ways to organize their value chain. Foundries, specialized in the contract manufacturing of ICs, authorized chip manufacturers to fully embrace the principle of externalization by giving up any form of material development and component manufacturing. Such dissociation between design and manufacturing was made possible by technological changes decreasing the specificity of assets exchanged and facilitating coordination within the value chain between these two production stages. Facing the diffusion of the fabless/foundry model, *C2A* firms moved towards externalizing manufacturing and a significant share of technology development activities. Contracting out to foundries turned out to be more interesting for the implementation of manufacturing technologies than in-house technology development as done in the *C2A*. The gradual outsourcing of more and more stages of the value chain limited proportionally the need of *C2A* partners for close and locally embedded relationships, as an industry expert confirmed:

“There is the emergence of a new phenomenon, called ‘foundries’. Firms like TSMC or UMC in Taiwan are manufacturing general purpose ICs thanks to large manufacturing units. They receive IC design and adapt it to their process in order to manufacture wafers. This is a model suited for firms that are ‘fabless’, that is to say, they have no manufacturing unit, and they only invest in R&D because they decided that their value added was no more in the production facility but in new IC design. This is a difference of business model between the existing model of vertical integration and a new model of specialized IC manufacturers”.

As a consequence, the fate of the *C2A* became dependent on fierce competition between those two models within the strategic meetings gathering the three partners. According to *NXP*’s top managers, *C2A* suffered from a lack of competitiveness in the face of Asian foundries business model, in terms of time-to-market of new IC technologies, as well as of production costs, as the site director of *NXP* and the head of strategic planning of *STMICROELECTRONICS* noticed:

“Since 2004, the possibility of extending the agreement moved away. This date corresponded to the production ramp up, that is, a post-R&D stage where the costs become an important criteria. When the production ramped up, we quickly figured out that Crolles 2, because of its low manufacturing volumes, was less competitive than Asian counterparts”.

“The main issue was that we never managed to know exactly how much profitable it was. The only thing that is still nowadays uncertain is that we think we have wasted billions to be a technology follower, and that it didn’t really work out. That is, our capacity to progress along the Moore’s law. There has always been a delay of several months and a production costs more important than what it

was done elsewhere, because the size of the manufacturing unit was significantly smaller than what we could find in Asia”.

According to this rationale, *NXP*’s top management decided to offshore technology developments from Grenoble and to begin a strategic partnership with TSMC in Taiwan. Industry experts described this evolution in the form of a creeping change of IDMs, such as *NXP*, towards a fabless model. Without the continued involvement of their Dutch counterparts, *FREESCALE*’s managers could hardly imagine extending their own commitment in the *C2A*. The inevitability of offshoring was vouched by the incapacity for the firm to share with only one partner the large amount of investment – approximately 750 million euros per year – needed to extend the R&D program of the *C2A*, as the site director argued:

“At a given moment, some Alliance members took a glimpse outside and they thought that they could have there development costs more competitive than in the Alliance. It’s a little bit like within a couple when there is an adulterous relationship. In the Alliance case, we were three partners and one of us took a glimpse outside. *NXP* didn’t keep it secret: they acquired several years before a share of TSMC, and therefore, they had an alternative to develop their own technology. We couldn’t manage to collect the amount of investment necessary to the functioning of Crolles 2 at only two partners”.

By June 2007, *FREESCALE* announced its withdrawal from both the R&D program and the manufacturing pilot line, joining a broad alliance of nine partners brought together by *IBM* in East-Fishkill (N-Y, USA), called the *INTERNATIONAL DEVELOPMENT SEMICONDUCTOR ALLIANCE (IDSA)*. Should *STMICROELECTRONICS* follow the same route than its ex-partners and decide to offshore its operations to Asian foundries, or closer from *IDSA* facilities? A significant share of *STMICROELECTRONICS*’ top managers defended this hypothesis, but, one has to admit that their ‘no-alternative-to-offshoring’ narrative would not have been so prevalent if it did not take into account the long-range local embeddedness of the semiconductor industry, and the related necessity to legitimate the new spatial configuration of the firm as regards the stakes involved for local industrial development.

SUB-CONTROVERSY 2: GLOBALIZATION DOES NOT RHYME WITH DESTRUCTION The specialization of Grenoble in semiconductors dates back to the creation of the *LABORATORY OF ELECTRONICS AND INFORMATION TECHNOLOGIES (LETI)* in the early 1960s. *STMICROELECTRONICS* was, indeed, born from the first spin-off from *LETI* in 1972. Drawing on such an old tradition of collaboration between science and industry, the building of a locally grounded coherent value chain around semiconductors occurred at the beginning of the 1990s, with the establishment in Crolles of a first R&D site, called *GRENOBLE 92*, bringing together the capacities of *STMICROELECTRONICS*, *LETI*, the French national telecommunication company *FRANCE TELECOM* – historically involved in the construction of a French semiconductor industry – and *NXP* (formerly *PHILIPS SEMICONDUCTORS*), around leading-edge manufacturing technologies.

Furthermore, since the 1990s the French state and local authorities have invested approximately 1 billion euros in the R&D and manufacturing facilities of both *GRENOBLE 92* and *C2A*. The *C2A* breakdown have consequently casted some doubts on the whole French industrial policy, supporting hitherto the assumption according to which technological innovation, in particular in semiconductors, provided a firewall against jobs and plants offshoring.

The main objective of *STMICROELECTRONICS*' top management was to achieve the challenge of giving some legitimacy to a strategic decision leading to a disembeddedness of activities carried out in Grenoble for more than 30 years. Their approach consisted in orienting public, as well as local and national authorities attention, towards the opportunity for local economic development of the new spatial configuration. The discursive strategy they have elaborated breaks down into two steps: the framing of the main issue that the firm is facing; the definition of the solution advocated to address this problem. According to the *STMICROELECTRONICS*' country manager, the main issue the firm was facing through the *C2A* breakdown related to the inevitable emergence of a new business model for semiconductors at the global scale:

"The gradual move of the world market towards Asia, the emergence of new competitors in developing countries, as well as radical technological transformations, all constitutes important challenges for European industrialists and countries. We are facing a new international division of labor, definitely more open, which leads to a new business model at the global scale. More and more, semiconductors are used within mass consumer markets. This commoditization increases the pressure on the price of semiconductor components. At the same time, the increasing in the technological performance expected from these components implies to maintain a high level of innovation".

