

Stratified View of Institutional Fit

Paper published in
British Journal of Management (BJM)

Full citation to this publication:

Fernandez-Giordano, M.; Gutierrez, L.; Llorens-Montes F.J. and Choi, T.Y. (2021): Stratified View of Institutional Fit. *British Journal of Management*. DOI: <https://doi.org/10.1111/1467-8551.12546>

Marisel Fernandez-Giordano¹ - mfernandezg@ugr.es University of Granada, Spain

Leopoldo Gutierrez¹ - leogg@ugr.es University of Granada, Spain

Francisco Javier Llorens-Montes¹ - fllorens@ugr.es University of Granada, Spain

Thomas Y. Choi² - thomas.choi@asu.edu Arizona State University, USA

STRATIFIED VIEW OF INSTITUTIONAL FIT

Abstract

Institutional theory suggests that organizations pursue legitimacy by institutional fit. However, there is a debate about the relationship between institutional fit and performance. Thus, the goal of the present study is to delve more deeply into this issue. Specifically, we evaluate how three dimensions of fit (technology, structure and culture) are related to organizational performance. The analysis is based on survey data and secondary archival data from a sample of 200 firms. Results show that the association of institutional fit and organizational performance varies along different dimensions of fit, which supports the stratified view of institutional fit. According to the results, there is a positive correlation between institutional fit and performance on the technological dimension, no correlation between institutional fit and performance on the structural dimension, and a negative correlation between institutional fit and performance on the cultural dimension. One thing is clear: we should consider a stratified view of institutional fit when considering its implication for performance. A possible explanation for the disparity among different dimensions of fit is that it may arise from the levels of organizational resistance associated to the type of change of each dimension.

Keywords: institutional fit; institutional theory; isomorphism; performance; organizational resistance.

Introduction

Over the past three decades, institutional theory has developed into one of the leading perspectives in organizational analysis (Heugens and Lander, 2009). Its primary thesis is that the institutional environment influences organizational behaviour (Oliver, 1991). Organizations are embedded in institutional environments or organizational fields (Kostova, Roth and Dacin, 2008, 2009) that promote norms ‘explaining what is and what is not, what can be acted upon and what cannot’ (Hoffman, 1999, p. 351).

The vast majority of studies have focused on how institutional pressures lead to institutional fit (Dubey *et al.*, 2017, 2019; Huo *et al.*, 2013); the organizational response to these pressures (Chaudhry and Rubery, 2019; Gaganis *et al.*, 2021; Villadsen, 2013; Wilson and McKiernan, 2011; Beynon *et al.*, 2021; Sena *et al.*, 2021), the relationship between institutional fit and legitimacy (Liedong, Rajwani and Mellahi, 2017), and the relationship between institutional fit and performance (Volberda *et al.*, 2012; Peretz and Morley, 2021; Dubey, Gunasekaran and Ali, 2015). In this regard, it is deemed good for organizations to conform to institutional norms (Heugens and Lander, 2009) to obtain legitimacy (i.e. acceptance by business partners) and resources (i.e. new contracts). By doing so, organizations fit better into the institutional environment and increase their performance (Heugens and Lander, 2009). Simply put, to increase performance, organizations should increase their institutional fit.

Institutional fit has been formally defined as ‘the degree of compliance of an organization’ to institutional norms (Kondra and Hinnings, 1998, p. 750). This fit is an outcome-state derived from isomorphic processes (Hawley, 1968), wherein organizations take on institutionally accepted traits and end up resembling each other (DiMaggio and Powell, 1983). From a single organization’s perspective, the goal is to attain fit with its institutional environment (Dacin, 1997).

However, as to how institutional fit may affect performance, the literature is quite divided. On the one hand, there are studies that promote fit as good (Heugens and Lander, 2009; Volberda *et al.*, 2012). The institutional fit enables the acquisition of better resources, efficient practices and better learning (Deephouse, 1999; Heugens and Lander, 2009). On the other hand, there are studies that suggest otherwise (Choi and Eboch, 1998; Miemczyk, 2008; Westphal *et al.*, 1997). These studies assert that institutional fit can be costly, awkward and can reduce competitiveness (Barreto and Baden-Fuller, 2006; Miller *et al.*, 2013; Westphal *et al.*, 1997). Institutional fit can have varied effects on performance such as pitting customer satisfaction against plant efficiency (Choi and Eboch, 1998). Therefore, we ask, is fit always good? Is there more to fit when it comes to how it affects performance? Given the importance of knowing the relationship between institutional fit and performance, the goal of the present study is to delve more deeply into how institutional fit affects performance. Specifically, we evaluate how three dimensions of fit (i.e. technology, structure and culture) are related to organizational performance.

We make two contributions to the literature. First, we contribute to the debate surrounding the relationship between institutional fit and performance, empirically testing the concept of fit in a loosely coupled and permeable organizational field such as the high technology sector. Although several studies use the concept of institutional fit, many of them evaluate the relationship between institutional fit and performance from a purely theoretical perspective (Greenwoods and Hinings, 1996; Kondra and Hinings, 1998), others use case studies with a small number of firms (Boon *et al.*, 2009) or evaluate this relationship indirectly (e.g. evaluating how certain pressures influence the adoption of environmental practices and, in turn, how these practices can be related to performance) (Huo *et al.*, 2013; Choi and Eboch, 1998; Zhu and Sarkis, 2007; Dubey *et al.* 2017). Furthermore, previous studies focused mainly in public sector organizations and in highly

institutionalized organizational fields (Ashworth, Boyne and Delbridge, 2009), thus other sectors need to be examined. We try to fill this gap with empirical testing.

Second, we propose a stratified view of institutional fit as a construct. Building on the literature (Meyer and Rowan, 1977; Scott, 1987, 2008; Volberda *et al.*, 2012), we postulate structure, culture and technology as three dimensions of institutional fit. We investigate whether and how performance might vary across different dimensions considered for the fit. Generally, studies have analyzed institutional fit as a unidimensional construct (Deephouse, 1996; Heugens and Lander, 2009; Miller and Eden, 2006; Volberda *et al.*, 2012; Wu and Salomon, 2016). Even Volberda *et al.* (2012), who theorized three different dimensions of institutional fit, treated it as a single construct when testing it. Our results suggest that ‘balancing tactic’ or partial conformity to the institutional processes could be an adequate strategic response to improve organizational economic performance.

Literature review

Institutional Fit and Performance

Despite the extensive body of work that examines the antecedents and consequences of institutional fit, the relationship between institutional fit and performance is increasingly subject to debate. This disagreement has been referenced by institutional theorists (Heugens and Lander, 2009; Volberda *et al.*, 2012) and operations management (OM) researchers (Choi and Eboch, 1998; Kauppi, 2013; Ketokivi and Schroeder, 2004). These researchers have studied how the institutional environment plays a determining role in the adoption of operational practices to increase performance. Various studies have attempted to evaluate whether institutional fit really

improves performance (Heugens and Lander, 2009; Miller and Eden, 2006; Rogers *et al.*, 2007; Volberda *et al.*, 2012; Wu and Salomon, 2016).

