INTRA-FIRM COMPETITION AND CHARTER EVOLUTION
IN THE MULTI-BUSINESS FIRM

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Abstract. This paper examines the phenomenon of *intra-firm competition*, defined as the extent of overlap between the charters of two or more business units in a single organization. We identify three structural design parameters (charter definition, charter overlap, inter-unit interdependency) that collectively define the level of intra-firm competition in the organization. These are used to describe the different forms that intra-firm competition takes. We then identify four environmental contingencies (environmental equivocality, industry maturity, basis of competition in the industry, market heterogeneity) that predict the conditions under which intra-firm competition transpires. Implications for organization design and management practice are discussed.
The purpose of this paper is to put forward a theoretical framework and research agenda to explain the phenomenon of *intra-firm competition*, by which we mean the often-temporary existence of overlapping activities within the boundaries of the multi-business firm. For example, there may be two business units producing competing products, two product development groups trying to solve the same technological problem, or two distribution channels serving the same customer group. These situations are commonly seen in multi-business firms, but they are rarely viewed as an explicit component of organisation design. Indeed, in our experience, intra-firm competition is either denied altogether, or it is seen as an unintended by-product of the resource allocation process that should be eliminated as quickly as possible.

The academic literature, in turn, offers limited insight into the phenomenon of intra-firm competition, perhaps because the creation of duplicate activities within the boundaries of the firm is traditionally seen as antithetical to the traditional logic of resource allocation in organisations (Williamson, 1975; 1991). Recently, however, there have been sporadic references to the positive sides of intra-firm competition. For example, Eisenhardt and Galunic (2000: 96) argue that "coevolving companies let collaboration and competition coexist… while senior managers don't actively seek out competition, they don't discourage it either". Similarly, Nadler and Tushman (1999) argue that one of the key strategic imperatives for large firms today is how to manage "intra-enterprise cannibalism… the need to develop and support new strategies … that might eventually dry up existing revenue streams". While little further discussion is offered as to how
intra-firm competition might be managed, these and other recent papers suggest that the phenomenon is worth consideration, even if received wisdom gives it little support.

Our approach in this paper is to analyse intra-firm competition as an organization design issue. In the tradition of contingency theory (Galbraith, 1973; Lawrence and Lorsch, 1967), we will argue that under a specific set of environmental conditions it is rational for top management to design the organization in such a way that intra-firm competition is encouraged. We put forward a novel set of design variables that specify the nature of overlap between adjacent business units, and we then specify the contingencies under which we would expect them to vary. This approach builds explicitly on the emerging literature on architectural innovation in dynamic environments (Birkinshaw, 2001; Brown and Eisenhardt, 1999; Galunic and Eisenhardt, 2001; Kalnins, 2004; Siggelkow, 2002), but it also goes a step further by attempting to formalise the relationship between environmental factors and particular attributes of the organizational context.

The paper is organized as follows. The first section provides a brief review of the existing literature and defines the parameters of our field of inquiry. The second section develops a theoretical model of the multi-business organization using the business unit’s charter as the core concept. The third section examines the economic logic for intra-firm competition (or rather the two different logics), and develops a set of propositions linking environmental contingencies to attributes of the organization design. The final section provides a discussion of insights and issues arising from the work, and offers suggestions for future research.

LITERATURE REVIEW AND DELINEATION OF STUDY BOUNDARIES
While there is no body of literature per se on intra-firm competition, it is possible to pull together insights from a number of different fields that collectively provide us with considerable insights into the phenomenon. Four bodies of research, in particular, appear to be relevant.

First, there is an emerging body of literature concerned with internal organization issues in dynamic markets. Most important here is the work of Galunic and Eisenhardt (1996; 2001) who show how the divisions in Omni (the disguised name of a Fortune 100 corporation) frequently end up competing with one another for product “charters” as new technology and market opportunities arise. Also within this stream are a number of other studies concerned with the internal dynamics of organization change (Brown and Eisenhardt, 1999; Nadler and Tushman, 1999; Sanchez and Mahoney, 1996) and some work on the competitive dynamics between foreign subsidiaries of multinational corporations (Birkinshaw and Hood, 1998; Crookell, 1986; Phelps and Fuller, 1998). This stream of research views intra-firm competition as part of an ongoing process of adjustment and change inside large organizations that is driven by both economic and social imperatives (Galunic and Eisenhardt, 2001: 1229). The process is driven primarily by exogenous factors (changes in the market, changes in technology) but also by an internal organization structure that encourages autonomous strategic behaviour by business units (Burgelman, 1983; Orton and Weick, 1990).

Second, the burgeoning literature on disruptive technologies and strategic innovation argues that for a new business to survive within a large organization it should be set up in a separate unit in competition with existing units (Christensen, 1997; Drucker, 1985;
Examples of this phenomenon include IBM’s PC development group in Florida (Roberts and Berry, 1985; Teece, 1987), Donnelley’s digital printing division (Garvin, 1996), and Barnes and Noble.com. These are best interpreted as specific examples of the broader need for organizations to adapt to dynamic markets. Such units are typically a response to a specific technological threat (e.g. the Internet), and they are managed through a complex process that involves both competition and collaboration with the existing business units. While the evidence is mostly anecdotal, these separate units are sometimes folded back into the existing lines of business (Barnes and Noble.com), sometimes kept separate (IBM’s PC business), and sometimes sold off altogether (e.g. the no-frills airline Go was sold by British Airways).

Third, there is a relatively large body of research concerned with the manifestations of intra-firm competition in the marketplace, in terms of product cannibalisation, optimum levels of product variety, and timing of new product entries. Well-known examples of this form of intra-firm competition include Procter and Gamble with competing brands of soap, toothpaste and detergent (Peters and Waterman, 1982; Solomon and Hymonitz, 1987); GM with five or more automobile brands; and WPP, the parent company of advertising companies Ogilvy and Mather, Young and Rubicam and J.Walter Thompson (Bower, 1996). The traditional logic for this form of intra-firm competition is market segmentation (Sorenson, 2000). In order to cater to the full scope of customer needs, the firm offers multiple different products, each one targeting a different segment of the marketplace. However, rather than run the risk of leaving certain customers unserved, the firm would prefer to allow its products to overlap with, or cannibalise, one another (Mason and Milne, 1994; Moorthy and Png, 1992).
There are a number of strands of research within this literature. One examines the optimal level of product variety using modelling techniques (Green and Krieger, 1985; Kekre and Srinivasan, 1990; Lancaster, 1979). Another focuses on the timing of entry and the positioning of the new product vis-à-vis existing ones (Conner, 1988; Ghemawat, 1991). A third is particularly concerned with product variety and cannibalisation under dynamic market conditions (Nault and Vandenbosch, 1996; Sorenson, 2000). While the general theme of this literature is that cannibalisation should be minimised where possible, there is also evidence that cannibalisation is more common under conditions of market turbulence. For example Nault and Vandenbosch (1996: 342) concluded that "the severity of competition, rather than the costs… are what forces firms to cannibalize at a loss", while Sorenson (2000: 577) showed that "product variety becomes less valuable as the total number of products on the market increases, but it increases in value as uncertainty makes the accurate prediction of demand difficult". It is also worth observing that this form of intra-firm competition often endures even in conditions of relative market stability, as the examples of P&G, Ford and WPP show. While market segmentation is clearly part of the reason for this, in our estimation it does not provide a completely satisfactory explanation for the phenomenon, a point we return to later.