These structural changes in the competitive patterns of the semiconductor industry would justify the gradual offshoring of manufacturing and process R&D in Asia, in order to counterbalance the decreasing prices on the semiconductor market by an optimization of the cost structure, as the head of strategic planning pointed out:

"A huge capacity is required to develop both process and design R&D programs. If you want to have the capacity to do both, either you have 20 billions euros of turnover and life is beautiful, or you do not and you can't afford to sustain the development of process R&D programs. Therefore, you have to outsource your process R&D to a specialist, and do the same with your manufacturing, which can be mass-manufactured in Asian plants. It is the only way to be able in the future to design a wide array of products and to sustain a critical size of investment in design R&D. Product differentiation nowadays doesn't rest on the manufacturing equipments. This is an old Japanese story coming from the 1970s! Nowadays, product differentiation rests on the capacity of developing a multi-functional product design in close collaboration with the end-user".

However, the breakthrough in the sources of competitive advantage, from process to design technologies, was also described as an opportunity to trigger a dynamics of creative destruction at the local scale, aiming at leaving aside the old model of geographical clustering, embodied by the *C2A*, to embrace a new spatial configuration. Whereas the former was

motivated by the necessity of a close proximity between design and manufacturing to accelerate the time-to-market of new semiconductor products, the latter results in a globally networked organization articulating the offshoring of manufacturing and process R&D with a local anchoring of design R&D. Accordingly, though the new spatial configuration threatened the fate of the *C2A* plant and facilities, it was assumed that the design-turn will provide, in return, opportunities of new local investments and job creation, as well as strong perspective for national industrial policy, as suggested by the country manager:

“Far from being incidental, the localization of numerous industrial groups in Asia is a part of a thoughtful industrial policy. This strategy is not necessarily deployed at the expense of their development in Europe, but on the contrary, has been fully tried and tested at the investment and employment levels. For *STMICROELECTRONICS*, the cash saved by the exploitation of manufacturing facilities in Asia contributes to the investment, in Europe, in the R&D expenditures necessary to stay ahead. Rejecting these evolutions in the name of previous social benefits will not prevent their development. It is more relevant to analyze what could be done to promote our strategic assets and to secure the continuation of the country’s economic development”.

Thus, *STMICROELECTRONICS*’ representatives called for a new spatial configuration conceived as a strategic solution to the new constraints imposed by the current prevailing fabless/foundry model at the global scale. This spatial configuration, and its attendant new spatial imaginary, substituted a rhetoric of ‘globalization under control’ for the traditional dichotomy between local embeddedness and offshoring. Through several diffusion channels – comments column in the French newspaper *Le Monde*², advertorial campaigns in the regional press, lobbying actions towards French legislators – the top managers of the firm tried to naturalize the on-going spatial transformations by arguing that offshoring had a creative dimension, *i.e.* it promoted the restructuring of less value added activities (manufacturing technologies) through their outsourcing to Asian foundries, while at the same time, contributing to the anchoring of highly strategic ones (design R&D).

In this fashion, top managers transform a strictly economic rationale, oriented towards their own interest, into a common-sensical discourse associating the fate of *STMICROELECTRONICS* in the competitive landscape with more public issues, such as local economic development and national industrial policy. It is as if the firm – and actors within it –, local organizations, and the State, merged into one mere logics of action, or as if their respective logics of action were converging in a spontaneous way. Nevertheless, the controversial nature of offshoring immediately came out when some stakeholder groups decided to reveal the internal contradictions of the ‘no-alternative-to-offshoring’ narrative and to cast some doubts on the legitimacy of the decision-making process.

² Cf. Dutheil A. (2004), « Mondialisation ne rime pas toujours avec destruction » [*Globalization does not always rhyme with destruction*], *Le Monde*, 16 novembre.

3.2 The ‘Business-as-Usual’ Narrative and the Critique of Financialization

Within the Grenoble area, in particular at *STMICROELECTRONICS*, the ‘no-alternative-to-offshoring’ narrative was not so pervasive. The *C2A* breakdown indeed challenged an organizational form drawing on the legacy of well-institutionalized community-based practices. For instance, at the heart of the *C2A* agreement laid the concept of ‘lab-fab’, an organizational innovation designed in Grenoble at the end of the 1980s that the *C2A* established as an industry standard in the early 2000s. By intertwining, at the local scale, basic and applied research stages on process technologies, pilot manufacturing as well as design R&D, the concept of lab-fab demonstrated itself as an organizational advantage for speeding up time-to-market of new technologies. Such a pioneer advantage rested on a science-based approach to industrial issues inherited from the *LETI*. Its rationale consisted in merging the habit of technological invention, driving the start-up stage from the early 1970s to the end of the 1980s, with the constraints of mass manufacturing associated with the growth of the semiconductor market since the 1990s. Accordingly, the focus on process technologies for mass production became – in substitution for the search for technological breakthroughs in products – the main logics of action governing the corporate strategy, as the previously mentioned quote from the former chief technology officer of *STMICROELECTRONICS*, and former *LETT*’s fellow, pointed out. For some of local community members, the *C2A* breakdown and the offshoring of process technology developments threatened their autonomy and their will to sustain such organizational practices. As a consequence, their discursive strategy will aim to point out the underlying logics of action of the ‘no-alternative-to-offshoring’ narrative and its contradictions with the search for technological advantage and local economic development.

SUB-CONTROVERSY 1: FABLESS/FOUNDRY MODEL AS A FINANCIALIZED ORGANIZATIONAL FORM For some of local stakeholder groups, the *C2A* breakdown had to be associated with the recent and active intervention of institutional investors in the semiconductor industry. According to them, they have prompted the diffusion of finance-based criteria in the strategic management of firms, in particular in their investment decision-making. For institutional investors, the semiconductor industry embodied a paradox. While it generated a large amount of cash, managers were accused of decreasing returns on invested capital by allocating a significant amount of cash flow in the now useless manufacturing technologies. They thus pushed for

accelerating the process of externalization of more and more stages of the value chain to Asian foundries, as an industry expert testified:

“Financial analysts has looked at annual reports and they said: ‘this industry destroy value and we cannot invest sustainably in an industry that destroy value’. Why did it destroy value? First of all because there were too much companies and therefore prices were low. Second, because the optimization of the value chain did not happen yet. Everyone did everything: process, manufacturing and so on. When investors came out, they of course first of all stop innovation because they are yellow dogs, but then, they said: ‘manufacturing should be achieved over there, R&D elsewhere and so on’, they triggered the rationalization of the industry”.

