Fit to Multiple Contingencies in Organizational Design: Contingency Imperative versus Equifinality

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ABSTRACT: In order to solve the dispute between contingency imperative and equifinality view in organizational design, i.e., whether there is one or a range of fitting structures to the multiple contingencies, this paper presents two approaches: structural contingency approach and structural separation approach. The discussion mainly provides theoretical support to the contingency imperative view. In contrast, equifinality is rare, only existing when two contingencies are equally important in their effects on performance. This paper makes two main contributions: redefining the importance of the contingency as the effect on performance of the fit between structure and this contingency; bringing in the concept of structural separation including the ambidexterity idea and showing that it supports the contingency imperative view.

Keywords: contingency imperative; equifinality; multiple contingencies

One tradition of organization design is the structural contingency approach, which holds that structure needs to fit the contingency to produce high performance. In this case, there is a contingency imperative, in that the contingency determines the required structure. However, there can be more than one contingency for a structure. This has been argued to produce a range of structures, all producing the same high performance. This is referred to as equifinality, and implies that managers enjoy a wide choice of structures, i.e., have strategic choice, so that there is no contingency imperative. This paper examines multiple contingencies and argues that equifinality and hence strategic choice will be rare, so that there usually will be a contingency imperative in organizational design. The original contributions of this paper are twofold. First, it redefines the concept of the importance of the contingencies, and show that it is critical to distinguish where there will be contingency imperative rather than equifinality. Second, it brings in the concept of structural separation including the ambidexterity idea and shows that it supports the contingency imperative perspective.

For some structural factors, each of them may have only one contingency, which the structural factor needs to fit in order to produce high performance. However, it is also likely that for some other structural factors, each of them has two or more contingencies (Burton & Obel 1998; Burton, Lauridsen, & Obel 2002; Child 1977, 1984; Donaldson 1985, 2001; Gresov 1989; Gresov & Drazin 1997; Mintzberg 1979;
Payne 2006; Van de Ven & Drazin 1985). For instance, organizational formalization needs to fit both environmental uncertainty (Burns & Stalker 1961) and size (Child 1975). The situation where the structure has to fit more than one contingency is termed “multiple contingencies” (Gresov 1989).

The fact that organizations usually face multiple contingencies provides a more realistic picture of the complexity of organizational design (Drazin & Van de Ven, 1985). However, it also complicates the specification of the fitting structure, especially in the context of conflicting contingencies where multiple contingencies require different levels of the same structure. This idea of conflicting contingencies is used to question the explanatory power of structural contingency theory in the multiple contingencies context (Child 1977, 1984; Gresov & Drazin 1997). Some scholars argue that structural contingency theory has difficulties in identifying the fitting level of structure in the situation of conflicting contingencies, as it is able to do in single contingency studies (e.g., Child 1977, 1984). This leads to the strong qualification of structural contingency theory.

Later on, Gresov (1989) points out that the structure that fits the multiple contingencies exist. He further posits that, in terms of the number of fitting structure, there can be two distinctive views in the context of multiple contingencies: contingency imperative and equifinality. Contingency imperative corresponds to the idea that contingency determines the fitting structure, which produces high performance (Donaldson 1987). Given multiple contingencies, contingency imperative idea holds that there is only one ideal structure. On the contrary, equifinality is “the existence of several feasible equally effective design options for given contexts” (Van de Ven & Drazin, 1985: 353). Therefore, the equifinality view claims that there is more than one structure that is equally effective.

He then highlights that, the relative importance of contingencies matters in the discussion of conflicting contingencies. Specifically, there is only one ideal level of structure when the contingencies are of unequal importance. In contrast, there will be a range of equally effective designs when the contingencies are
equally important. However, the criteria of the importance of contingency proposed by Gresov (1989) are problematic (shown in the following section). Thus, a new criterion is needed.