Fourth, there is a body of research concerned with the innovation process in R&D organizations (Kidder, 1981; Peters and Waterman, 1982; Quinn, 1988; Wheelwright and Clark, 1992; Nonaka and Takeuchi, 1995; Spender and Kessler, 1995). It includes reference to skunkworks projects that often overlap with the officially sanctioned development work (Kidder, 1981; Peters and Waterman, 1982); competing development teams working on the same technological problem for a limited period of time (Quinn, 1988; Hayes, Wheelwright, and Clark, 1988); and an unstructured process of
experimentation in R&D laboratories in which duplication is an accepted part of the process of creativity and problem solving (Hargadon and Sutton, 2000). This research echoes the principles discussed above, in terms of the development of competing options in the face of technological uncertainty. However, it is different in one important way, namely that the output from such a process is a technology or intermediate product, rather than an end product. This means that the “judge” of the competing options is an internal decision-making body, rather than the marketplace; it also therefore means that the individuals managing the competing units are being judged on very specific criteria, rather than on market acceptance. For these reasons, we see internal competition within an R&D unit as a somewhat different process, even though many features are similar.

Definitions and Delimitations

This brief review serves two purposes: it illustrates the breadth of literature that has acknowledged the importance of intra-firm competition, and it helps us to establish some definitions and delimitations that will guide the theory development in the rest of this paper. Four points should be made.

First, the level of analysis under investigation is the organizational unit (also called a division, a subsidiary, or a business unit). We are not concerned with competition between firms or firm groupings (Marshall, 1925; Hatten & Schendel, 1977; Porter, 1980; Yoffie & Rangan, 1995), nor are we interested in competition between individuals in an organization who are seeking to enhance their personal status and performance (Eisenhardt and Bourgeois, 1988, Schwenk, 1989; Pfeffer and Sutton, 1999; Puffer, 1999). Rather, we are concerned with those units that lie between the organization and
individual levels of analysis. Additionally, and this is primarily for the sake of analytical expediency, we restrict our discussion to *organizational units that have external customers*. This means that we give no further attention to competition between product development teams in R&D labs. This is an important phenomenon, to be sure, but it raises several additional issues that are beyond the scope of the current paper. We briefly consider some of these issues in the final section.

Second, the *nature of competition between units* needs to be clarified. One established line of thinking here is that units compete with one another for financial, human and physical resources, to the extent that such resources are in scarce supply and they must therefore be allocated to the most worthwhile opportunities (Arrow, 1959; March and Simon, 1958; Williamson, 1975; Eccles, 1985; Hennart, 1993; Hamel, 1999). Our concern here is with a more specific form of competition in which two or more units offer products that are to some degree substitutes for one another in the marketplace. As such, the competition actually takes place on two levels. At the *product-market* level, competition manifests itself in terms of the competing offerings that the customer chooses between, and in the level of cannibalisation that transpires. At the *intra-organizational* level, competition manifests itself in terms of the social and political processes such as lobbying, negotiating and initiative-taking, that help to shape a unit’s charter (Galunic and Eisenhardt, 1996; Burgelman, 1983). Competition at the product-market level is visible to the customer, competition at the intra-organizational level is not.

The primary focus here is on the latter - intra-firm competition at the *intra-organizational* level. The reason for this is simply that the paper is motivated by an interest in the
organization design issues associated with intra-firm competition, which self-evidently apply at the intra-organizational level rather than at the product market level. Product-market level phenomena, such as the amount of product variety and the level of cannibalisation, are in fact better understood as manifestations of the underlying (and invisible to the customer) competition between organization units, rather than as evidence of intra-firm competition per se. Or to state it slightly differently, the appropriate causal logic should be to make sense of the design of the organization (in terms of the rules of engagement, the degrees of freedom, the interaction between units), and then to see the nature of competition in the product market as a consequence of that chosen design. Other factors will also play their part (such as the competitive offerings from third parties) but we can expect to see a strong, if imperfect, correlation between the magnitude of intra-firm competition at the intra-organization and product-market levels.

Third, it is important to be clear on whether intra-firm competition is a state or a process. It can potentially refer both to the existence of overlapping units (state) as well as to the evolving nature of interaction between those units (process). For the purposes of this paper, which is focused on organization design issues, it is convenient to think of intra-firm competition primarily as a state variable – as a deliberate facet of organization design that engenders certain behaviours among unit managers, and that results in certain visible manifestations (such as cannibalisation). There are important processes involved in creating such a design, and these will be given due consideration towards the end of the paper, but the starting point is to model intra-firm competition in state form.

Fourth, intra-firm competition can have both positive and negative consequences for the organization. The focus in this paper is primarily on the positive; that is on identifying
the environmental conditions under which intra-firm competition can be seen as a good thing for organizational effectiveness. But it is self-evident that intra-firm competition can also be destructive, in terms of the duplication and waste of resources, and its capacity for engendering non-cooperative behaviour among organizational units. In this regard, intra-firm competition can be seen as a particular form of organization slack, which is widely recognised as having both positive and negative aspects (Bourgeois, 1981; Cyert and March, 1963; Nohria and Gulati, 1996; Sharfman, Wolf, Chase, and Tansik, 1988).

In sum, we define intra-firm competition as the extent of overlap between the charters of two or more business units in a single organization (i.e. it is a continuous variable). This paper will develop a theoretical model of intra-firm competition, and it will then attempt to shed light on the environmental contingencies under which it occurs, and the processes by which it is managed. And to reinforce an earlier point, our purpose here is not so much to identify and explain the visible manifestations of intra-firm competition (such as product cannibalisation); rather, it is about designing the organization in such a way that individual unit managers can choose to compete with sister units, or not, as they deem fit.

THEORETICAL DEVELOPMENT: A MODEL OF INTRA-FIRM COMPETITION

To move from a broad concept of what intra-firm competition is to a set of falsifiable propositions requires that we develop a detailed (if somewhat stylised) model of the phenomenon. To do this, we build on Galunic and Eisenhardt,’s (1996; 2001) concept of
the organization unit’s charter (defined below) to identify a set of organization-design variables that capture the multi-faceted and complex nature of intra-firm competition.