Overall, the literature seems to be divided into two camps, one that promotes a positive relationship between institutional fit and performance, and the other that argues for a more nuanced relationship (see Tables 1 and 2).

Table 1. Positive Arguments for Institutional Fit

<i>Studies</i>	<i>Positive arguments</i>	<i>Explanation</i>
<i>Deephouse (1999)</i> <i>Heugens and Lander (2009)</i> <i>Volberda et al. (2012)</i> <i>DiMaggio and Powell (1983)</i>	Better resource acquisition	Institutionally confirming firms have greater capability to acquire resources from customers, suppliers and regulators. These firms accrue legitimacy and are viewed as non-threatening to the reputations of others and as low risk.
<i>Heugens and Lander (2009)</i> <i>Deephouse (1999)</i>	Efficient practices	Institutionalized models persist because they offer efficiency. Over time, certain practices are approved, accepted and become institutionalized. These practices persist because they, too, are proven to offer efficiency. Without efficiency's being reinforced, these practices begin to lose legitimacy and may become deinstitutionalized.
<i>Volberda et al. (2012)</i> <i>Zhu and Sarkis (2007)</i> <i>Wu et al. (2012)</i>	Collectively accepted learning	Firms may learn from conducting their own research, but to do that they must expend their resources. They can also learn from benchmarking others and imitating what they do. This process of learning from what others have done and accepted would offer more expediency.
<i>Heugens and Lander (2009)</i> <i>Deephouse (1999)</i> <i>Zbaracki (1998)</i>	Sanctioned differentiation	Once a firm becomes part of an institutional field, others may allow it to be a little different. This differentiation may help competitiveness. Deephouse (1999, p. 152) references the 'range of acceptability'.

Note: It should be noted that not all previous studies explicitly express the concept of institutional fit. However, the interpretation is made through the operationalization of this concept used by the authors. Source: Developed by the authors.

Table 2. Nuanced arguments for institutional fit

Studies	Negative arguments	Explanation
Barreto and Baden-Fuller (2006)	Cost of conforming	Firms need to expend corporate resources to conform to institutional norms. They must search for and discover what others do and then carry out activities to conform at the organizational level. It also takes resources to remain in conformity. According to Barreto and Baden-Fuller (2006), these are the resources that may be better expended on other activities that are more closely associated with the corporate bottom line.
Choi and Eboch (1998) Ferrón-Vilchez (2016) Miernczyk (2008)	Decoupling of value-adding activities	A firm's internal value-adding activities seeking efficiency and its effort to conform to institutional demands may conflict. To overcome this conflict, firms often decouple these two types of activities, akin to saying one thing to external constituents and doing something else internally.
Westphal et al. (1997)	Lack of differentiation	Isomorphism eliminates the possibilities for a firm to be different from its competitors, thereby reducing its ability to obtain competitive advantages.

Note: It should be noted that not all previous studies explicitly express the concept of institutional fit. However, the interpretation is made through the operationalization of this concept used by the authors. Source: Developed by the authors.

Positive relationship argument. Many researchers consider institutional fit positively related to performance (Heugens and Lander, 2009; Volberda *et al.*, 2012; Wu *et al.*, 2012; Zhu and Sarkis, 2007). Institutional fit, as conformity with institutional norms, improves organizational performance (Heugens and Lander, 2009). Isomorphic organizations attain institutional legitimacy, which then helps attract higher-quality resources. Volberda *et al.* (2012) argued that institutional fit increases performance through different reinforcing mechanisms such as collective learning and access to resources. Similarly, Deephouse (1999) found that strategic conformity improves social acceptance of these firms and their performance. Rogers *et al.* (2007) found that suppliers improved internal operational efficiency as a result of institutionally applied supplier development programs. Examining the environmental and economic performance in Chinese manufacturers, Zhu and Sarkis (2007) found that the presence of mimetic pressures encourage increases in economic performance through reduced costs for materials, energy, waste treatment

and waste discharge. Along these lines, Wu *et al.* (2012) argued that mimetic isomorphism could lead firms to a more efficient utilization of their resources.

Nuanced relationship argument. A few researchers, however, have indicated that legitimacy-driven forces may lead firms to suboptimal resource decisions (Oliver, 1997). In the words of Meyer and Rowan (1977, pp. 340-341), ‘conformity to institutionalized rules often conflicts sharply with efficiency criteria’. Barreto and Baden-Fuller (2006) found that mimetic isomorphism contributes negatively to the firm’s profitability. In uncertain situations, it is likely that firms’ strategic choices will ‘result in erroneous or economically inefficient choices with adverse consequences and offer an explanation for mimetic adoption of technically inefficient innovations’ (Barreto and Baden-Fuller, 2006, p. 1563). Analyzing a sample of 2,700 hospitals in the U.S., Westphal *et al.* (1997) showed a negative relationship between isomorphism and efficiency. The late adopters of TQM were subject to institutional pressures and adopted these programs to make their practices conform to the environment, thus increasing their legitimacy but reducing their efficiency. Choi and Eboch (1998) proposed that the impact of institutional conformity on customer satisfaction versus operational performance was different. When TQM programs are not ‘driven by the internal needs justified by the technical reasoning but by external needs justified by the institutional reasoning’, operational performance can be jeopardized (Choi and Eboch, 1998, p. 71). When firms prioritize external legitimacy instead of internal efficiency-driven behaviour, variations may occur in the implementation of organizational practices (Ferrón-Vílchez, 2016; Delmas and Montes-Sancho, 2016). Miemczyk (2008) examined the implications of the institutional environment for manufacturing firms’ end-of-life product recovery capabilities. The results of their study show that coercive pressures on firms lead to restrictions in existing processes and systems.

Most studies from these two schools of thought have considered institutional fit as a one-dimensional construct. Volberda *et al.* (2012) evaluated the institutional fit jointly despite recognizing three dimensions of fit. Also, when institutional fit was measured in banking (Barreto and Baden-Fuller, 2006; Deephouse, 1999), researchers recognized several facets but finally evaluated all of them as being isomorphic. It is likely that institutional fit is a multidimensional construct; institutionalization is a complex process (Meyer and Rowan, 1977; Scott, 2008). Therefore, the relationship of each of the dimensions with performance would likely be different. Ashworth *et al.* (2009), in their study of 101 public organizations in England, found that institutional pressures affected some organizational characteristics differently.

Institutional fit represents the level of conformity with institutional norms an organization exhibits. However, not all institutional norms have significant impact on organizations (Dacin, 1997). For some dimensions, the institutional fit would have positive effects while for other dimensions it might have other effects. In fact, some studies of institutional fit have made vague reference to this observation. Barreto and Baden-Fuller (2006) suggested the possibility that not all dimensions are equally important for institutional conformity and performance. Deephouse (1999) also pointed out that in markets with strong institutional forces, both conformity and non-conformity with institutional norms were important to performance. Therefore, we submit the following proposition.