Moreover, the structural separation approach (Donaldson 2001; O’Reilly & Tushman 2004; Tushman & O’Reilly 1996) can also shed light on the debate between contingency imperative and equifinality views. However, not much attention has yet been paid to this issue.

In this paper, we attempt to solve the dispute on the contingency imperative and equifinality views through presenting two approaches to the fit of structure to multiple contingencies. We will first discuss the structural contingency approach. We will show how the different combinations of two dimensions – the degree of conflict in required structure and the importance of contingencies – lead to different theoretical conclusions. In this section, we will also redefine the concept of the importance of the contingency. Then, we will present the structural separation approach, to show how conflicting requirements from multiple contingencies can be satisfied by the internal differentiation-and-integration pattern. Finally, we will offer our conclusion and proposed directions for future research.

**STRUCTURAL CONTINGENCY APPROACH**

**A Framework of Multiple-contingencies Contexts**

The extant literature has revealed that two dimensions are critical to the multiple contingencies issue: the degree of conflict in required structure from multiple contingencies, and the relative importance of the contingencies (e.g., Gresov, 1989).

On the one hand, the degree of consistency of the requirements of two contingencies makes a distinction between two contexts: non-conflicting and conflicting contingencies (Child 1977, 1984; Mintzberg 1979;
Gresov 1989). When the contingencies impose consistent requirements on structure, i.e., equal levels of the structure, they are non-conflicting contingencies. When multiple contingencies have inconsistent implications on the structure, i.e., unequal levels of the structure, they are conflicting contingencies. To take an example, consider the case of formalization fitting to both environmental uncertainty and size. Assume that these variables are all measured by scales ranged from 1 to 5. For a given organization, if both environmental uncertainty and size requires the formalization to be at level 3, then formalization has non-conflicting contingencies. In contrast, if its environmental uncertainty requires the formalization at level 3, while its size needs the formalization level to be 4, then formalization faces a context of conflicting contingencies.

On the other hand, the relative importance of contingencies also plays a role in the multiple contingencies discussion. This distinguishes equal and unequal contingencies, based on whether contingencies are equally important to the organizational design or not (Gresov 1989; Gresov & Drazin 1997). For instance, Gresov posits that the previous ideas of conflicting contingencies “are based on the view that the design imperatives of both contingencies are relatively equal” (1989: 438), and that it will become a dominant-imperative situation if one contingency is “more important for unit design” than another (1989: 438).

What is worth noting is the overlap between meanings of conflicting-contingencies in the extant literature. In the language of Child (1977, 1984) and Mintzberg (1979), the concept of conflicting contingencies focuses on the conflict between the required levels of structure from multiple contingencies. However, according to Gresov (1989) and Gresov and Drazin (1997), the concept of conflicting-contingencies is defined as contingencies requiring unequal levels of structure and also of unequal importance to the design. In order to avoid confusion due to different terminology, this paper will use the term conflicting-contingencies as the inconsistency between required levels of structure from multiple contingencies only, as such it will not include the relative importance of contingencies.
Mainly based on Gresov’s (1989) arguments, this paper develops a framework of multiple-contingencies contexts and their respective theoretical implications (see Figure 1). A cross-classification of the two dimensions discussed above creates four types of contingency contexts. When the required structures from multiple contingencies are non-conflicting, it is a consistent contingencies context, no matter whether these contingencies are of equal or unequal importance. In this context, there is a single fitting structure that fits both of the contingencies (see Figure 2). Structural level fitting to one contingency simultaneously fits the other contingency, regardless of whether the importance of multiple contingencies is equal or not. Hence, there is a contingency imperative in this context, in that optimal performance comes from fitting the structure to the contingencies.