Elements of a model

Our starting point is the concept of the organization unit’s charter, which is defined by Galunic and Eisenhardt (1996) as the business –or elements of the business - in which a division/unit actively participates, and for which it is responsible within the corporation. The charter can be understood in purely technical terms as a definition of the technologies, products, and/or customer groups that the unit is oriented towards, but it also has an important institutional component, as a shared understanding of the organizational domain that the unit has staked out for itself (cf. Levine and White, 1971; Thompson, 1967). In a stable business environment charters evoke little discussion, because there is no ambiguity in the meaning of the “iron ore” division in a mining company or the “coffee and tea” business unit in a consumer goods company. But in a more turbulent environment where new technologies and product categories are emerging all the time, charter definitions are highly contentious, because they shape the types of growth opportunities that an organization unit is entitled to pursue. As Galunic and Eisenhardt (2001) show in Omni, charters often overlap and two or more units will end up contesting their right to pursue a particular opportunity. As such, the definition of the unit’s charter (and the acceptance of it by others) becomes a critical factor in the overall structuring of the organization.

Our conceptualisation of the unit’s charter attempts to acknowledge some of the points raised in this discussion (see figure 1). There are three elements - the product markets
served, the capabilities held by the unit, and the definition of the charter as communicated to (and shared with) the rest of the organization. Product markets served refers to the current portfolio of products and customers. Capabilities refers to the things that the unit currently does well in comparison to other units in the organization – it includes specific technologies held by the unit as well as knowledge of particular customers, and experience with certain processes (Amit and Schoemaker, 1993; Eisenhardt and Martin, 2000). Charter definition is inherently more ambiguous, because it does not necessarily reflect the actual product markets or capabilities of the unit, and nor does it necessarily mention both product markets and capabilities. For example, a unit might claim the “European medical devices” charter even if it only has operations in five countries, because it believes it is better positioned than any other unit to roll out its products into the other European countries. Moreover, the European medical devices charter says nothing about capabilities – it only mentions products and markets. Similarly, a unit might state its charter as “broadband wireless services” without having all the necessary technologies to deliver these services, and without any clarification regarding the customers to which these services will be sold. Both are as much statements of intent as they are descriptions of the current activities of the unit. As such, they are the intra-firm analogue of a company’s strategic intent (Hamel and Prahalad, 1987) or vision statement.

The key point about figure 1 is that the greater the alignment between the three elements (product markets served, capabilities, stated charter), the more likely it is that other units understand and accept the definition of the focal unit’s charter, and the more defensible and stable the boundaries of the unit are likely to be. Conversely, in an industry with rapidly-evolving technologies and markets, the three elements are always likely to be out
of alignment to some degree, and this is where charter definition becomes a social process of negotiation and competition. By way of example, five separate business units in Ericsson claimed the charter for screenphones in 1999 because they all saw it as being aligned with either their existing product markets, their existing capabilities, or their stated charter. These competing claims were readily resolved, but the example illustrates how fluid charter boundaries can be in a rapidly changing environment. Another example is described by Birkinshaw and Hood (1998), in terms of the mismatches between capabilities and product markets served by foreign subsidiaries, and the effect this has on the subsidiary’s growth and evolution.

Three key constructs

Having put forward a stylised model of the organization unit, we can now examine the relationship between two such adjacent units, and consider the extent to which they are, or might be, competing with one another (see figure two). On the basis of insights from the existing literature as well as our own field work, we propose that three parameters comprehensively describe the relationship between the units.

1. Charter overlap. This is the degree to which adjacent units in the organization occupy the same charter space as the focal unit (Felsenthal, 1980; Lerner, 1987), and it is essentially the definitional construct for the phenomenon of intra-firm competition.
Because charters can be defined in either product-market or capability terms, or both, it follows that charter overlap can potentially be measured on both these dimensions. However, for the purposes of this paper we are focusing on units that have external customers, so the relevant approach is to assess charter overlap in product-market terms – as the percentage of one unit’s product-market space that other units in the organization are competing for (cf. Mason and Milne, 1994). To offer a real-world example, Ericsson’s GSM network division has approximately 50% overlap with other divisions, meaning that around half of its customers (the mobile operators) have other Ericsson products as close substitutes. In contrast, Unilever’s ice cream division has charter overlap of approximately zero – there are no other business units in Unilever selling ice cream products.

2. Charter definition. This refers to how clearly the charter boundary is defined, on a scale from high (sharply defined) to low (vaguely defined, fluid). In terms of the discussion of figure 1, the greater the level of alignment between the three elements, the more sharply defined the unit’s charter. More practically, charter definition could be operationalised in terms of the level of agreement between unit managers, their bosses, and their peers as to what the charter is. Another indicator of charter definition is the degrees of freedom the unit managers have to move beyond it. So to reconsider the earlier examples, the “European medical devices” charter is probably fairly sharp, in that there is likely to be considerable agreement as to what “European” and “medical devices” mean in the organization, and that special permission would probably be needed to transgress its boundaries, e.g. for the unit to enter Asia or Africa. In contrast the “broadband wireless services” charter is more fluid, because it probably means different
things to different individuals in the organization, and there may be several organization units that believe they are in a position to move into this space\textsuperscript{3}.

3. Inter-unit interdependence. Unlike the first two variables, this is a standard construct taken from organization theory (Thompson, 1967)\textsuperscript{4}. Interdependence refers to the extent to which the focal unit is dependent on resources and capabilities controlled by other units. When interdependence is low, the unit is essentially autonomous, and able to perform its activities with little or no interaction with other units. When interdependence is high, the unit has to either share with or transfer resources from other units in order to function effectively. This construct can be operationalised in terms of the actual levels of shared resources with other units, or in terms of the flows of information and levels of communication across units. The reason inter-unit interdependence is important is that provides a way of making sense of the social dynamics between units. The literature often makes a distinction between competitive and collaborative behaviour, and yet as we will show below, in the context of intra-firm competition the two forms of behaviour are not necessarily in conflict. Units will often compete and collaborate at the same time (Galunic and Eisenhardt, 2001).

Combining the three constructs
To illustrate how these variables shed light on the phenomenon of intra-firm competition, it is useful to consider the different ways in which they can be combined, and to provide some typical examples of each. Consider first the scenarios in which there is a moderate to high degree of charter overlap – in other words, those scenarios in which there is intra-firm competition. Figure 3 illustrates the four possible combinations of charter definition (sharp vs. fluid) and inter-unit integration (low vs. high) when charter overlap is high. Using insights from our research and from the existing literature, we can readily identify examples that fit into each quadrant of the matrix.