Proposition: The association between institutional fit and organization performance varies along different dimensions of institutional fit.

Context of the Empirical Analysis

We evaluate the validity of the institutional fit on organizational performance using the spanish high technology sector as an institutional field. The institutional field is a useful framework for

identifying relevant institutional actors and phenomena of interest. The spanish high technology sector constitutes an organizational field that comprises a distinctive area of the institutional environment that includes, 'key suppliers, resources and consumers of products, regulatory agencies and other organizations that produce similar services or products' (DiMaggio and Powell, 1983, p. 148). Firms immersed in a particular institutional field face different institutional pressures for institutional fit (DiMaggio and Powell, 1983).

The spanish high technology sector is made up of manufacturing and service firms whose activities require a high level of knowledge and research effort. These firms have in common a dependence on advanced scientific and technological expertise and are often identified by their high investments on research and development (National Institute of Statistics of Spain, INE). Due to the characteristics of the sector (e.g. national and international competition, product obsolescence, changing customer needs) (Wong *et al.*, 2013), these firms compete in an environment with high uncertainty, which makes them sensitive to institutional processes (Volberda *et al.*, 2012). Faced with situations of uncertainty in an institutional field, organizations face pressure to copy or emulate other organizations' activities, systems, or structures (DiMaggio and Powell, 1983). Aspects that are deemed to enhance legitimacy are seen as desirable, especially under conditions of uncertainty where actors cannot be sure of the relationship between organizational means and ends (Ashworth *et al.*, 2009). In this sense, the role played by the institutional environment of these firms is increasingly significant.

Three Dimensions of Institutional Fit: Structure, Culture and Technology

Structure. According to DiMaggio and Powell (1983), structure has been the most widely studied construct by institutional analysts (DiMaggio and Powell, 1983; Meyer and Rowan, 1977; Tolbert and Zucker, 1983). Organizational structure 'can be defined as the set of rules and roles

that shape the relationships between parts of an organization' (Ashworth *et al.*, 2009, p. 172). Such complex relationships within the structure of an organization arise from the processes of exchange and the existence of institutional norms (Meyer and Rowan, 1977). Firms in the high technology sector in Spain are under institutional pressure to introduce organizational structures that promote efficiency and the use of knowledge. This dimension could be more susceptible to institutional fit, as it represents a 'peripheral' attribute of the organizations that does not directly affect the identity and values of the organization (Hannan y Freeman, 1984; Ashworth *et al.*, 2009).

Culture. Organizational culture refers to the values, beliefs, assumptions and symbols that define the way in which a firm conducts its business (Volberda *et al.*, 2012). Scott (2008, p. 428) asserts that culture is a complex set of 'shared conceptions that constitute the nature of social reality and the frames through which meaning is made'. Such shared conceptions provide order not only by being mapped onto organizational forms and procedures but also by their direct influence on the beliefs and behaviours of individual participants (Scott, 1987). Culture can lead to substantive differences in how organizations operate in different institutional fields (Ahlstrom and Bruton, 2002), thus suggesting that different organizations might attain different levels of institutional fit. The speed at which knowledge becomes obsolete in the high-tech sector pushes firms to create a corporate culture that can continue to produce new applications of knowledge in the field. However, organizational culture can be relatively insensitive to pressures from the institutional field by representing a core aspect of organizations (Ashworth *et al.*, 2009). The core is defined simply 'as embodying an organization's identity and value system' (Hannan and Freeman, 1984, p. 155).

Technology. Finally, technology represents the hard assets and the knowledge necessary to orchestrate those assets to engage in value-adding activities (Volberda, 1996). The technology

consists of a physical component that includes elements such as products, tools, equipment, plans, techniques and processes and an informative component that consists of knowledge about different functional areas (Wahab, Rose and Osman, 2012). This dimension, like the organizational structure, is a 'peripheral' attribute of the organizations. Those aspects that are more tangible and related to the organization's processes are probably more open to the influence of the institutional environment (Ashworth *et al.*, 2009).

Methods

Unit of Analysis

The unit of analysis for this study is the firm. To measure how a firm would respond to the institutional field and make changes in the organization that would affect performance, we chose upper-level managers (e.g. Chief Executive Officers, Chief Operational Officer and other Top-level Managers). These managers are industry experts, having a close association with the long-term trajectory of the businesses they operate in and are responsible for analyzing and interpreting the institutional requirements of their industry (Volberda *et al.*, 2012).

Sample and Data Collection

The target population is composed of Spanish firms. Selecting firms located in a relatively homogeneous space, minimize the impact of other variables that cannot be controlled in empirical research (Rojo *et al.*, 2016). The list of firms was compiled from the Sistemas de Análisis de Balances Ibéricos (SABI) database. Only firms belonging to the high technology sector were chosen. To select firms in this sector, we used the procedure developed by Kile and Phillips (2009).

Primary data. A survey was designed to gather specific information on the three dimensions of institutional fit (structure, culture and technology). A pilot survey was developed and validated

with a pre-test and the assistance of six practitioners and three academics. With their feedback, the final survey was developed. The data collection was done through a computer-assisted telephone interview system. A final sample of 200 firms was obtained (see Appendix A).

Secondary data. Secondary data were obtained through SABI. Following the previous research (Villena *et al.*, 2011), we used this database to validate the survey-based measures. It was also used to verify the non-response bias and to obtain the dependent variable and the three control variables.

Measurement Development and Assessment

All questions in the survey were answered on a seven-point Likert scale (1 = strongly disagree to 7 = strongly agree).

Operationalization of the institutional fit. Organizations achieve greater performance when organizational response variables match environmental variables (Volberda *et al.*, 2012). We used the following definition to operationalize institutional fit: ‘the alignment between three organizational design variables (structure, culture and technology) and the institutional environment’ (Volberda *et al.*, 2012, p. 1041).

To measure institutional fit, we noted that firms tend to follow the behaviour of other firms that are perceived to be ‘more legitimate or successful’ (DiMaggio and Powell, 1983, p. 152). These firms are assumed to have reached fit with their environment (Kondra and Hinings, 1998; Volberda *et al.*, 2012), and because these successful firms have high visibility and prestige in their organizational field, they influence the actions of other firms (Haveman, 1993). In the for-profit sector, highly profitable organizations are viewed as more successful than less profitable organizations, thus, the most profitable organizations serve as the benchmark for the rest (Haveman, 1993). Following the methodology used by Volberda *et al.* (2012), we assumed that

top-performing firms respond effectively with the institutional requirements of the environment. As did Volberda *et al.* (2012), we also used the practices of these leading firms as a surrogate measure for institutional field. Therefore, the impact of a firm's practices on organizational performance depends on their similarity to the practices of top performing firms. This impact is captured in the following equation 1, with Y as firm performance:

$$Y = f[\text{abs}(X_1^h - X_1) + \text{abs}(X_2^h - X_2) + \text{abs}(X_3^h - X_3)],$$

where $(X_1^h - X_1)$ is the structural misfit; $(X_2^h - X_2)$ is the cultural misfit; and $(X_3^h - X_3)$ is the technological misfit.