In contrast, if the required structures from multiple contingencies are conflicting, and contingencies are of equal importance \( b_1 = b_2 \), then it gives rise to an even-contingencies context. In this case, there will be a range of optimal designs available, because structure can fit one of the contingencies, or lies intermediately between the two structures that fit these two contingencies (see Figure 3). This supports the equifinality view in organizational design (Gresov & Drazin 1997) as well as strategic choice theory (Child 1972). However, if contingencies are of unequal importance, i.e., \( b_1 > b_2 \) or \( b_1 < b_2 \), then it becomes a dominant-contingency context. In this situation, there will be a single fitting structure, where one fits the more important contingency (Gresov 1989). For example, in Figure 3 the structure should fit \( C_1 \) when \( C_1 \) is more important than \( C_2 \) (i.e., \( b_1 > b_2 \)), while fit \( C_2 \) when \( C_2 \) is more important than \( C_1 \) (i.e., \( b_1 < b_2 \)). This is compatible with the idea of contingency imperative.
This shows that in conflicting contexts, the relative importance of contingencies is critical to determine if contingency imperative view is sounder than equifinality view. However, what are the criteria on the importance of contingencies? In the following section, we will first offer a critique of Gresov’s (1989) criteria and then propose a new criterion derived from the structural contingency approach.

A Critique to Gresov’s (1989) Criteria on the Importance of Contingencies

In a study of organizational design in the context of two contingencies, Gresov (1989) outlined three pairs of competing criteria, to examine whether two contingencies are equally important in design. However, most of the criteria are actually testing whether one or two contingencies are important, rather than comparing the importance of fits of structure to contingencies on performance. For example, it is claimed that, if both contingencies affect organizational structure, it supports the equal contingencies view (conflicting-contingencies view in Gresov’s (1989) language). In contrast, if only one contingency affects organizational structure, it is claimed to support the dominant-imperative view. In this sense, these are actually the criteria for one versus multiple contingencies views, rather than even versus dominant contingencies views. Therefore, the criteria proposed by Gresov (1989) are not appropriate to distinguish between even-contingencies and dominant-contingency contexts.

The Criterion Derived from Structural Contingency Approach

In the contingency theory of organizational design, the performance implication of fit between structure and a specific factor determines whether this factor is a contingency to the structure (Donaldson, 2001). Only if the fit between structure and a factor causes high performance, and the misfit between them
produces low performance, is this factor eligible to be a contingency. In this sense, the importance of the contingency should be defined as the effect on performance of the fit between structure and this contingency. The higher the effect, the more important the contingency. In other words, the importance of a contingency shall be reflected by the extent of performance loss resulting from each unit of deviation of structure from the ideal structure required from this contingency.

Therefore, in order to appropriately test the rival views of equal and unequal contingencies, we shall compare the relative magnitudes of the effects on performance of the fits between one structure and each of its multiple contingencies. In this sense, equal-contingencies hypothesis would argue that the effects on performance of the fits between structure and each of the multiple contingencies are equal. In contrast, unequal-contingencies hypothesis would claim that the effects on performance of the fits between structure and each of the multiple contingencies are not equal.

The Likelihoods of the Even-contingencies and Dominant-contingency Contexts

Whether contingency imperative or equifinality view is more valid depends on the likelihood of situations with even- and dominant- contingencies. This is in turn mainly determined by the relative possibility of equal- and unequal- contingencies. Limited existing literature shows that it is rare for the weights of multiple contingencies to be equal. The effects of fits of structure to different contingencies on performance usually differ. For instance, in a study of work unit design, Gresov (1989: 448) reveals that “horizontal dependence appears to have played a secondary role in the fit relationship”, compared with task uncertainty. The results in Gresov (1990) also support this idea. Likewise, Keller (1994) also provides evidence for the unequal contingencies idea in his empirical study, where nonroutineness and unanalyzability are two contingencies to one structural variable, information processing. The results show that the effect size of nonroutineness-information processing fit on project quality is more than three times
that of the unanalyzability-information processing fit. In addition, two fits also have different effects on budget-schedule performance, though these effects are all statistically insignificant.