In the top-right box, charters have fluid boundaries, and intra-unit interdependency is high. We use Galunic and Eisenhardt’s (2001) term *dynamic community* to describe this situation, and it is best illustrated by their case study of *Omni* corporation, in which the charters of individual units evolve according to changes in technology and market opportunities and through the processes of negotiation and interaction between executives in related units. While each unit is given considerable freedom to shape its charter, there is still a moderate to high level of interdependence between units – they typically share core technologies and sales channels, and they communicate frequently and freely with one another.

The top-left box is characterised by fluid boundaries and low inter-unit interdependency, and we refer to it as a *loosely-coupled community*. An example of this is a UK telecoms testing company called Spirent that grew rapidly through acquisition. Over a six-year period from 1995 to 2001 it bought seven companies, each of which had its own distinctive technology but also substantial overlaps with the technologies and products of the others. Because of the rapid growth of demand in this period, Spirent encouraged
each acquired unit to focus on sales growth, even if that meant some cannibalisation of the sales of sister units. As a result, during this period of market growth there was substantial charter overlap between units, the boundaries of individual units was highly fluid, and the level of interdependency was low. Indeed, one could argue in a situation such as this that the value-added of these units being part of Spirent was non-existent. However, this was essentially a transition period, and gradually top management began to impose some structure on the organization, by increasing the level of sharing between units, and by reducing the level of charter overlap between units. As a result, Spirent migrated from a fragmented community (top left) to a dynamic community (top right).

In the parallel development quadrant (bottom right) charters have sharp boundaries and high levels of inter-unit interdependency. An example of this is Ericsson’s second-generation mobile businesses during the mid-1990s. Faced with an explosion in demand for mobile networks and three different technological standards (GSM, PDC, TDMA), Ericsson set up three business units in direct competition with each. Each had its own product development, sales and marketing activities, but they all drew on certain shared Ericsson resources, including the company’s brand reputation and its underlying technological capabilities. Moreover, as second-generation mobile technology matured, the level of sharing between business units was increased, as a means of reducing the cost of production and software development. In terms of the framework, Ericsson’s level of inter-unit interdependency evolved from medium to high, while charter definition was relatively sharp (and imposed from above).

Finally, the coexistence quadrant (bottom left) is characterised by sharp boundaries and low levels of inter-unit dependency. An example of this is WPP, the communication
company that owns competing agencies Ogilvy & Mather, Young and Rubicam and J. Walter Thompson. From our own research and other documents (Bower, 1996) we would argue that each unit has a very clear understanding of its (and everyone else’s) charter boundaries, and there is a relatively low level of resource sharing between units - there is some cross-fertilisation of knowledge and people, but there is no sharing of activities between businesses, client-specific information is closely guarded, and the brands are separate. At the same time, there is still a high level of charter overlap with business units actively courting each other’s clients.

These four scenarios cover the range of possibilities where charter overlap is high (i.e. where intra-firm competition exists). There is also a parallel set of possibilities where charter overlap is low or non-existent, as shown in figure 3. These are briefly discussed for the sake of completeness, but because –by definition- they do not involve charter overlap, they are not developed further in the paper (nor are they given labels).

In the lower quadrants, charter boundaries are sharply defined and there is little or no charter overlap. In the bottom-right, the level of inter-unit interdependency is high: for example, Volkswagen’s national sales subsidiaries depend on the manufacturing operations for products to sell, and on the central marketing function for advertising materials, but each one has a clear and non-overlapping charter. In the bottom-left quadrant, by contrast, the level of inter-unit interdependency is low. For example, Philips is organized into a series of product divisions (e.g. mobile handsets, TVs) each of which
has its own development, manufacturing and sales operations. While there is clearly some sharing of best practices and technology across division, the level of interdependency is far lower than in the Volkswagen national subsidiaries example.

In the upper quadrants, charter boundaries are relatively more fluid but there is little or no charter overlap, a situation that may transpire in conglomerates with unrelated businesses. In the upper-left quadrant interdependency between units is low: for example GE medical systems and GE capital both have relatively fluid boundaries and operate in a vast array of different businesses, but they are sufficiently different that their charters do not overlap. In the upper-right quadrant interdependency between units is high: for example Shell’s exploration and production business sells a large portion of its output to Shell chemicals (i.e. they are vertically integrated) and both businesses have relatively fluid boundaries, but there is no overlap between their charters.

In sum, this section has demonstrated that the three focal constructs (charter definition, charter overlap, inter-unit interdependency) are conceptually distinct and that collectively they shed light on the different forms of intra-firm competition that have been identified in the literature. To reiterate the core argument of this paper, we see these constructs as important design variables that can and should be manipulated by those responsible for the organization’s design. We have argued that these constructs are important. The next step, which is the theme of the following section, is to explore the environmental contingencies under which they would be expected to vary.

It is worth making one final point before moving on. The field of organization design has a long-established set of core constructs such as differentiation, integration,
autonomy and formalization (Lawrence and Lorsch, 1967; Pugh and Hickson, 1976), so there is a heavy burden of proof facing anyone that seeks to develop new organizational constructs rather than use existing ones. In this case, the concept of charter definition is indeed new, but it builds on the established work of Galunic and Eisenhardt (2001).

Charter overlap is a relatively unknown construct in organization theory though it can be traced back to the work of Felsenthal (1980) and Lerner (1987) in the political economy literature. And inter-unit interdependency is well-established (Thompson, 1967). The key point, though, is that together these three constructs provide a way of looking at intra-firm competition that would not be possible using existing terminology. For example, the classic concepts of differentiation and integration (Lawrence and Lorsch, 1967) can be mapped onto our concepts of charter definition/overlap and inter-unit interdependence, but they do not help us to make sense of the ways in which units change the focus of their activities over time, nor do they explicitly account for the overlapping activities of two or more units. These new constructs therefore enhance our ability to illuminate an interesting and important new aspect of organizational dynamics.

FORMS OF INTRA-FIRM COMPETITION AND PROPOSITION DEVELOPMENT

This section builds on the theoretical model developed above to set out the conditions under which intra-firm competition makes sense. The theoretical framing here is contingency theory, which holds that there is no one best way to organize, that different organizational approaches are valid under different environmental conditions, and that superior organizational performance will result when there is a clear “fit” between the environment and the chosen organization structure (Burns and Stalker, 1961; Galbraith, 1973; Woodward, 1965). Consequently, the approach taken in this section is to first
identify the relevant environmental contingencies and second to specify the relationships between these contingencies and the three focal constructs (charter definition, charter overlap, inter-unit interdependency). Figure 4 provides an overview of the propositions that will be developed below.