NXP’s and *FREESCALE*’s managers involved in the *C2A* governance were the first to promote the fabless/foundry model, and therefore, to encourage the offshoring of firms’ operations from Grenoble. It has to be compared with the acquisition of their parent companies by private equity funds a few months before their withdrawal of the *C2A*. The leveraged-buyout technique adopted by the hedge funds implied a high level of corporate debt for the two firms, preventing their managers to maintain the same rate of investment in R&D programs. Contesting the ‘no-alternative-to-offshoring’ narrative, local stakeholders, in particular local R&D practitioners and policymakers, pointed out that the *C2A* was not underperforming as regards existing performance criteria, *i.e.* the time-to-market of new technologies. But, on the contrary, they suggested that a shift in the criteria of reference has occurred. In other words, financialization introduced a new logics of action questioning the legitimacy of the *C2A*, as several *STMICROELECTRONICS* managers involved in the *C2A* confirmed:

“Hedge funds came out to invest in those companies and took the control. Since then, the notion of corporate strategy became different because the strategy of a hedge fund is to know when it could sell the stocks it is holding with the goal of maximizing its gains. When a firm is tied to a five-year agreement of about 250 million euros per year, it doesn’t match with what a hedge fund plans to do. So they were not really attracted by the idea of extending the partnership”.

“I want to emphasize the highly negative effects of the leveraged buyout of our two partners, which are resourceless today. We have to claim that if the alliance is over it is because of financial reasons. *FREESCALE* wanted to continue, but we were facing strong, very strong external constraints. Some wandered if the alliance had been a success or a failure but there was something much much bigger behind which implied that we couldn’t know”.

These contradictions have had an echo within *STMICROELECTRONICS* where supporters of technology- and finance-based logics of action were struggling to perform their own vision of the strategic future of the firm. On the one hand, under the pressure of financial market analysts the introduction of new performance criteria – in particular revenue per employee and shareholder value added – came to question the relevance of the existing business model. On the other hand, it had a concrete impact on the governance and organizational practices within the firm. Trade unions highlighted that the annual growth of the dividend policy and the share buyback program increased significantly over the period 2001-2007, *i.e.* from 7% to

25% of the net income. R&D practitioners claimed that the chief financial officer had took the power at the expense of the focus on technological and industrial performance:

“I have one anecdote that I think is exemplary. The firm has to release its quarterly results every three months. And every three months, two weeks before the financial release, you can take a bet on it, there will be a freezing on planned investment, on recruitments, and sometimes we are obliged to take our holidays, in order to improve financial results! Don’t you think this is ridiculous from an industrial point of view? In other words, because of the imperative of financial results, one has to make people believe that we don’t need them. It’s a little bit strange in terms of corporate culture, don’t you think? Sometimes the success of an R&D project depends on one or two months of full time work. When you are leading a project and that, suddenly, the budget is frozen and you will have to wait... That’s just for financial reasons. This is not an economic rationale in the sense that we could say ‘the firm has some difficulties, let’s see where we could make some economies’. It isn’t. This is an optimization of financial flows driven by the need of investors for financial accountability”.

Accordingly, trade unionists, R&D practitioners and some heads of business development decided to call for a preservation of the *status quo* and for an engagement in a business-as-usual strategy. In other words, after the withdrawal of *NXP* they have supported the search for a strategic substitute in order to extend the *C2A* partnership in its initial form. Against the ‘fab-less’ strategy promoted by top managers, consistent with shareholder value creation objectives, this emerging internal coalition argued that only the ‘lab-fab’ organizational model could allow the firm to maintain a technological advantage by leaning on its historical core competence on manufacturing technologies. Thereby, they intended to struggle against the idea of technology outsourcing common to fabless/foundry model proponents.

SUB-CONTROVERSY 2: OFFSHORING AS A THREAT FOR LOCAL ECONOMIC DEVELOPMENT Joining the *IDSa* could have embodied a relevant alternative to a complete outsourcing of manufacturing technologies. The consortium agreement allowed partners to share a significant amount of capital expenditures and to continue in-house technological developments along the Moore’s law. Nevertheless, the argument of a local anchoring of these value chain stages prevailed for some stakeholders of the firm, in particular industry veterans and local authorities. For the formers, a space in-between the fabless/foundry model and the offshoring of process R&D operations to *IDSa* remained. They claimed that French and European technological sovereignty was at stake through the *C2A* breakdown. For instance, Joseph Borel, former Chief Technology Officer of *STMICROELECTRONICS*, addressed this issue in a public report³, which attracted much attention in the specialized press, calling for the creation of an ‘Airbus of chips’, that is, a united European company for IC manufacturing, using the infrastructures of the *C2A* and localized in the Grenoble area. He justified the legitimacy of its plan by

³ Cf. Borel J. (2007), “Nanotechnologies in Europe: there is a room for a single profitable shared application-driven foundry!”, *Personal Archives*; Pele A.-F. and Ojo B. (2008), “Ex-ST exec. pitches pan-European IC company”, *EE Times Europe*, 14 March.

drawing on the locally grounded technology-based logics of action. He mobilized his scientific background to argue, against the ‘no-alternative-to-offshoring’ narrative, that the design-turn had not happened yet and that future semiconductor products would need to maintain a deep in-house know-how in manufacturing technologies. Moreover, he warned policymakers about the political implications of the offshoring of the *C2A*’s operations. Since the early days of semiconductor technologies, strategic and defence matters laid at the heart of governments voluntary policies aiming at constructing sustainable national industries in the USA, Japan, Europe, and more recently, Taiwan and China. Borel’s advocacy suggested that an offshoring of such strategic R&D programs could threaten Europe’s defence and industrial policy in the face of Asian competition:

“One of the assumption underlying the Alliance was to economize R&D expenditures by clustering operations at a local scale in order to maximize technological developments for a given investment. In the same line of inquiry, I wanted to promote a European strategic alliance. It was an extraordinary opportunity to convert the ‘cathedral’ of the *C2A* into an industry standard for the European foundries. This was a European strategic initiative to counterbalance emerging dynamics between Taiwan and China, that is to say, TSMC. Competition between European firms was too microscopic, and it was about to be over. This was more and more about Europe competing against China, against the USA... USA were not really a threat, but about China...TSMC could become the world’s biggest foundry and its partnership with China could give the highest design capacity”.

Borel’s discourse was a substantial critique of the ‘globalization under control’ rhetoric of *STMICROELECTRONICS*’ top managers, which meant that local stakes could be conveniently subsumed within global ones. For him, as for a wide array of local stakeholders, the sustainability of European industry depended, conversely, on the capacity of local actors to resist to the offshoring of process R&D from the Grenoble area. In the same line of inquiry, local authorities tried to support *NXP*’s site managers within the negotiations with their parent company, in order to make local manufacturing equipments and workforce lived through the *C2A* breakdown by converting them to technology derivatives less sensitive to offshoring pressures.