Institutional fit $(X_i^h - X_i)$ for each of the independent variables is measured as the absolute differential score of a firm with respect to the top-performing firms. Volberda *et al.* (2012) use the Z-score for firm performance ≥ 1.5 to identify top-performing firms, and our approach was consistent with theirs. X_1 , X_2 and X_3 are calculated as the average values of the structural ($\bar{x}_e$ 5.83), cultural ($\bar{x}_c$ 5.42) and technological ($\bar{x}_t$ 4.76) practices, respectively, of top-performing firms.

To recap, Y is firm performance, X_1^h is the structural variable representing the top performing firms, X_1 is the structural variable of the rest of the firms, X_2^h is the cultural variable of the top performing firms, X_2 is the cultural variable of the rest of the firms, X_3^h is the technological variable of the top performing firms, X_3 is the technological variable of the rest of the firms. We want to note that institutional fit as measured in Equation 1 really represents the lack of institutional fit, which should therefore be considered as institutional misfit.

Independent variables. Our model includes three independent variables: structure, culture and technology. Items related to structure reflect the rules and procedures organizations use in decision making, coordination and execution. These items were adapted from the work of Volberda *et al.* (2012) and Covin and Slevin (1988). Items related to culture reflect the values or beliefs shared by

members of an organization. These items were adapted from the work of Volberda *et al.* (2012) and Hult, Ketchen and Arrfelt (2007). Items related to technology reflect the resources related to the knowledge, information, communication and the use of technologies. These items were adapted from Volberda *et al.* (2012).

Dependent variable. Firm performance was measured using the operating profit of the firm. Operating profit is the profitability of the business from core operations, excluding any financing or tax-related issues, and we collected this data from the SABI database. To determine operating profit, operating expenses were subtracted from gross profit. We used this measure because it represents the income earned from the core operations of a business. This information is particularly valuable for seeing how a business is performing over a long period, and it is a key number for managers to monitor as it reflects the revenue and expenses they can control.

Control variables. Firm size, firm age and firm's past performance, which were gathered from SABI. Firm size is measured as the number of employees in the firm. This variable is key in the relationship between strategy and performance (Volberda *et al.*, 2012). Firm age is measured as the number of years since the firm was legally formed. Older firms could have higher levels of productivity, experience and resources to achieve performance goals (Villena, Choi and Revilla, 2016). Finally, firm's past performance is measured using the operating profit of the previous year. More profitable firms may be able to devote more resources to improving their performance (Villena, Choi and Revilla, 2016).

Measurement assessment. We examined the reliability and validity of the measurement scales following the procedure developed by Kaynak and Hartley (2006). To assess the reliability of each scale, we calculated Cronbach-alpha's (α) coefficient. All coefficients exceed the generally accepted cutoff values of 0.7. Confirmatory factor analysis (CFA) using the EQS 6.1 software

package was performed to complete this analysis by calculating the composite reliability (CR), whose recommended minimum value is 0.7 and the average variance extracted (AVE), whose recommended minimum value is 0.5 (Hair *et al.*, 2014). Table 3 shows the scales in all cases to be within the accepted limits. We also conducted a confirmatory factor analysis (CFA) to evaluate the convergent and discriminant validity. All standardized item loadings are above the cutoff of 0.60 and are significant at the 0.001 level, indicating that the constructs exhibited convergent validity (Hair *et al.*, 2014). All scales satisfy the requirements for convergent validity (see Table 3).

Insert Table 3

To assess discriminant validity, we compared the correlation of each pair of factors to the square root of the AVE for each factor. To achieve discriminant validity, correlation of two factors must be less than the square root of the variance extracted for each factor (Fornell and Larcker, 1981). The results confirmed discriminant validity (the square root of the AVE variables are: structure = 0.76; culture = 0.81; and technology = 0.88). As an additional test for discriminant validity, we constructed confidence intervals (± 2 standard errors) around the estimated correlation between two factors. Results confirmed that none of the confidence intervals include 1.0. Therefore, discriminant validity is achieved (Anderson and Gerbing, 1988) (see Table 4). In addition, following Henseler *et al.* (2015), the heterotrait-monotrait ratio of correlations (HTMT) was calculated for each pair of constructs. As Table 5 shows, the HTMT ratio is < 0.85 for each pair of constructs, also indicating the presence of discriminant validity.

Insert Table 4

Insert Table 5

Tests for non-response bias and common method bias (CMB). Potential non-response bias in the sample was assessed following the recommendation of Fawcett *et al.* (2014) by comparing the mean values between respondents (200 firms) and non-respondents (a subsample of 206 firms respondents was selected at random from the initial contact list) according to the number of employees (firm size), age (firm age), sales, and performance variables. The results for the *t*-test revealed no significant differences for any variable (number of employees $t = -0.25$; $p = 0.80$; age $t = 1.85$; $p = 0.07$; sales $t = 0.89$; $p = 0.37$, and, performance $t = -1.21$; $p = 0.23$). Furthermore, to analyze the presence of possible ‘late-response bias’ in the sample, the study determined whether there were significant differences between the firms that responded first and the firms that responded at the end of the fieldwork. To do so, the sample was divided into responses obtained on the first phone call ($n = 78$) and responses obtained after more than one call ($n = 122$). The results for the *t*-test revealed no significant differences for any variable (number of employees $t = -0.59$; $p = 0.56$; age $t = 0.39$; $p = 0.07$; sales $t = 0.04$; $p = 0.97$, and, performance $t = -0.79$; $p = 0.43$). In addition, non-respondents were asked why they were unable to take part. The main reasons were the lack of a qualified person to answer the survey and a firm policy that did not allow the sharing of confidential information.