Two points of clarification should be made before proceeding. First, the identification of environmental contingencies is inherently subjective. Contingency theory is forty years old, and there is still no consensus around which contingencies are critical, and how they relate to one another (Donaldson, 2001; Schoonhoven, 1981; Van de Ven and Drazin, 1995). The approach we take here is to examine the underlying economic logic for two distinct forms of infra-firm competition, and to use those theoretical anchors to select our choice of contingency variables. Second, the specification of the propositions is done from the perspective of the organization “designer” who is attempting to put together the most effective organization design for a given set of environmental conditions. This means that propositions are of the form “the greater the level of Contingency Variable X, the greater the level of Organization Variable Y”.

Two forms of Intra-firm Competition

While the focus of the paper up to now has been to develop a stylised model of intra-firm competition, we now need to link this to the broader question of why intra-firm competition occurs. Or, stated rather more precisely, we need to understand the economic
logic for a company to condone overlapping activities inside the organization boundary when this appears to run counter to the traditional logic of efficiency (Liebenstein, 1966; Williamson, 1991). Our argument, building on the existing literature and several of the insights developed above, is that there are two distinct logics. The first views intra-firm competition as a temporary mechanism for experimenting with multiple emerging technologies or business ideas in an uncertain and fast-changing environment. This form of intra-firm competition is typically framed in the language of evolutionary theory: the organization allows internal variations to emerge, and through a Darwinian process the fittest are selected and retained, while the less fit are terminated (Burgleman, 1983; 1991). The examples of intra-firm competition in Omni, Ericsson and Spirent above are all consistent with this logic.

The other form of intra-firm competition is exemplified by such firms as P&G, Ford and WPP. Here, business units frequently offer overlapping products and services on an ongoing basis, rather than as a temporary arrangement. And they do so in a relatively predictable and stable business environment. The logic for this arrangement is essentially built on economies of scope (Panzer and Willig, 1981; Teece, 1980). Certain markets are sufficiently heterogeneous that they require multiple distinct offerings for different segments, and firms such as P&G, Ford and WPP have responded to this demand by creating business units with overlapping charters. There are additional costs in doing this but, depending on the characteristics of the products/services in question, they may be more than offset by the benefits of sharing and transferring resources between units (Markides, 2001; Nayyar, 1993; Sorenson, 1990).
Each of these arguments is now developed in greater detail. This discussion then leads to
the development of formal propositions linking the relevant environmental contingencies
to the three core constructs of charter overlap, charter definition and inter-unit
interdependency.

Dynamic Environmental Conditions and Evolutionary Theory

Building on the application of evolutionary theory to the processes of variation, selection
and retention in populations of organizations (Aldrich, 1979; Campbell, 1965; Hannan
and Freeman, 1977), there is an emerging body of literature that looks at the evolutionary
processes within organizations. Burgelman (1991) argued that an organization can be
"viewed as an ecology of strategic initiatives which emerge in patterned ways, and which
compete for limited organizational resources to increase their relative importance within
the organization. Strategy results in part from selection and retention operating on
internal variations associated with strategic initiatives" (1991: 240). A number of other
studies (Birkinshaw and Ridderstråle, 1997; Miner, 1990; Lovas and Ghoshal, 2000)
have pursued this same line of thinking. The value of this approach is that it provides
insight into the processes through which strategic initiatives (or projects) generate
support and funding within a complex, multi-layered organization. It also helps to
explain how an organization's concept of strategy changes over time, partly leading and
partly led by the internal processes of variation, selection and retention.

The phenomenon of intra-firm competition lends itself very well to an evolutionary
framing. Internal variation is made possible through the creation of unit charters that
overlap to some degree and that are relatively fluid, and it then transpires when two or
more units perceive and act on competing opportunities. There is then a process of selection and retention that is driven both by signals from the marketplace, and by the interactions between unit managers and their superiors (Galunic and Eisenhardt, 2001).

Under what environmental conditions is internal variation necessary? We propose that the most relevant attribute of the business environment is its equivocality. As argued by Daft and Lengel (1986), there is an important difference between equivocality and uncertainty: environmental uncertainty is a measure of an organization’s ignorance of a value for a variable in n-dimensional space, whereas environmental equivocality is a measure of an organization’s ignorance of whether a variable exists in the space. In other words, equivocality suggests a greater level of “unknowability” about the magnitude, speed and dimensions of environmental change than the term uncertainty, and it is this characteristic that makes internal variation particularly necessary. For example, if a firm’s top management team know that there are two competing technological standards, it can commission two project teams, one to work on each technology. This would be a situation of environmental uncertainty. However, if the top management team do not even know that these competing technological standards are taking shape (i.e. if the environment is equivocal), they cannot take such a hands-on approach. Instead, they would be better advised to structure the organization in such a way that individual unit managers are encouraged to seek out and pursue these technologies if they believe they have potential. And this is done by allowing unit charters to overlap, by making charter boundaries relatively fluid, and by limiting the degree of inter-unit interdependence.
Let us consider this argument in greater detail. Environmental equivocality means that no single organization, however large, can reasonably expect to understand all the possible trajectories of technological development underway in an industry. To maximise its chances of identifying and acting on the full scope of promising opportunities, the organization needs to provide each unit with very high degrees of freedom, and it needs to suppress the temptation to impose its own dominant logic (Prahalad and Bettis, 1986) on their activities. Thus, it should not predefine charter boundaries because those are by definition derived through a consensus-driven process that is steered by the organization’s dominant logic. It would explicitly allow some level of charter overlap between units so that competing technologies and/or products have a chance to coexist within the boundaries of the firm until one or more has proven itself in the marketplace. And it would discourage inter-unit interdependencies, because by pushing interdependence, e.g. in terms of underlying technologies, the scope of opportunities that are considered within the organization are prematurely constrained.

Thus, the first formal proposition:

Proposition 1. The greater the level of environmental equivocality, (a) the more fluid the boundaries of unit charters, (b) the greater the level of overlap between unit charters, and (c) the lower the level of inter-unit interdependence.

It is worth observing parenthetically that there are two separate mechanisms that make intra-firm competition beneficial in a situation of environmental equivocality. First, by allowing units to have overlapping charters, it is more likely that one of them will generate output that is successful in the market place. Second, the knowledge among the participants that there are overlapping charters will lead to more effort being exerted or
more creativity being exercised, the result of which will be an increase in the average fitness of the variations produced. These two mechanisms have parallels in evolutionary biology. The first mechanism is similar to the distinction between a K-strategy and an r-strategy (MacArthur and Levins, 1964)\(^7\). The second mechanism is similar to ecological competition within a niche.