Thus, the ‘business-as-usual’ narrative intended to ensure the legitimacy of the *C2A*’s organization model. Its proponents highlighted the financialized logics of action underlying the ‘no-alternative-to-offshoring’ discourse and its detrimental consequences for the technological competitiveness of the firm as well as for local, national and European economic development. Thereby, it focused on the internal contradictions of the big narrative promoting institutional change, and advocated for the *status quo*, seeing no need to change existing organizational practices and spatial configuration.

3.3 The ‘Tabula Rasa’ Narrative and the Critique of Negative Externalities

The public controversy emerging out of the *C2A* breakdown brought forth another kind of local resistance, pointing out the internal contradictions of both ‘no-alternative-to-offshoring’ and ‘business-as-usual’ narratives. Surprisingly, the distinctive feature of these discourses of resistance was to promote offshoring. They sought, indeed, to deconstruct radically the logics of action legitimizing the organizational form of the *C2A* as well as the idea of a local anchoring of the semiconductor industry. Whereas the focus points of such contestations were heterogeneous, they originated in the common will of several stakeholder groups to question the firm-territory nexus in order to evaluate the concrete externalities of such industry for the growth of local labour pool, the balanced use of public funds and the preservation of natural ecosystems. Accordingly, the ‘tabula rasa’ narrative they have contributed to elaborate saw the *C2A* breakdown as an opportunity to develop the local industrial base well beyond the semiconductor industry, the latter symbolizing a paragon of negative externalities entailed by global corporations.

SUB-CONTROVERSY 1: C2A AS A SOURCE OF PUBLIC FUNDS WASTING The *C2A* institutional arrangement rested on a local development model well accepted since the 1990s. According to this model, the public financial support to the semiconductor industry was justified by a common-sensical system of mechanical links, entailing that each euro of public subsidy directed towards *STMICROELECTRONICS* would, in return, feed the growth of the local scientific and industrial base as well as the local economy more than proportionally, through a multiplying effect. This virtuous circle metaphor describing self-reinforcing dynamics at the local scale is a part of the ‘business-as-usual’ narrative, promoting the local embeddedness of semiconductors, as the head of a local public laboratory stated:

“When one observes the situation of the Grenoble industrial base at the end of the 1980s, it was a survival situation. It was disastrous. When one observes the same situation 15 years latter, it is much favorable. If you wonder what were the reasons why it survived during this period, you’ll find a long story of about 40 years, which contributed to create a very important cluster of competences with a tight coupling between education, research and industry. Thereby, local development has been for the most part endogenous, drawing on a strong effort on research and development supported by an extremely strong and sustainable involvement of public authorities”.

However, the *C2A* breakdown introduced a rift within such a virtuous circle. Submitting the fate of the entire local scientific and industrial base to the uncertainty of semiconductor markets appeared as a mere promise, more and more difficult to honour. Opening the black box of the local development model became thus a necessity for some civil society movements – such as the *OBSERVATOIRE DES FINANCES ET DES POLITIQUES PUBLIQUES (FPPO)*⁴ – in order to explain its inconsistencies and to envision alternative ways of development. For

⁴ Finance and Public Policies Observatory, www.ofipopu.org.

the *FPPO*, the employment and tax impact studies ordered by local authorities since the middle of 1990s to legitimize public financial support to public-private R&D programs in semiconductors were not really transparent in their methodology. This local stakeholder group challenged the ideas according to which a real multiplying effect has ever existed between public subsidies and job creations, and the extent to which there was an effective return on investment in terms of tax collected:

“Local authorities saw that the streaming of economic externalities down the scientific and industrial base they were waiting for will never happened. They now explain that taxes collected are going to give some returns on public investments, but they seem to ignore that this pure financial approach doesn’t take into account all the hidden costs entailed by the localization and the offshoring of one’s company operation for the whole society”.

They concluded, along with supporting figures, that the funding of the *C2A* by public authorities, because it had been more important than the total costs of job creations as well as of local taxes supported by the *C2A* partners, was equivalent to the creation of a ‘tax haven’ for high technology developments, creating strong incentives for TNCs’ nomadic and opportunistic behaviors. The results of these empirical impact studies allowed other stakeholders, in particular the members of the small business industrial base, to look at the existing local development patterns through a critical lens. They thus called for a new organizational form for the local value chain more concerned with the outsourcing of value chain stages towards local start-ups and SMEs than with the concentration of public spending within the hands of large multinationals.

SUB-CONTROVERSY 2: C2A AS A SOURCE OF ENVIRONMENTAL DAMAGE Another source of criticism at the local scale concerned the wider societal and environmental damages attributable to the semiconductor industry. The local growth of a social movement came from anti-militarist groups, contesting the public funding of technologies of war, and ecological activists, highlighting the exploitation of natural resources as well as the large amounts of wastes produced by semiconductors, and the *C2A* in particular. The action group *PIÈCES ET MAIN D’OEUVRE (PMO)*⁵ opened, here again, the black box of the legitimacy of the local anchoring of the *C2A*:

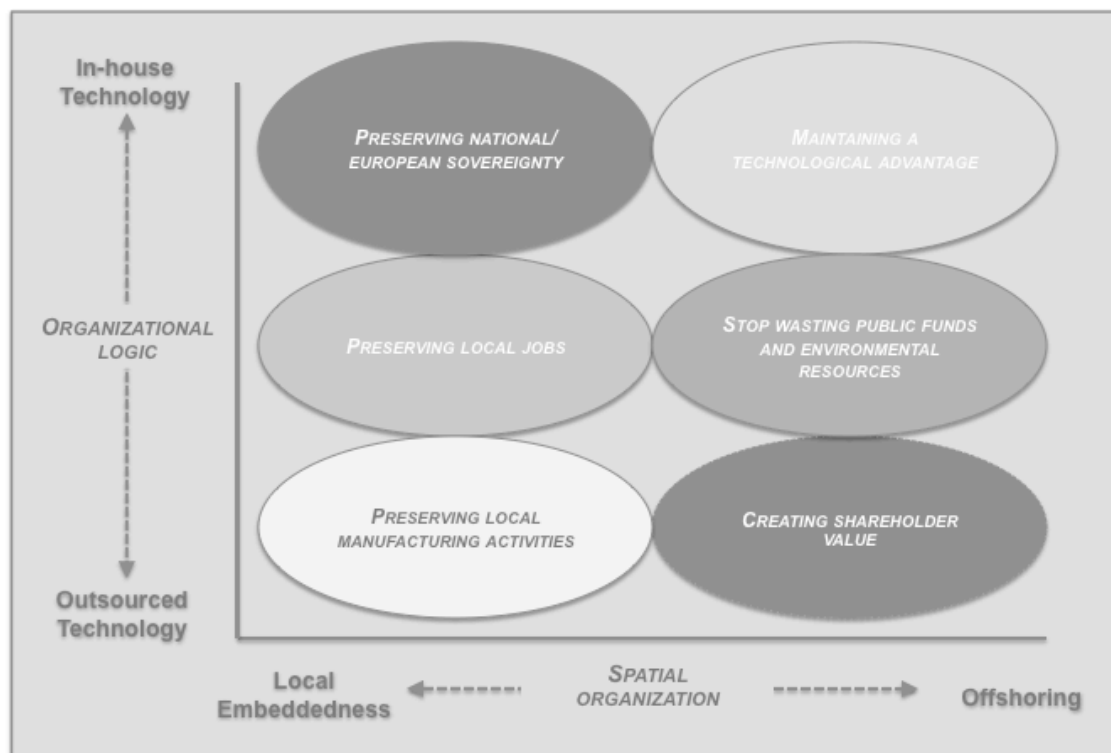
“Does the Alliance require huge quantities of water? Local authorities have doubled the waterway over 18 kms for 25 million euros. Does the cleaning of silicon wafers necessitate a continuous input of water, *i.e.* approximately 700 m³ per hour? While local citizens were willing to diminish their water consumption, local authorities have accepted to invest 150,000 euros of penalty for each hour of break. Does the Alliance need a lot of energy? The local electrical company has decided to upgrade its infrastructures to supply enough energy to its ovens ‘radical thermal processing’, functioning at