CMB was evaluated following the suggested procedures by Podsakoff *et al.* (2003). We employed rigorous tests of CMB which involved both procedural and statistical methods. First, the items were not grouped by constructs, and various response formats were used. The respondents' anonymity has also been protected, and a survey pre-test was performed to avoid ambiguity. The data used for the variables of the study come from primary and secondary sources. Utilizing multiple sources enhances the reliability and validity of the data and reduces the potential risk of CMB (Spector, 2006). Second, CMB was examined using statistical tests, starting with Harman's single-factor test (Podsakoff *et al.*, 2003). We loaded all variables in the exploratory factor analysis, constraining the number of factors to 1. As the first component accounts for less than 50% of all variables (It accounts for 48.78% of the variance), CMB is not a problem in our study. Second, a common-method model following the guidelines of Podsakoff *et al.* (2003) was examined. This model was created under the assumption that all scale items load in the same factor. The fit indices for the common-method model were: root mean square error of approximation (RMSEA) = 0.16, comparative fit index (CFI) = 0.63, incremental fit index (IFI) = 0.64, Bentler-Bonnett non-normed fit index (BBNNFI) = 0.56. The results obtained confirm that the CMB is not a problem. The indices of the model worsened with respect to the validation of the scales composed of more than one factor (RMSEA = 0.07, CFI = 0.94, IFI = 0.94, BBNNFI = 0.92). We also tested for CMB using the correlation marker technique (Lindell and Whitney, 2001). The survey included the variables of interest for the study and a variable theoretically unrelated to them (marker variable) but equally susceptible to measurement biases. The method assumes that, when the variance of the common method is present, the marker variable will be just as affected as the interest variables by the effects of the method. The correlations between the interest latent variables of the study (i.e. structure, culture, and technology) were greater than the correlation between the

variable marker and the interest variables (see Appendix B). Based on these results, we consider the potential effects of CMB to be non-substantial (Dubey *et al.*, 2019).

Analysis and results

Table 6 provides means, standard deviations and correlations. As a preliminary step to the regression analysis, the assumptions of multivariate analysis for the variables were tested. The requirements of normality, linearity, homoscedasticity and multicollinearity were satisfied by all the variables. The data were normalized using the LISREL 8.80 software. Collinearity statistics for each of the regression models yielded variable inflated factor (VIF) scores below 2 (ranging from 1.03 to 1.26) and condition indices scores below 17, suggesting that multicollinearity was not a serious problem in the analysis (ranging from 1.00 to 5.55) (Belsley, 1991; Kleinbaum *et al.*, 2013). The Durbin-Watson test that measures the independence of errors in the regression also showed adequate scores, given that their value was close to 2 (1.58).

Insert Table 6

Once we verified the fulfillment of all these requirements, we tested the hierarchical regression analysis. Table 7 shows the main results obtained.

Insert Table 7

This study investigates the practices that firms' engagement with three variables (structure, culture and technology) and how these practices affect its performance. Model 1 tested the control variables: firm size, firm age and firm past performance.

Both the firm size and firm age variables were non-significant in this model. As expected, firm past performance had a positive and significant relationship with firm performance ($\beta = 0.62$; $t = 10.66$; $p = 0.000$). Model 2 added the structural misfit. This variable showed a positive and non-significant relationship with firm performance ($\beta = 0.06$; $t = 1.02$; $p = 0.310$). Model 3 added the cultural misfit. In this model, the structural misfit retained its positive and non-significant relationship with firm performance ($\beta = 0.02$; $t = 0.35$; $p = 0.725$). However, the cultural misfit showed a positive and significant relationship with firm performance ($\beta = 0.10$; $t = 1.65$; $p = 0.100$). Finally, model 4 added the technological misfit. In this model, structural misfit retained its positive and non-significant relationship with firm performance ($\beta = 0.04$; $t = 0.69$; $p = 0.491$). Cultural misfit kept a positive and significant relationship with firm performance ($\beta = 0.14$; $t = 2.35$; $p = 0.020$). Technological misfit showed a negative and significant relationship with firm performance ($\beta = -0.16$; $t = -2.71$; $p = 0.007$). Since we are using the institutional misfit concept (see section Operationalization of the institutional fit), the institutional fit concept needs to be interpreted in the opposite way.

In sum, the results confirm the initial preposition: The relationship between institutional fit and organization performance varies along different dimensions of institutional fit.

We have performed a robustness test for the regression analysis, including a control variable to rule out that different subsectors of the sample could have a different fit. This control variable is a dummy variable that distinguishes between manufacturing and service firms in the high technology sector, since each subsector could face different levels of uncertainty or pressures to

innovate. The results have shown that there are no differences in relation to performance between the evaluated subsectors. The results of the robustness test can be found in Appendix C.

Discussion

The literature shows mixed dispositions with regard to the relationship between institutional fit and organizational performance. We see inconsistency in previous researchers' approach to conceptualizing the institutional fit and measuring it. Many of them (Barreto and Baden-Fuller, 2006; Deephouse, 1999; Volberda *et al.*, 2012) theorize institutional fit as a multi-dimensional construct but measure it as a unidimensional one. Our research addresses that inconsistency by conceptualizing it as a multidimensional construct and examining empirically the three dimensions of institutional fit - technology, structure and culture - as proposed by Volberda *et al.* (2012).

Our results support the stratified view of institutional fit. The relationship between institutional fit and organizational performance varies along different dimensions of fit. Conforming to others is not uniformly beneficial, institutional fit is fraught with difficulties and its performance implications are hard to predict (Chandler and Hwang, 2015; Miller *et al.*, 2013). Institutional fit can improve performance (Heugens and Lander, 2009; Rogers *et al.*, 2007; Volberda *et al.*, 2012; Zhu and Sarkis, 2007), but it can also hurt performance (Barreto and Baden-Fuller, 2006; Choi and Eboch, 1998; Miemczyk, 2008; Westphal *et al.*, 1997). These findings help us move toward integrating two scholarly dispositions by proposing the stratified effects of institutional fit. We define the stratification of institutional fit as 'the discrimination of dimensions of institutional fit (e.g. technology, structure and culture) whose impact on performance varies depending on the dimension evaluated'.

Our results show a positive correlation between institutional fit and performance for the technological variable, no correlation between institutional fit and performance for the structural variable and a negative correlation between institutional fit and performance for the cultural variable. Overall, the results support our proposition. However, when we were formulating our proposition, we anticipated varying levels of correlation across different dimensions. We did not expect a negative correlation.

One possible explanation for this unexpected result may arise from the levels of organizational resistance with respect to a specific norm. To achieve institutional fit, organizations must make organizational changes (Del Val and Fuentes, 2003) that involve the adoption of new practices that frequently face some type of organizational resistance (e.g. workers see their status quo endangered, established ways of doing things in the organization are modified and uncertainty increases) (Kotter and Schlesinger, 2008). Resistance delays and obstructs the implementation of change and increases its costs (Ansoff and McDonnell, 1990). Therefore, the greater the organizational resistance, the more performance could be damaged.

However, not all organizational changes lead to the same organizational resistance. Changes can occur along a continuum from evolutionary changes (also called low-scope change) to revolutionary changes (also called high-scope change). According to Greenwoods and Hinings (1996), evolutionary change occurs slowly and gradually but revolutionary change occurs rapidly and affects all parts of the organization simultaneously. Depending on the type of change (or its level of scope), resistance may be greater or less (Del Val and Fuentes, 2003). In the high technology sector, the structure of the institutional field, is loosely coupled and its permeability is significant (i.e. it lacks strongly consolidated institutional norms and its relationship with other sectors is high), so if they did occur, the changes would be evolutionary (Greenwoods and Hinings,

1996). In Figure 1 we propose that the three dimensions analyzed in the study (technology, structure and culture) may represent a spectrum of levels of organizational resistance.