A recent evidence for the unequal-contingencies view comes from Payne (2006). His study on the design in medical groups is claimed to provide evidence for the suboptimal equifinality. According to the suboptimal equifinality idea, two contingencies are equally important and thus organizations can freely choose one of two conflicting contingencies for its structure to fit (Gresov & Drazin 1997). In this research, medical groups face two conflicting contingencies: quality and efficiency. Thus, if suboptimal equifinality is supported, the empirical data should show that quality and efficiency are of equal importance to medical group design. However, the empirical results show the opposite. Specifically, quality is shown to be a more important contingency compared to efficiency for medical groups. Only those small organizations focusing on quality are able to produce high performance, while those who focus on efficiency or pursue both contingencies may suffer from performance loss. Therefore, the author admitted that this “may empirically resemble an ideal type context and can be largely supported by contingency theory” (Payne, 2006: 764). The importance of two contingencies is unequal, which supports the contingency imperative view.

Thus, to date, research findings have not supported the idea that two contingencies are of equally importance. It provides little evidence for equifinality and free choice of structures. To the contrary, the situation where one contingency is more important than the other is more common. Hence, there is usually only one ideal level of structure. The contingency imperative view holds in most of the contexts of multiple conflicting contingencies.
Another way to fit the level of structure to the contingency is structural separation (Donaldson 2001; O’Reilly & Tushman 2004; Tushman & O’Reilly 1996), which draws upon the classical differentiation-integration notion (Lawrence & Lorsch 1967). The basic idea is that, the organization can be structurally differentiated into multiple parts, each of which is able to cope with the requirement from one contingency. These differentiated units can then be integrated as a whole. By doing so, an organization facing conflicting contingencies achieves the fits with contradictory demands from the multiple contingencies simultaneously.

Relating to the debate between contingency imperative and equifinality, structural separation approach provides supports to the contingency imperative concept. Although there is more than one contingencies faced by organizations, each contingency has only one ideal structure that is in one part of the organization. For the organization as a whole, its fitting structure is the combination of these fitting substructures.

In the remainder of the paper, we follow Donaldson (2001) and categorize main contingencies into two types: task and size. In the following sections, we will first discuss how structural ambidexterity can resolve the problems of conflicting requirements of multiple task contingencies. Then, we will address how structural separation reconciles the contradictory demands from size and task.

Conflict between Fitting Structures of Two Task Contingencies

Organizations are required to satisfy two task demands, exploitation and exploration (March 1991), both of which impose certain requirements on the organizational structure. Therefore, in the language of structural contingency theory, exploitation and exploration can be viewed as two task contingencies of
structure. Exploitation and exploration are in conflict in terms of their requirements on structure. Relatively, exploitation suggests more routine work, while exploration implies more non-routine task to perform. Relating them to organizational structure, exploitation typically requires a mechanistic structure, while exploration needs an organic structure.

Studies on the ambidexterity have revealed that organization can satisfy the competing demands from exploitation and exploration by structural differentiation and integration (Jansen, Tempelaar, Van den Bosch, & Volberda 2009; O’Reilly & Tushman 2004; Tushman & O’Reilly 1996; see a review in Raisch & Birkinshaw, 2008). The organization can differentiate itself, in the way that some units with mechanistic structure deal with exploitation tasks while other units with organic structure handle exploration tasks. Then the units can be incorporated together using integration mechanisms.

**Conflict between Fitting Structures of Size and Task**

Task uncertainty and size may also have conflicting requirement on the same structure variable (Child 1977; Donaldson 2001). For instance, as task uncertainty increase, the level of formalization should decrease to fit the rate of change in task environment. In contrast, as size increases, the formalization should also increase in order to produce high performance (Child 1975). Thus, for a large organization within the context of high uncertainty, the requirements from task uncertainty and size are in conflict.