The second critical environmental contingency that underlies the evolutionary perspective is the state of maturity of the industry in which the organization is competing. It is well-known that industries go through a life cycle, from emergent to established to mature (e.g. Porter, 1980). This process of evolution has two distinct dimensions. First, there is a technology dimension, whereby the industry typically takes shape through the emergence of new technology; different versions of this technology compete for the mass market until a dominant standard emerges; product innovation gives way to process innovation; and ultimately the industry either becomes commoditised or begins the cycle again through the discovery of a new technological breakthrough (Dosi, 1982; Tushman and Anderson, 1986; Utterback, 1994). There is also an institutional dimension, which is concerned with the social processes of learning, imitation, and legitimisation through which competitors in an industry gradually converge around certain industry “recipes” or rules of the game (Spender, 1989). In the early stages of development of an industry, there are no established ways of competing and there are no recognised sets of competitors. But as certain business models start to emerge as superior, a hierarchy of competitors takes shape, second tier players copy the practices of the top players, and the behaviours of all the players in the industry converge on a set of unwritten rules (Dimaggio and Powell, 1983; Meyer and Rowan, 1977).
How does this process of industry evolution influence the focal constructs of charter definition, charter overlap and intra-unit interdependence? In an emerging industry, technology standards have not been established, and the industry rules are ill-defined. Competing firms often have different business models, and sometimes they will even have coexisting business models within their boundaries (e.g. because of mergers and acquisitions). Under such conditions, we can expect charter definition to be highly fluid, the level of charter overlap between units will be highly variable, and level of interdependence between units will also be variable.

As this industry matures, the process of technological and institutional changes described above will take hold, and this will affect all three organization constructs. Charter definition will become sharper throughout the industry as dominant technologies and institutional norms emerge. For example, packaged consumer goods firms define their charters around brands, categories and business lines, while computer software companies have charters based around the major industry “verticals” of their customers. These are industry norms, and the terminology does not require any further explanation to people working in the industry. Charter overlap will typically go down as an industry matures for three reasons: competing technologies (often managed in separate units) will gradually be displaced by a dominant technology; competing business models (again often managed in separate units) will typically be displaced by a single business model; and the pressure for cost reduction in a maturing industry will encourage organizations to eliminate overlapping activities where possible. Finally, inter-unit interdependence will correspondingly increase through industry maturity, primarily because of the need to share and transfer resources as a means of cost reduction. Taken together, these arguments suggest the following proposition.
Proposition 2. The more mature the industry in which the organization competes, (a) the sharper the boundaries of unit charters, (b) the lower the level of overlap between unit charters, and (c) the higher the level of inter-unit interdependence.

Static Environmental Conditions and Economies of Scope

The second form of intra-firm competition is typically seen in relatively mature markets with relatively unequivocal business environments, so we would argue that it is driven by a fundamentally different logic to that developed for propositions 1 and 2. As stated earlier, our approach is to frame it simply in terms of the economies of scope that the diversified firm generates out of competing in multiple product markets at the same time. Thus, if one observes Procter and Gamble persisting with an organization design with a significant degree of charter overlap between units, it is because their top management believes the benefits gained from charter overlap outweigh the costs. The purpose of this section is to put forward the environmental conditions under which this logic makes sense.

The first contingency variable is concerned with the basis of competition in the industry in terms of the relative importance of economies of scope vs. economies of scale to the organization’s competitive position. Economies of scale are achieved by reducing unit cost with increased volume. Economies of scope are achieved by reducing cost through the sharing of certain activities across two or more products (Chandler, 1990; Panzer and Willig, 1981; Teece, 1980). These factors combine to influence the cost structure of most large organizations, but their relatively importance varies enormously. For example,
competitiveness in the microprocessor industry is driven by economies of scale in R&D and manufacturing, while competitiveness in the fast moving consumer goods industry is driven by economies of scope in distribution and marketing. The argument advanced here is that overlapping unit charters have a detrimental effect on the organization’s ability to deliver economies of scale (because it requires greater product variety), but they have a neutral or positive effect on the organization’s ability to deliver economies of scope (because greater visibility and variety in the market is attractive to distributors and retailers). Procter and Gamble’s well-known strategy of populating single product categories like toothpaste and detergent with multiple brands is entirely consistent with this logic.

In terms of the other organization variables, we would argue that charter definition and inter-unit interdependence will both be unaffected by the relative importance of economies of scope vs. scale. That is, we would expect to see relatively sharp charter boundaries and relatively high levels of interdependence regardless of the basis of competition. Thus:

Proposition 3. The greater the relative importance of economies of scope vs. scale to the competitiveness of the organization, the higher the level of charter overlap.

The second environmental contingency, which is related to but conceptually distinct from the first, is the heterogeneity of the market, defined as the extent to which customers differ in their perception of the ideal attributes of the product offered (Mason and Milne, 1994; Moorthy and Png, 1992; Sorenson, 1990). The greater the level of heterogeneity of the market, the more addressable segments there are, defined by such variables as
customer type, channel to market, and time and location of purchase. In such a market, there are clear benefits to offering a high level of product variety, as a means of ensuring that each product gets closer to the segment’s ideal set of attributes. In the automobile industry, for example, the importance of brand image in the purchase decision has led to a proliferation of products with highly-overlapping physical characteristics. A rather different and extreme form of market heterogeneity is found in the advertising industry, where clients who are arch rivals (e.g. GM and Ford) refuse to deal with an agency if the other is already working with it. The response from advertising firms such as WPP is to build competing agencies that each works with one of the rival clients.

While there are obviously costs associated with product variety, these are broadly accounted for under proposition 3. The argument advanced here, then, is that notwithstanding the costs that are incurred, the greater the heterogeneity of the market, the greater the level of charter overlap between units. Indeed, the automobile industry provides a very clear illustration of this point because the economies of scale in car development and production are enormous, and yet there is still substantial charter overlap between the different marques in Ford, Volkswagen and GM.

Market heterogeneity is not predicted to have any effect on charter definition. Indeed, in a heterogeneous market, charters are likely to be defined as clearly -if not more so- than in a homogeneous one. In terms of inter-unit interdependencies, heterogeneous markets typically require some separation between competing units. For example, in WPP there is very little contact, and certainly no explicit sharing, between the advertising agencies of the different groups; and in Procter & Gamble brand managers are expected to keep their distance (Peters and Waterman, 1982: 215). In contrast, there are likely to be few such
strictures on the level of sharing between units in more homogeneous markets, so on balance we would expect the relationship here to be negative. Thus:

Proposition 4. The greater the heterogeneity of the market, (a) the higher the level of charter overlap, and (b) the lower the level of inter-unit interdependence.

Taken together, the four environmental contingencies (equivocality, industry maturity, basis of industry competition, market heterogeneity) provide a picture of the conditions under which we would expect the level of intra-firm competition to vary. In the final section of the paper we discuss some of the internal factors that will affect the nature and amount of intra-firm competition, and a number of additional directions in which this research agenda could be taken.