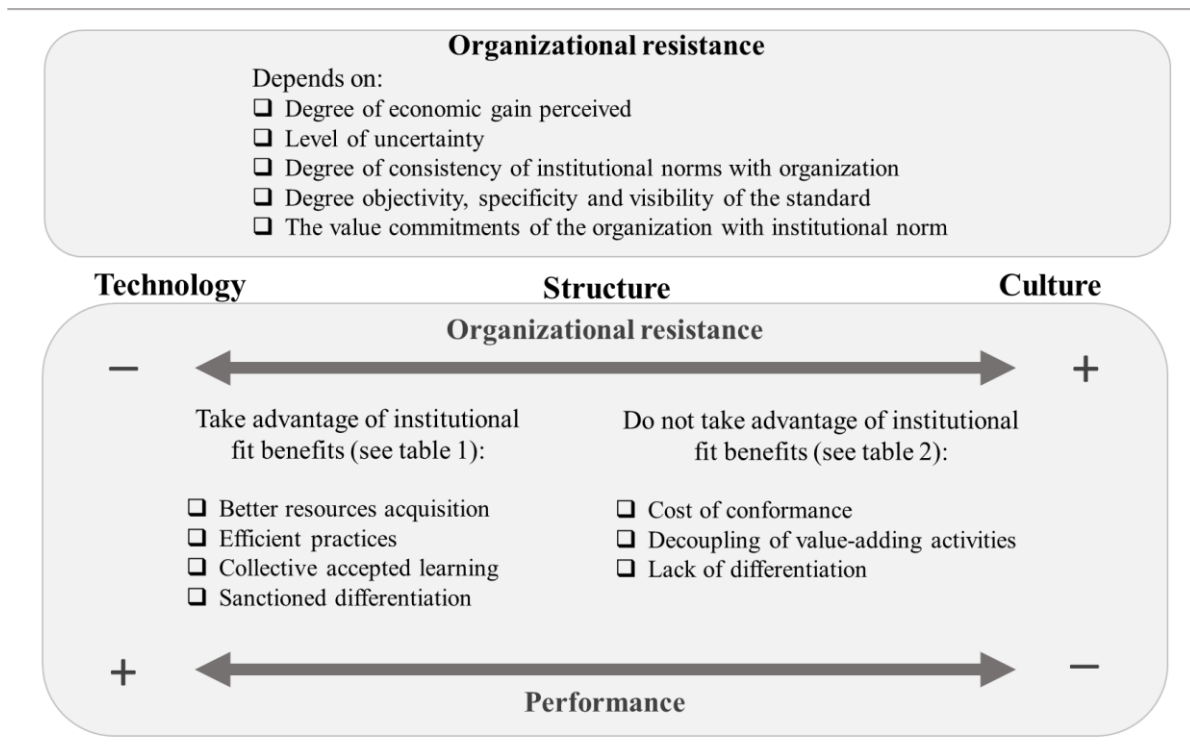


Figure 1. Levels of Organizational Resistance and its Relationship to Institutional Fit

Technology is represented at the lowest end, structure at the middle level and culture at the highest end. The types of changes associated with each of the dimensions imply a different type of organizational resistance related to the type of change. It has been demonstrated that the levels of organizational resistance to institutionalization depend on multiple factors or antecedents such as the economic gain the organization aspires to obtain when it adopts a norm, the levels of uncertainty associated with the environment, and the levels of consistency between the norm and the organization, the levels of objectivity, specificity and visibility of the norm, or the value commitments of the organization with institutional norm (i.e. the normative embeddedness of an

organization within its institutional context) (Del Val and Fuentes, 2003; Oliver, 1991; Greenwood and Hinings, 1996).

Changing an organization's technology involves adjusting the assets, knowledge and techniques that the organization uses to convert inputs to outputs (Nagarajan and Mitchell, 1998). As with any change, an organization must adapt to a new situation. Consistent with our findings and the propositions developed by Oliver (1991), technological fit may prompt less organizational resistance. The characteristics and functionalities of technology usually develop and are adjusted over time, as the diffusion, adoption and utilization of the technology increases (Liu *et al.*, 2010). These types of changes are more evolutionary, implying less organizational resistance. In addition, following the norm in this context would enable firms to reduce the high cost of researching while benefitting from technologies that have been shown to be more efficient, which leads to reduced costs and uncertainty (Liu *et al.*, 2010). Moreover, institutional norms related to technology are more objective, specific and visible. Firms could take on the changes with less chance of errors. Technology could generate less organizational resistance and enables organizations to enjoy the benefits of institutional fit. When they adopt technological norms, firms use more efficient practices and take advantage of collective learning.

Changing the organizational culture, on the other hand, may involve a fundamental change in the fabric of an organization - the ideas, values and meaning - that the organization's members hold close. These types of changes are more revolutionary, implying greater organizational resistance. These changes are invariably more subjective, ambiguous and complex. Consistent with our results and the propositions developed by Oliver (1991), cultural fit would likely be met with greater organizational resistance. Since organizational culture constitutes a firm's personality or identity (McAfee, Glassman and Honeycutt, 2002; Ramarajan, Rothbard and Wilk, 2017),

attaining cultural fit would involve disturbing the long-entrenched ways of doing things (Cao, Huo, Li and Zhao, 2015; Mello and Stank, 2005). Organizational identity claims uniqueness while institutional fit claims conformity and similarity (He and Baruch, 2010). This situation can generate a conflict in organizational identity. According to Ramarajan *et al.* (2017, p. 2211), ‘identity conflict is the experience where one is torn between, or must give up, the meanings, values and behaviours associated with one identity in order to maintain or preserve another’. Cultural fit involves tension between what the organization is and what it should be. It may even threaten the motivation of employees, who are paralyzed or trapped between two worlds, making it difficult for them to use their knowledge at work and thus jeopardizing performance (Ramarajan *et al.*, 2017). Further, uncertainty increases with the complexity of the changes proposed. The organization may accept some ideas and values superficially but remain skeptical and leave the deepest aspects of its culture intact (Alvesson and Sveningsson, 2015). Therefore, organizations that strive for a better institutional fit through the cultural norm thus may not obtain economic benefits from this adoption, and instead, may end up with a negative outcome.