⁵ Pièces et Main d’Oeuvre [*Pieces and Workforce*], defined as a ‘*bricolage workshop oriented towards the construction of a critical thinking in Grenoble*’, <http://www.piecesetmaindoeuvre.com>.

1,000°C. The only sustainable strategy for the *CROLLES 2 ALLIANCE* in terms of social and ecological performance is its complete and definitive closure”.

According to the ‘tabula rasa’ narrative, supported by public funding considerations, small business issues and ecological activism, the only economically and socially efficient decision to be made was to end up with the *C2A*. These local stakeholder groups thus positioned themselves in opposition with the idea of a preservation of semiconductor jobs in the Grenoble area, more particularly within the realm of TNCs.

Diagram 1 – The mapping of the controversy over offshoring



Source: author.

To sum up, we have described that the offshoring decision-making process of the *C2A* was less driven by the uncontested search for economically efficient answers by firms, than the output of a public controversy involving a multiplicity of stakeholders – top and middle managers, R&D practitioners, trade unionists, heads of public laboratories, industry veterans, financial analysts, social movements activists, *etc.* – gathered around three universes of discourse (*cf. Diagram 1*) – the ‘no-alternative-to-offshoring’, the ‘business-as-usual’ and the ‘tabula rasa’ narratives, each universe gathering several discursive positions about the two sub-controversies that has emerged – aiming at framing the institutional arrangement according to which the final decision will be taken.

3.4 The Controversy Closure and the Formation of a Compromise

In September 2008, after 18 months of public disputes between the advocates of the three big narratives previously depicted, the announcement of a new agreement between *STMICROELECTRONICS* and public authorities, setting their mutual commitments for the next 5 years (2008-2012) – the ‘*NANO 2012*’ technological program – was seemingly sufficient to close the controversy over offshoring. On the one hand, *NANO 2012* came to legitimize a strategic alliance between *STMICROELECTRONICS* and the *ISDA* led by *IBM* in Fishkill (N-Y, USA), decided a few months before, allowing the former to share R&D expenditures while at the same time sustaining some of its technology developments in-house. On the other hand, the manufacturing pilot line stage of the value chain was maintained in the *C2A*’s plant, now reduced to the workforce of *STMICROELECTRONICS*, and organized on the principle of a distance-based management between Fishkill and Crolles. This movement of value chain and geographical segmentations, between process R&D and pilot manufacturing, led to the formation of a new spatial configuration for the firm. Such a shift in the ‘lab-fab’ organizational model was achieved through the establishment of a well-accepted compromise between relevant stakeholders of the firm, aiming to struggle against the idea of complete offshoring, suggested by the adoption of the fabless/foundry model in its pure form. Thus, the *NANO 2012* model could be interpreted as an hybridization between the summons to change of the ‘no-alternative-to-offshoring’ narrative and the praise for the *status quo* embodied in the ‘business-as-usual’ narrative. However, whereas not all of the *C2A*’s technological activities remained anchored locally, surprisingly, the ‘tabula rasa’ narrative did not appear to play any role in the debates surrounding the decision of offshoring to *ISDA*. It seems on the contrary to have been, to a certain extent, excluded from the locus of strategic decision-making. Before discussing, in the next section, the theoretical implications of the *C2A* case, we will now depict empirically the concrete social formations supporting the translations between logics of action, which have made such a compromise possible (*cf. Diagram 2*).

SUB-CONTROVERSY 1: IN-HOUSE VS. OUTSOURCED TECHNOLOGY DEVELOPMENTS After the announcement of *NXP* and *FREESCALE* withdrawals, local authorities were the first to worry about the potential detrimental effects of the fabless/foundry model. According to them, the offshoring of manufacturing operations from the Grenoble area would indeed trigger a ‘vicious circle’, threatening first of all the local supplier base, then the locally grounded scientific partnerships, and finally, the whole ecosystem surrounding the *C2A* (start-ups, SMEs, public laboratories, *etc.*). As a consequence, the Deputies and Mayors of Grenoble and

Crolles decided to warn the French government about the industrial policy issues implied by the *C2A* breakdown, as the head of one local authority argued:

“[*Deputy and Mayor of Crolles*] and [*Deputy and Mayor of Grenoble*] took some initiatives to start strategic negotiations in order to be involved and to have a decisive influence in the final decision-making process. They were the most concerned by the implications of this decision for local economic development. We were very worried about the way things could have turned, in spite of the strong local ecosystem, the strong local supplier base... We have had the feeling that if the engine of innovation was not continually fed, the whole ecosystem could be threatened. [*Deputy and Mayor of Crolles*] were very active to mobilize the Government to be able to weigh within the strategic negotiations with *STMICROELECTRONICS*’ top managers”.

Local authorities thus called for a state intervention in order to be able, inasmuch as French state still held a share of the firm’s capital, to reach *STMICROELECTRONICS*’ top managers and to counterbalance the shareholder value logics of action promoted by financial markets analysts. In association with the French Ministry of Economy, they pushed for an extension of the *C2A*’s operations by *STMICROELECTRONICS*, in line with the ‘business-as-usual’ narrative, giving guarantees about their future financial involvement. It was nevertheless assumed from the beginning of the negotiations, that this public funding was submitted to the abandonment of the project of complete outsourcing of process R&D to Asian foundries, as one Vice-President of *STMICROELECTRONICS* confirmed:

“We couldn’t forget that one of our shareholders was the French state. He used to express his opinion regardless he was asked to do so, even if it is obvious that he couldn’t impose his will. This is true that for the French Government, if we have to cooperate with industry partners, we know that it is better to so towards the West than towards the East! They’d rather prefer an American than a Japanese, an American than a Korean, and if tomorrow there were Chinese partners available it would be worst. Such political influence invited us to look for American partners. I was safer. There is a strong tradition of national R&D protection by the state in France”.