DISCUSSION AND CONCLUSIONS

The role of top management

What is the role of top management in facilitating or suppressing intra-firm competition? For our purposes, top management refers to all those individuals with oversight responsibilities that span multiple business units. It includes the executive board, corporate-level managers responsible for several business units, and corporate staff who have responsibility for organization design and strategy. With this relatively broad definition in mind, their role in facilitating or suppressing intra-firm competition has three parts.
First, it is possible for top management to establish intra-firm competition through direct authority, by setting up two or more business units in direct competition with one another. The most common examples of this are separate units such as IBM’s PC business and Barnes and Noble.com, which are typically created to develop disruptive new technologies alongside the organization’s existing lines of business. The case mentioned earlier of Ericsson establishing competing business units in 2G mobile technology was also driven through a top-down process.

Second, top management has responsibility for designing the organization in such a way that intra-firm competition is encouraged or discouraged according to the relevant environmental contingencies. This role includes such things as defining the scope of unit charters, the sharpness of their boundaries, lines of reporting, systems for evaluating and rewarding performance, and the way that unit managers interact with one another. Obviously in this paper we have focused on the three key structural parameters, but organization design must also incorporate elements of the organization’s systems and its intangible cultural elements (Bartlett and Ghoshal, 1989).

Third, top management have an ongoing role to play in managing the process of intra-firm competition. This includes transferring information between units regarding the scope of activities each is working on, facilitating discussions between units when charter overlap occurs, and ensuring that rules and policies on charter boundaries are adhered to. Galunic and Eisenhardt (2001) describe in great detail how this role works in Omni.

The focus in this paper is on the second role – on the basic design rules that the organization puts in place to establish whether intra-firm competition is facilitated or
suppressed. The third role is strongly related to the second, in that it involves an ongoing process of re-affirming the design choices that have been made, and in facilitating the necessary interactions between unit managers. The first role, in contrast, has received very little attention here. This is partly because our contingency-theory framing leads to a focus on the design choices facing the organization. But it is also because this top-down role appears in most cases to be a second-best solution to the problem of how an organization copes with a fast-changing environment. As we discussed earlier, the appropriate design response to an equivocal environment is to provide individual business units with sufficient degrees of freedom that they explore new markets and technologies as they arise. If top management step in and create a new unit to address a particular charter, it suggests that the existing units have failed to identify and/or act on the opportunities in question. This may indeed be appropriate on an exceptional basis, but we argue the organization should ideally be designed to avoid such interventions.

Extending the evolutionary metaphor

A second major line of inquiry that is opened up but not developed in this paper is the nature of selection processes within organizations. As discussed earlier, evolutionary theory provides a valuable conceptual lens for making sense of the process of intra-firm competition (Burgelman, 1991; Campbell, 1965), but we restricted our discussion to situations in which variation arises internally, and the selection and retention processes transpire in the external marketplace. In reality, however, the decision to terminate one or more competing activities is often made by senior executives before the product reaches the customer. In the language of evolutionary theory, this opens up a discussion of both the agent of selection and the criteria of selection. Let us briefly consider both.
The *agent of selection* can be either external or internal to the organization. In situations where the cost/benefit analysis favours some level of charter overlap, customers in the product market become the *de facto* agents of selection. Clearly they do not make decisions about which competing products to terminate or when, but through their purchasing behaviour they send strong signals to top management about the relative fitness of the various options, which ultimately causes top management to decide whether or not to reduce the level of intra-firm competition. However, when the costs of overlap are higher (e.g. the pharmaceutical industry) top management will typically step in and select one activity at the expense of another before the offerings reach the market. In so doing, they are essentially substituting for the marketplace. The term *vicarious* is often used to refer to such selection mechanisms (Campbell, 1965). Vicarious mechanisms are not necessarily inferior to true market mechanisms because they have the advantage that they can act very rapidly. However, they often suffer from lack of detailed market knowledge and from systematic biases (Campbell, 1994; Meyer, 1994). As a result they may not be aligned with external, product-market selection mechanisms.

The agent of selection is also likely to affect the *criteria used for selection*. A distinction can be made between *efficiency* criteria and *legitimacy* criteria (cf. Meyer and Rowan, 1977; Parsons and Smelser, 1956). Efficiency is based on relative performance within a group of competing ecological units, and it selects for units with high performance. Legitimacy operates through isomorphism, which is the process whereby one unit of a population resembles other units (DiMaggio and Powell, 1983), and it selects for units with modal performance. Building on the previous paragraph, it would be interesting to examine the extent to which different agents of selection operated on different criteria.
For example, one could hypothesise that the closer to the end product-market the intra-firm competition occurred (e.g. competing products rather than competing technologies), the better the quality of feedback from end users, and the greater the propensity to see decisions based on efficiency rather than legitimacy criteria. One could also hypothesise that intra-firm competition that favours legitimacy (as its selection criterion) will lead fairly quickly to variation being suppressed.

Competition and Cooperation

A final issue to raise for future research relates to the complexity of managing the competitive and cooperative elements of intra-firm competition at the same time. A key dimension is how competition affects the individuals involved in the overlapping units (cf. Puffer, 1999). Among other effects, it is likely that the amount of conflict will be increased. Most of the authors criticising intra-organizational competition are concerned with the negative effects on the quality of each generated variation (Eisenhardt and Bourgeois, 1988, is an exception). For example, Pfeffer and Sutton (1999) point to the fact that internal competition results in dysfunctional conflict, which reduces co-operation. We do not dispute this relationship, but would hypothesise the possibility of a negative correlation between co-operation and the number of variations created. Lack of co-operation could have the positive effect in that more alternatives are generated. If people are not sharing ideas and things are developed in parallel we can expect more variety, both in number and in degree. Even what is normally considered dysfunctional conflict could be useful if the positive effect on the number of variations is larger than the negative effect on average quality of the variations. This is a truism when considering competition between organizations in a market, but we believe it can be equally true in
intra-organizational competition. Our macro-level model, therefore, needs to be complemented with research on the micro-level. The effect of conflict could possibly be dysfunctional for the agent of variation themselves, but functional for the organization as a whole. Agent of variation could refer to individuals as well as organizational units or projects. Of particular relevance is a more complete understanding of conflict as a tool in organizational design.

Concluding Comments

In summary, this paper has put forward a conceptual framework for making sense of intra-firm competition, and it has developed a number of formal propositions as well as some more speculative arguments regarding the conditions under which we would expect it to transpire.

The paper began with the premise that intra-firm competition is an organizational design issue. That is, we can identify attributes of the organization design (charter definition, charter overlap, inter-unit interdependency) that engender certain behaviours among unit managers that in turn foster or suppress intra-firm competition. On this basis, we formalised our definitions of the relevant organization design parameters, and then developed propositions linking these design parameters with the relevant environmental contingencies.