The example of the automotive manufacturing plant, New United Motor Manufacturing, Inc. (NUMMI), a joint venture of General Motors (GM) and Toyota, illustrates such organizational resistance. NUMMI allowed GM to learn Toyota’s methods that made the firm successful and share them with its plants. However, GM was unable to replicate Toyota’s model, so GM managers visited NUMMI to see how Toyota’s methods worked. There was no mystery. The employees labored diligently, and the production line ran as it would in any efficient plant. Managers from GM left wondering why they could not achieve the same success as NUMMI. GM could process the mechanics of the Toyota Production System (TPS) quite easily, but implementing the TPS was an entirely different story. The actual practices of TPS are socially complex and often context-

specific (Adler, Goldoftas and Levine, 1999; Liker, 2004). TPS's techniques and tools could be adopted mechanically, but to reap the real benefit from them, the underlying cultural aspects had to be adopted also. That was difficult for GM.

We propose that the organizational changes associated with each dimension of the institutional fit face a different level of organizational resistance, which would influence the organization's ability to reap the benefits of institutional fit. When organizational resistance is great (i.e. cultural dimension), negative outcomes acquire relevance, thereby hurting performance. However, when organizational resistance is less (i.e. technological dimension), the opposite occurs and leads to a positive performance outcome.

Theoretical Implications

This study makes two contributions to the literature of institutional theory. First, it contributes to the debate surrounding the relationship between institutional fit and performance, suggesting that organizational resistance to change could be an explanation for the different positions existing in the literature. To our knowledge, this is one of the few studies that evaluates the narrower and more specific concept of institutional fit and its relationship with organizational economic performance, focusing in a loosely coupled and permeable organizational field such as the high technology sector. Specifically, it extends previous research that explored, on a theoretical level, institutional fit and its possible implications on performance (Greenwoods and Hinings, 1996, Kondra and Hinings, 1998), testing empirically the concept of fit, in line with more recent studies in the literature (Boon *et al.*, 2009; Heugens and Lander, 2009; Volberda *et al.*, 2012; Handika and Wibowo, 2018). Our findings show that aspects of the relationship between institutional fit and organizational performance vary according to the dimension studied, and they take a step towards reconciling two stances (positive and negative arguments) regarding institutional fit (Barreto and

Baden-Fuller, 2006; Choi and Eboch, 1998; Heugens and Lander, 2009; Miemczyk, 2008; Volberda *et al.*, 2012; Westphal *et al.*, 1997). These scholarly stances are not contradictory, for each provides a partial explanation of the effects of institutional fit on performance.

Second, we propose the stratified view of institutional fit or the multidimensional perspective of institutional fit as a construct. Volberda *et al.* (2012) offered three dimensions of institutional fit. We built on their work and investigated whether and how performance varies across dimensions considered for the fit. This is an important yet overlooked aspect of institutional fit. In general, studies have analyzed institutional fit as a unidimensional construct (Deephouse, 1996; Heugens and Lander, 2009; Miller and Eden, 2006; Volberda *et al.*, 2012; Wu and Salomon, 2016). Even Volberda *et al.* (2012) pointed out the three dimensions of institutional fit and then treated it as a single construct when testing it. Our response is to propose the stratification of institutional fit, where each dimension impacts performance in a different way. In Figure 1, we suggest organizational resistance as a possible explanation for these findings. Those dimensions that offer greater organizational resistance (e.g. culture) could damage performance because the negative reaction to the institutional fit would acquire relevance. However, the dimensions that offer less organizational resistance (e.g. technology) could improve performance because the economic benefits would be obvious and immediate. Our results suggest that ‘balancing tactics’ or partial conformity to the institutional processes related to structural, cultural and technological dimensions could be an adequate strategic response to improve organizational economic performance, at least in organizational fields that are less institutionally mature. Particularly significant for the institutional theory are the findings for the cultural dimension. It contributes to the literature on institutional logics, indicating that different institutional logics could coexist and compete within an organizational field (Marquis and Lounsbury, 2007; Nicolini *et al.*, 2016).

There could be different institutional logics for each of the evaluated dimensions (i.e. structure, culture, technology) and also within each particular dimension (e.g. culture).

Managerial Implications

Managers should exercise discretion when it comes to why, when and how to adopt institutional fit (Wu and Salomon, 2016). As some researchers have pointed out (e.g. Kauppi, 2013; Ketokivi and Schroeder, 2004), managers must be aware of the effects institutional fit has on performance. The empirical evidence from this work indicates that the adoption of an institutionalized norm has different effects on performance depending on the characteristics of the dimension studied.

Adopting norms associated with the technological dimension could be positive for performance. The technological changes in an organization are associated with a greater economic benefit, less uncertainty and are more objective, specific and visible. They would likely encounter less organizational resistance. Therefore, managers should adopt technological norms. However, adopting norms associated with the cultural dimension could harm performance. Cultural changes in the organization may be associated with lower economic benefits and greater uncertainty. They entail more ambiguous, subjective and complex changes that may undermine the identity of the firm. Changes such as these increase organizational resistance to them. Therefore, managers should be cautious when adopting cultural norms, at least for a short or medium term period.

The study's findings indicate that full conformity with institutional norms may not be the best choice to improve performance. Kondra and Hinings (1998) pointed out that firms with a high institutional fit could have an acceptable institutional performance for their institutional field, but institutional misfit could lead firms to a higher performance. Since firms must have legitimacy to survive in their environments, a possible strategic response to institutional processes could be to use 'balancing tactics' (Oliver, 1991, p. 153). This response would involve partial conformity to

the institutional processes that enable firms to adapt to multiple institutional demands. Thus, our proposal consists of a balancing tactic characterized by a technological fit that corresponds to the conformity required by institutional pressures and the cultural misfit that corresponds to the organizational goals that require not changing an organization. Avoid total organizational convergence with the environment (Wilson and McKiernan, 2011). Although this tactic, initially, could be more risky, the characteristics of this sector (e.g. institutional field less strong) could lead that these firms were not only seen in a positive way by other institutional actors but also that they were imitated. 'In some sectors, performance above institutional norms provides legitimacy' (Kondra and Hinings, 1998, p. 761). Furthermore, institutional theory recognizes that, although organizational cultures within an organizational field tend to converge towards a macroculture, organizational cultures are not unique (Greenwoods and Hinings, 1996). In fact, firms can react differently at the same level of institutional pressures due to differences in their organizational cultures (Dubey *et al.*, 2017).

This study can guide managers in making strategic decisions that enable improved performance without altering institutional legitimacy.

Limitations and Future Research

Some limitations constrain our contributions. First, the cross-sectional research design limits the extent to which cause-effect relations can be inferred from the findings. When evaluating institutional fit with cross-sectional data, there is a risk of analyzing a temporary situation in the organization and not its capability for institutional fit over time. Hence, future research could, where possible, collect longitudinal data to have a more complete view of the fit. Second, our sample only contains firms that are active in Spain and belonging to the high technology sector. This sector is an institutional field with specific characteristics (e.g. high level of uncertainty,

loosely coupled, significant permeability, etc.). Therefore, it would be interesting to replicate the study in other contexts to evaluate not only the validity of these findings but also to be able to compare the levels of resistance to change between sectors. Third, as a single respondent was used to obtain the data, there is risk of CMB. To address this problem, we identified respondents who were experts on the questions studied and obtained data from different sources, which reduces the variance of the method. However, adopting these remedies does not entirely eliminate the risk that CMB. Future studies could confirm the results obtained by using multiple informants on institutional fit.