However, the structure required by task uncertainty and size occurs in different parts of organization (Donaldson 2001), which opens the door for structural separation. Structural variables required by environmental uncertainty is on the micro, task-related part (Burns & Stalker 1961), while the structure fitting to organizational size is related to the administrative activities, such as those in the accounting department or in personnel regulations, as suggested by bureaucratic theory (Blau & Schoenherr 1971; Pugh, Hickson, Hinings, & Turner 1969). Therefore, the organization can meet the requirements of task
uncertainty and size simultaneously by vertical structural separation. Specifically, this can be done by coping with task uncertainty by proper formalization levels in task-related activities and also fitting size by adopting an appropriate level of formalization in administrative work.

Thus, wherever structural separation can be used, it provides a solution to the conflicting contingencies. For each of the multiple contingencies, there is only one ideal level of structure, which supports the contingency imperative concept.

**DISCUSSION AND FUTURE RESEARCH**

This paper discussed the long-standing debate between contingency imperative and equifinality in organizational design. In order to solve the theoretical dispute, it presented two approaches to model the fit in the context of the multiple contingencies: structural contingency approach and structural separation approach. These two approaches converge to the theoretical conclusion that contingency imperative is likely to be more applicable in organizational design. While equifinality may occur, its likelihood is relatively rare, only at special occasions, when the importance of contingencies is equal in the structural contingency approach. Thus, the contingency imperative generally holds in the organizational design in the context of multiple contingencies. Moreover, where contingencies are equally important in their effects on performance, structural separation can also be a solution to conflicting contingencies. Hence, despite the fact that equally important contingencies can lead to a range of fitting structures, equifinality is rare and there will usually be a contingency imperative.

The theoretical contributions of this paper are mainly twofold. In structural contingency approach, while the discussion is generally developed on the basis of Gresov’s (1989) insight that the relative importance of contingencies leads to the support to different theoretical implications, this paper also makes a critique of Gresov’s criteria on the importance of contingencies and points out that the importance of
contingencies should be defined as the effect on performance of the fit between structure and the contingency. Moreover, this paper also brings in the concept of structural separation and reveals that it supports the contingency imperative view.

**Future research**

First, more empirical studies are needed to fully test equal- and unequal-contingencies hypotheses. Although the existing studies reveal that unequal contingencies are more common than equal contingencies, the number of these studies is limited. Therefore, further research is still required to test the likelihood of equal- and unequal-contingencies contexts.

In addition, comparing structural contingency approach with structural separation approach, the latter seems to be a better solution to multiple contingencies, because in this way structure is able to satisfy the requirements from different contingencies simultaneously without a misfit. However, structural separation is possibly only applicable in certain contexts, whereas structural contingency approach will be more powerful in explaining the fit of structure to multiple contingencies. It remains an empirical issue to explore under which context each approach is more valid.

Finally, it may be important to extend the theoretical reasoning into the contexts of three or more contingencies. In this paper, most of the discussion focuses on the cases with two contingencies for a focal structure. However, it is possible for a structural variable to have three or more main contingencies (Donaldson 2009). It may be of theoretical value to examine how the increase in the number of contingencies affects the identification of fit relationship as well as the debate between contingency imperative and equifinality explanations.
References


Lawrence PR and Lorsch JW (1967) *Organization and Environment: Managing Differentiation and Integration*, Harvard University, Graduate School of Business Administration, Division of Research, Boston.


Figure 1: A Classification of Multiple-contingencies Contexts

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<thead>
<tr>
<th>Importance of contingencies</th>
<th>Equal</th>
<th>Unequal</th>
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<tbody>
<tr>
<td>Non-conflicting</td>
<td>Consistent contingencies: Single fitting structure</td>
<td>Consistent contingencies: Single fitting structure</td>
</tr>
<tr>
<td>Conflicting</td>
<td>Even contingencies: Equifinality</td>
<td>Dominant contingency: Single fitting structure</td>
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Figure 2: Fit to the Consistent Contingencies in Structural Contingency Approach

Figure 3: Fit to Conflicting Contingencies in Structural Contingency Approach