The public funding argument allowed for a compromise at the crossroads between the technology- and the finance-based logics of action. On the one hand, with 72% of public float, *STMICROELECTRONICS*’ top managers had to preserve the firm from an hostile takeover from private equity funds. Maintaining the firm’s shares at a high price on the stock exchange might explain their strong commitment towards the financialization of the corporate strategy. In this context, the withdrawal of *NXP* and *FREESCALE*, because it obliged *STMICROELECTRONICS* to support alone the capital expenditures of the *C2A*’s infrastructures, impacted negatively the financial forecasts of the firm. Thereby, public subsidies could have, in the short run, contributed to support the 62% of annual capital expenditures associated with the *C2A*’s plant and left aside by *NXP* and *FREESCALE*. Accordingly, the hypothesis of extending the operations of the *C2A* for the next 5 years became justified as regards shareholder value considerations, and thus, seemed to convey the finance-based logics of action and the ‘business-as-usual’ narrative into line with each other. Thus, the hybridization

process at stake consisted for local authorities in demonstrating the relevance of the existing organizational form – the ‘lab-fab’ model of the *C2A* – in order to enact the performance criteria of the new logics of action. We will conclude in the next paragraph that, in the end, such an hybridized organizational model, while it sustained the local embeddedness of the firm, contributed to the offshoring of value chain stages undertaken in the Grenoble area for more than 30 years, and therefore, transformed substantially the ‘lab-fab’ organizational model.

SUB-CONTROVERSY 2: LOCAL EMBEDDEDNESS VS. OFFSHORING The *NANO 2012* program led to the emergence of a global innovation network for the development of process R&D whereas such activities were previously co-located in the ‘lab-fab’ model of the *C2A*. Once the idea of extending the *C2A*’s plant operations established, another dispute remained about the type of ‘operation’ that could be carried on in Crolles, in other words, the concrete position of the *NANO 2012* program within the now global networked organization of *STMICROELECTRONICS*. Whereas top managers intents was to limit the mission of the site to the pilot manufacturing of technologies developed within *IDSa*, in-house R&D practitioners were calling for a local embeddedness of process R&D. The involvement of the heads of local laboratories, in particular the *LETI*, in the offshoring decision-making was of paramount importance in the spatial configuration adopted, inasmuch as they stood as the guarantors of the scientific and technological contents for each side within the negotiation process. The agreement between *IBM*, *STMICROELECTRONICS* and the *LETI*, clearly demonstrated that the long standing ties between the local laboratory and the firm played an important role in its decision of offshoring to Fishkill the research teams previously dedicated to the *C2A*. Facing the threat of loosing an important financial partnership with the semiconductor industry top-tiers, as well as an access to the most advanced scientific developments in nanotechnologies, they positioned the public laboratory as a facilitator for global technology transfers between Fishkill and Crolles, thereby, providing the human skills and the scientific devices necessary to organize the innovation process on a global scale.

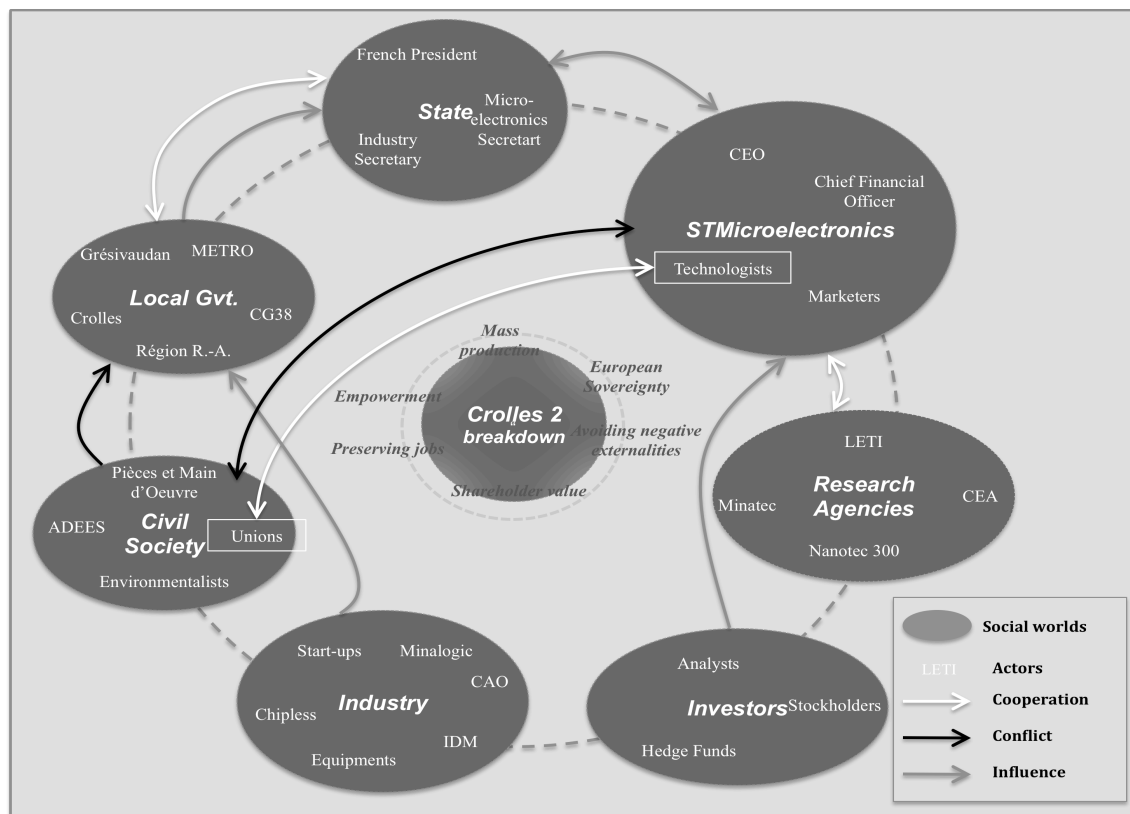
It is noticeable that the proposition of industry veteran Joseph Borel, consisting in clustering in Crolles the process R&D as well as the silicon foundry of the three lead European semiconductor manufacturers, has never been taken into account. Despite his own efforts to activate the social networks he had within *STMICROELECTRONICS* and the *LETI*, he never managed to give some legitimacy to the business case he had elaborated:

“It has been a total ignorance. I told us I have had an idea, that I had a document... The answer was straightforward, they told me: ‘what do you want Borel? You are no more a member of

STMICROELECTRONICS, it is not your business anymore. You don't know nothing about what you are talking about! Politicians didn't help me much. I tried to give the document to the French President when he was in charge of the European policy but it never worked”.