While the ideas developed in this paper provide some new insights into intra-firm competition, much remains to be done. First, we do not know how pervasive the phenomenon of intra-firm competition really is. As noted at the outset, its existence is
often denied by executives, so traditional approaches such as questioning key informants are unlikely to yield valid answers. Case-based research, in which the phenomenon is explored at multiple levels in the organization and preferably in real time, is likely to be far more effective, though obviously this will only answer the question in a small number of companies. Perhaps as the phenomenon becomes better accepted and understood it will be easy to research, but at the moment it is problematic, as limited field studies by the authors have indicated.

Second, our understanding of how to manage the process is far from complete. While it is relatively straightforward to draw up a set of *ceteris paribus* conditions under which intra-firm competition should transpire, it is much harder to offer any useful advice for managers as they grapple with the trade-offs that are typically encountered. For example, a pharmaceutical company that is evaluating which of several drugs projects to take forward into its development pipeline has to take into account technical information about each drug, market conditions, actions of competitors, the costs associated with each drug, the motivation and capabilities of the individuals supporting each one, and so forth. These factors are all important, yet we do not have any way of prioritising or ordering them, other than gut feel and experience. There is considerable opportunity for additional research in this area.

Finally, we know very little about the relationship between intra-firm competition and organizational performance. This paper has focused on design choices facing the organization, so a “fit” based link to performance is assumed. However, when one considers the relationship as it exists in practice the story becomes more complex. For example, it would be possible to speculate on an inverse-U shaped relationship in which
too much or too little intra-firm competition led to inferior performance, but this is currently difficult or impossible to test. Part of the problem lies in the multi-level nature of the phenomenon: competition can occur at the level of the project team, the operating unit, and the business unit level, and sometimes all three at the same time. Research should probably be done first of all at one specific level (e.g. development projects in pharmaceuticals, or technological standards in telecommunications) to enable comparability, but a secondary body of work should compare across levels of analysis in order to understand the relative costs and benefits at each level. For example, it may be that there is more benefit in redundancy if it is encouraged only at the lowest level where the cost is smallest.

To conclude, it is worth bringing this study back into the broader debates in organization theory. By focusing on intra-firm competition, and the particular forms that it takes, this paper brings issues of organization design back to the forefront. Over the last thirty years, the field of organization theory has moved away from design issues in favour of meta-level processes, such as those indicated by evolutionary theory and institutional theory, or transaction-level perspectives. While these are clearly important issues to address, it takes little more than casual observation to recognise the fundamental role of organization design in shaping the behaviours and attitudes of individuals inside organizations. This paper provides one example of the insight that can be gained by focusing on design issues, and it is hoped that it facilitates additional work in the same genre.
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Figure 1. Model of Unit Charter

- Product Markets served
- Unit Capabilities
- Relationship with other units

Charter Boundary
Figure 2. Model of Intra-Firm Competition Between Two Unit Charters

(a) Charter overlap (percentage)

(b) Charter definition (how sharply defined)

(c) Level of Inter-unit Interdependency
**Figure 3. Combining the Three Constructs: Eight Archetypes**

**A) High Charter Overlap (i.e. cases of intra-firm competition)**

<table>
<thead>
<tr>
<th>Fluid Charter Definition</th>
<th>Low Inter-unit Interdependency</th>
<th>High Inter-unit Interdependency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sharp (fixed)</td>
<td>LOOSELY-COUPLED COMMUNITY e.g. Spirent</td>
<td>DYNAMIC COMMUNITY e.g. Omni Corporation</td>
</tr>
<tr>
<td>COEXISTENCE e.g. WPP Group</td>
<td>PARALLEL DEVELOPMENT e.g. Ericsson 2G Mobile</td>
<td></td>
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</table>

**B) Low Charter Overlap (i.e. no intra-firm competition)**

<table>
<thead>
<tr>
<th>Fluid Charter Definition</th>
<th>Low Inter-unit Interdependency</th>
<th>High Inter-unit Interdependency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sharp (fixed)</td>
<td>Example: GE Capital and GE Med Systems</td>
<td>Example: Shell Oil and Shell Chemicals</td>
</tr>
<tr>
<td>Example: Product divisions for Philips</td>
<td>Example: Sales subsidiaries for Volkswagen</td>
<td></td>
</tr>
</tbody>
</table>
Figure 4. Contingency Framing for Proposition Development

- Environmental Conditions
- Design of Organization Units
- Performance of Organization

- Environmental Equivocality (P1)
- Industry Maturity (P2)
- Business Model: Economies Scope / Economies Scale (P3)
- Market Heterogeneity (P4)

- Charter Definition (Sharp vs. Fluid)
- Level of Charter Overlap
- Inter-unit Interdependency
FOOTNOTES

1 Indeed it is important to recognise that intra-firm competition at the product-market level is not necessarily indicative of competition at the intra-organizational level. For example, it would be quite possible for a single unit in Procter & Gamble to offer an array of competing and cannibalising products that it managed behind the scenes in a purely collaborative manner.

2 Alternatively, if charters are defined in terms of capabilities or technologies, then charter overlap could also be measured on these terms. However, this is rarely seen in practice. Sometimes R&D organizations define their operating units in terms of their technological capabilities, but such teams do not have external customers so they are not considered further here.

3 We will expand on this point in the discussion, but it is worth noting now that fluidity in charter definition is a function of both (a) the interpretation of the charter boundary by unit managers, and (b) the extent to which corporate managers choose to monitor and defend those boundaries.

4 Note that we do not explicitly distinguish between reciprocal, pooled and sequential interdependence here (Thompson, 1967). This is because our unit of analysis is the individual unit, rather than the interaction between two units. Hence, the distinction between pooled and reciprocal interdependence is less important than the overall extent to which the focal unit depends on others.

5 Note that this is equivalent to proposing an interaction effect on performance (e.g. the greater the level of Contingency Variable X, the greater the relationship between Organization Variable Y and Organization Performance). The difference is that our approach takes the position of the organization designer, whereas the interaction-term approach takes the position of the impartial observer who is collecting data on both well-designed and inappropriately-designed organizations.

6 Alternatively, in Simon’s (1945) terminology, uncertainty is a situation in which the ends are clear but the means are not, whereas equivocality is a situation where neither the ends nor the means are clear.

7 In the r-strategy, a large number of offspring is produced, but only a small proportion survives. In contrast, the K-strategy involves a smaller number of variations, but more care is taken in nurturing each offspring. The average fitness of the offspring in the r-strategy is lower than in the K-strategy. However, in an uncertain environment this is compensated for by the larger number of offspring.