The publication of his report in the specialized press would not have more positive effect. It is as if the rhetoric of ‘globalization under control’ has reached an hegemonic-kind of consensus. The European technological sovereignty he drew on appeared as an old-fashioned struggle in a context where local industries and laboratories tried to decipher how to benefit from their insertion within global value chains. In the same line of inquiry, the public funding supporting the *NANO 2012* technological program has been decided outside of the realm of democratic councils. The contestations coming from political parties and social movements supportive of the ‘tabula rasa’ narrative have been systematically excluded from the locus of decision-making. As a consequence, whereas the objectives of job creation of *NANO 2012* decreased in comparison with the *C2A* (– 45%), at the same time, the subsidies provided by local and national authorities increased significantly, *i.e.* respectively + 60% and + 115 %. It thus appeared that the more radical the alternative to offshoring the more confined decision-making within the interests of a small elite, gathering actors embedded within local, as well as national scales.

Diagram 2 – In search for a compromise



Source: author.

To sum up, the coalition of interests gathering the initiatives of local authorities, French government, *STMICROELECTRONICS*' R&D practitioners and local managers as well as heads of local public laboratories to establish the *NANO 2012* agreement, allowed the closure of the controversy over offshoring. Without such an equivalence chain between the will to preserve local jobs, the *C2A*'s manufacturing facilities and a local technological advantage, it could have been possible that the pure adoption of the finance-based logics action would have led to a very different *scenario*. Nevertheless, the compromise giving birth to the *NANO 2012* technological program did not come to challenge such logics of action. Whereas this coalition of interest embodied a concrete movement of resistance against the 'no-alternative-to-offshoring' narrative, it is all the more true that it has at the same time contributed to adapt local strategies to the performance criteria it draws on, without challenging it. The *C2A* case epilogue suggests that an analysis of institutional change taking into account spatial configuration as well as organizational form and logics of action suggests a more complex reading of what can be considered as 'change' or 'resistance'. In the next section, we will discuss theoretically the notion of hybridization to decipher the interplay between power and contestation at works in the politics of offshoring.

4. Discussion: the Politics of Offshoring and Institutional Change

A political and interpretive stance on offshoring processes illustrates how, independently from isomorphic pressures, individuals subordinate their commitment to organizational practices to historically and locally grounded normative assumptions, *i.e.* logics of action (Barley and Tolbert, 1997). The legitimization of such logics within organizations is constitutive of what Spicer and Sewell (2010) call 'organizational logics'. The institutional logics approach contends that organizational logics are composite assemblages emerging from contradictions and conflicts between field-level logics (Purdy and Gray, 2009; Seo and Creed, 2002). Thereby, they contribute to reinforce, or threaten, prevailing institutional logics, and thus, trigger institutional stabilization, or change. More recent institutional accounts drawing on the translation framework assume, however, that organizational logics are the output of hybridizations between a multiplicity of logics, each of them being locally grounded (Frenkel, 2008; Frenkel, 2005; Frenkel and Shenhav, 2003). The assumption of local embeddedness indicates that instituted field-level or meso-level logics have necessarily to be translated in order to adapt to local contingencies and existing logics of action (Buck and Shahrim, 2005). According to the translation approach, hybridization occurs at the end of a controversy-based

process. Controversy depicts a situation of disruption in prevailing organizational and institutional logics and the related struggle between a large set of stakeholders aiming to define a well-accepted compromise around a new organizational logics (Patriotta *et al.*, 2011). Our analysis through the lens of the translation framework of the controversy over offshoring has the potential to make several contributions to neo-institutional studies on TNCs. First, our results highlight that local resistance to offshoring draws on the capacity of local actors to re-define discursively their own logics of action, instead of rejecting all sorts of transformations, in order to legitimate an organizational logics that ensure local embeddedness, as regards the dominant institutional logics of their organizational field. However, far from subordinating existing organizational forms to global industry standards, these discursive strategies relate to a process of hybridization which could be subsumed under the notion of symbolic bricolage, stating that multiple, brand new and old-fashioned logics, are strongly intertwined in the process of institutional change. Second, our fieldwork results posit that the constitution of a coalition of interests, while it promotes the local stickiness of the firm's operations, forbid at the same time the access of less connected and more radical stakeholder groups to locus of strategic decision-making. These empirical results will be discussed in the next section according to relevant neo-institutional readings of institutional change.

4.1 Institutional Change as Symbolic Bricolage

The *C2A* breakdown results from a disruption in the well-established technology-based organizational logics legitimizing at the local (R&D practitioners, middle managers, heads of public laboratories, trade unionists, public authorities), national (French government) as well as the global scale (top managers, shareholders, industry-level standards), the 'lab-fab' organizational form. Such an institutionalization process was triggered by community-based practices inherited from 30 years of joint scientific and industrial developments of semiconductors in the Grenoble area. The sensemaking constructs – *i.e.* logics of action – which have emerged from day-to-day technological and commercial trade-offs and struggles between local practitioners, gave rise to an organizational logics setting up the development of new technologies for mass production as the core value of corporate strategy. The geographical clustering of technological operations in the Grenoble area was thus justified as the best way to enact these strategic values within the organization and to achieve the related performance objectives. The following table (*cf. Table 1*) highlights to what extent the finance-based logics of action embodied a significant breakthrough in the previously institutionalized logics.

Table 1 – Struggling for organizational/institutional legitimacy: technology- vs. finance-based logics

<i>Logics of action</i>	Technology-based logics	Finance-based logics
<i>Value chain focus</i>	ICs mass production	IC Design
<i>Strategic values</i>	Benefit from the growth of the IC world market	Create shareholder value from technological portfolio optimization
<i>Performance criteria</i>	Time-to-market, production yield, production costs	Revenue per employee, shareholder value added, earnings per share
<i>Spatial imaginary</i>	Local technological cluster (<i>lab-fab</i>)	Global innovation network (<i>fabless/foundry model</i>)

Source: author.

We decided in this paper not to consider the finance-based logics as an impersonal and abstract institutional logics coming from an undefined outside, but on the contrary, to trace concretely how it became so pervasive at the local scale, following Greenwood *et al.* (2010: 535-536) statement about “*how community identities form (...) mechanisms by which norms and expectations are learned and diffused*”. The C2A case epilogue highlights that whereas the finance-based logics has been first established by financial analysts, semiconductor industry experts, *STMICROELECTRONICS*’ stockholders and top managers outside of the local realm of Grenoble, its diffusion has nevertheless been promoted, more or less directly, by local actors such as public authorities, middle managers, R&D practitioners, and heads of public laboratories. From a theoretical standpoint, this result appears to challenge the view according to which local communities would be more incline to resist to external pressures when the fate of the “*geographical community*” and of its autonomy is concerned (Greenwood *et al.*, 2010; Lounsbury, 2007; Marquis and Lounsbury, 2007). Our fieldwork suggests, however, that the significant transformations in existing practices local stakeholder groups decided to promote, in the face of homogenizing tendencies towards the fabless-foundry model, were primarily motivated by their will to embed locally firm’s operations, and therefore, to reject the finance-based logics in its pure form. As a consequence, in line with neo-institutional studies aiming at going beyond the adoption vs. rejection debate to account for institutional change in the context of TNCs (Frenkel, 2008; Pedersen and Dobbin, 2006; Spicer, 2006; Frenkel et Shenhav, 2003; Stark, 1996), we suggest a more refined understanding of how people might be able to promote at the same time *status quo* and change. The hybridization between technology- and finance-based logics, described to explain the local anchoring of technological programs through the *NANO 2012* agreement, has several points in common with what Spicer and Sewell (2010: 935) call “*discursive bricolage*”. In

line with the levi-straussian's "*intellectual bricolage*" (Levi-Strauss, 1962: 26), it means that each new organizational logic builds on previously accepted logics of action in order to be considered legitimate by the larger set of stakeholders. According to this approach, a discursive strategy entailing a 'tabula rasa' of past and present logics of action would annihilate the chance to form an equivalence chain with individuals and groups committed to 'business-as-usual' decisions. In the *C2A* case, 'discursive bricolage' took the form of a distributed process inasmuch as both technology- and finance-based logics' representatives have promoted it. It triggered the closure of the controversy over offshoring by making stakeholders agree on a common compromise integrating discourses about 'sustaining technological advantage' and 'preserving national/European sovereignty' – inherited from the 1970s-1980s' organizational logics –, discourses about 'preserving local jobs and manufacturing activities' – inherited from the 1990s and the early 2000s' organizational logics –, while at the same time, articulating these logics with the new performance criteria entailed by the objectives of shareholder value creation.

Following Zeitlin and Herrigel (2000) the compromise leading to the *NANO 2012* agreement should be interpreted as a form of resistance. The capacity of local stakeholders to promote hybridized, or alternative organizational models, in the face of external homogenizing pressures, would thus create a space for contestation in-between conformity and rejection (Frenkel, 2008). If our fieldwork reveals that such movements of resistance are involved in the strategic decision process of TNCs, and thus influence their strategic decision-making, we defend here the idea that hybridization-as-resistance should take into account the more or less deliberative character of the compromise-making process.

4.2 Local Resistance as New Authoritarianism

The concrete social formations that supported the compromise around the *NANO 2012* agreement, gave rise to a coalition of interests gathering the initiatives of local authorities, French government, *STMICROELECTRONICS*' R&D practitioners and local managers as well as heads of local public laboratories. This result suggests that the 'discursive bricolage', previously depicted, rests on relational arrangement consistent with the translation framework, arguing that the legitimacy of one particular discourse does not depend on its intrinsic degree of truth, but results from its broad diffusion through a network of heterogeneous actors, "*much like a commercial circuit*" (Latour, 1983). It thus challenges the theoretical dichotomy established by much of neo-institutional studies, between "*instrumental movements*" such as bureaucratic organizations, and "*identity movements*" of resistance, such

as social movements, suggesting that it could be more relevant to explore how both of them interact in the establishment of a compromise around a new logic of action (Rao *et al.*, 2003: 796). Our fieldwork highlights that the local coalition of interests observed embodies an ‘identity-based’ informal network linking and influencing the different locus of strategic decision-making of ‘bureaucratic organizations’, such as the French state, local authorities, *STMICROELECTRONICS* and public laboratories. This result matches with a claim established in recent translation studies, that the interactions between individuals and groups embedded within local and national scales are at the forefront of hybridization processes of institutional logics embedded within the global scale, as Frenkel (2005: 295) argues: “*institutional arrangements at the local level, and in particular power relations at the state level, influence not only the adoption or rejection of models, ideologies and practices, but also, and primarily, their translation, the social interpretation attached to them and the social order that they construct in the adopting society*”.

The controversy closure reveals, however, that such a coalition of interests and the ‘discursive bricolage’ it draws on, does not encompass all the discourses formulated publicly during the controversy. Beyond the idea of controversy closure, it is all the more necessary to think to local resistance issues in terms of controversy closeness, that is, the process of inclusion/exclusion from the locus of strategic decision-making of some stakeholder groups, in particular the more radical ones. The compromise established by the local coalition could thus be interpreted as a somehow “*passive revolution*”, that Levy and Egan (2003: 823) describe as a mere defense of particular interests. Whereas the supporters of the ‘tabula rasa’ hypothesis tried to contest, within the deliberative councils of local authorities, the case for mutual benefits arising from the ‘business-as-usual’ narrative, the making of the compromise surrounding *NANO 2012* has been decided outside of such democratic terrain. Thus, a political stance on offshoring decision-making highlights that the threats of rescaling of TNCs’ operations trigger, at the local scale, the emergence of movements of resistance trying to avoid offshoring, while at the same time, disconnect the negotiations about the purpose of the very resistance from the deliberative councils it should depend on. This result echoes prior findings in critical geography studies, highlighting the diffusion of a “*new authoritarianism*” (Swyngedouw, 1996: 1499) within local strategies of adaptation to globalization. It emphasizes a point that is not much discussed in the abundant literature on institutional change, that is, the tendency to domination at work within resistance movements. Embracing this issue would require to grasp the kind of permanence that allow local coalitions of interests to sustain their legitimacy and power over the long range. Further researches on the

French semiconductor industry could thus investigate the hypothesis according to which transformations within organizational and institutional logics resulted more from the will to sustain the social position of coalition's members rather than the uninterested quest for local development. Moreover, an important limitation of this paper is that it does not take into account the material realm of organizational practices. The transformation of logics of action could have entailed, however, important consequences on management systems, and thus, both on intermediary objects supporting translations as well as on micro-politics of resistance intended to preserve existing practices. These elements suggest important avenues for further research drawing on the empirical material collected during our fieldwork, and therefore, allowing us to engage more deeply with the theorization of the institutional embeddedness of TNCs.

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