We proposed a possible explanation for the results obtained, based on organizational resistance. Therefore, future studies could assess whether the proposed arguments on resistance are confirmed for each of the dimensions. It would be interesting to evaluate different institutional norms belonging to each of the dimensions. For example, future studies could evaluate different norms related to technology. In this way, we would obtain a more detailed knowledge of what happens in each of the dimensions, and we would avoid the possible bias associated with evaluating the dimension as a whole (e.g. technology). Aspects such as ‘technological diversity’ (Aldieri *et al.*, 2020) or ‘technological proximity’ (Orlando, 2004) could be evaluated in the institutional context. It would also be important for future studies to explore the effects of the institutional fit using other performance measures (e.g. including performance measures related to social or environmental aspects). Future research also could consider the causes and response mechanisms of fit.

References

Adler, P. S., B. Goldoftas and D. I. Levine (1999). ‘Flexibility versus efficiency? A case study of model changeovers in the Toyota production system’, *Organization Science*, **10**, pp. 43-68.

- Ahlstrom, D. and G. D. Bruton (2002). 'An institutional perspective on the role of culture in shaping strategic actions by technology-focused entrepreneurial firms in China', *Entrepreneurship Theory and Practice*, **26**, pp. 53-68.
- Aldieri, L., Makkonen, T., and Vinci, C. P. (2020). 'Environmental knowledge spillovers and productivity: A patent analysis for large international firms in the energy, water and land resources fields', *Resources Policy*, **69**, 101877.
- Alvesson, M. and S. Sveningsson (2015). *Changing organizational culture: Cultural change work in progress*. Routledge.
- Anderson, J. C. and D. W. Gerbing (1988). 'Structural equation modeling in practice: A review and recommended two-step approach', *Psychological Bulletin*, **103**, pp. 411-423.
- Ansoff, H. I. and E. McDonnell (1990). *Implanting Strategic Management*, 2nd edn, Prentice Hall, New York.
- Barreto, I. and C. Baden-Fuller (2006). 'To conform or to perform? Mimetic behaviour, legitimacy-based groups and performance consequences', *Journal of Management Studies*, **43**, pp. 1559-1581.
- Belsley, D. A. (1991). *Conditioning diagnostics: Collinearity and weak data in regression* (No. 519.536 B452). New York: Wiley.
- Beynon, M., M. Battisti, P. Jones and D. Pickernell (2020). 'How Institutions Matter in the Context of Business Exit: A Country Comparison Using GEM Data and fsQCA', *British Journal of Management*, **32**, 832-851.

- Boon, C., J. Paauwe, P. Boselie and D. Den Hartog (2009). 'Institutional pressures and HRM: developing institutional fit', *Personnel Review*, **38**, pp. 492-508.
- Cao, Z., B. Huo, Y. Li and X. Zhao (2015). 'The impact of organizational culture on supply chain integration: a contingency and configuration approach', *Supply Chain Management: An International Journal*, **20**, pp. 24-41.
- Chandler, D. and H. Hwang (2015). 'Learning from learning theory: A model of organizational adoption strategies at the microfoundations of institutional theory', *Journal of Management*, **41**, pp. 1446-1476.
- Chaudhry, S. and J. Rubery (2019). 'Why Do Established Practices Deinstitutionalize? An Actor-Centred Approach', *British Journal of Management*, **30**, pp. 538-557.
- Chen, I. J. and A. Paulraj (2004). 'Towards a theory of supply chain management: the constructs and measurements', *Journal of Operations Management*, **22**, pp. 119-150.
- Choi, T. Y. and K. Eboch (1998). 'The TQM paradox: relations among TQM practices, plant performance, and customer satisfaction', *Journal of Operations Management*, **17**, pp. 59-75.
- Covin, J. G. and D. P. Slevin (1988). 'The influence of organization structure on the utility of an entrepreneurial top management style', *Journal of Management Studies*, **25**, pp. 217-234.
- Dacin, M. T. (1997). 'Isomorphism in context: The power and prescription of institutional norms', *Academy of Management Journal*, **40**, pp. 46-81.

- Deephouse, D. L. (1999). 'To be different, or to be the same? It's a question (and theory) of strategic balance', *Strategic Management Journal*, **20**, pp. 147-166.
- Deephouse, D. L. (1996). 'Does isomorphism legitimate?', *Academy of Management Journal*, **39**, pp. 1024-1039.
- Del Val, M. P. and C. M. Fuentes (2003). 'Resistance to change: a literature review and empirical study', *Management Decision*, **41**, pp. 148-155.
- DiMaggio, P. J. and W. W. Powell (1983). 'The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields', *American Sociological Review*, **48**, pp. 147-160.
- Dubey, R., A. Gunasekaran and S. S. Ali (2015). 'Exploring the relationship between leadership, operational practices, institutional pressures and environmental performance: A framework for green supply chain', *International Journal of Production Economics*, **160**, pp. 120-132.
- Dubey, R., A. Gunasekaran, S. J. Childe, C. Blome and T. Papadopoulos (2019). 'Big data and predictive analytics and manufacturing performance: integrating institutional theory, resource-based view and big data culture', *British Journal of Management*, **30**, pp. 341-361.
- Dubey, R., A. Gunasekaran, S. J. Childe, T. Papadopoulos, B. Hazen, M. Giannakis and D. Roubaud (2017). 'Examining the effect of external pressures and organizational culture on shaping performance measurement systems (PMS) for sustainability benchmarking: Some empirical findings', *International Journal of Production Economics*, **193**, pp. 63-76.

- Fawcett, S. E., M. A. Waller, J. W. Miller, M. A. Schwieterman, B. T. Hazen and R. E. Overstreet (2014). 'A trail guide to publishing success: tips on writing influential conceptual, qualitative, and survey research', *Journal of Business Logistics*, **35**, pp. 1-16.
- Ferrón-Vílchez, V. (2016). 'Does symbolism benefit environmental and business performance in the adoption of ISO 14001?', *Journal of Environmental Management*, **183**, pp. 882-894.
- Fornell, C. and D. F. Larcker (1981). 'Evaluating structural equation models with unobservable variables and measurement error', *Journal of Marketing Research*, **18**, pp. 39-50.
- Gaganis, C., P. Papadimitri, F. Pasiouras and A. Ventouri (2021). 'Informal Institutions and Corporate Reputational Exposure: The Role of Public Environmental Perceptions', *British Journal of Management*, **00**, pp. 1-35.
- Greenwood, R. and C. R. Hinings (1996). 'Understanding radical organizational change: Bringing together the old and the new institutionalism', *Academy of Management Review*, **21**, pp. 1022-1054.
- Hair, J. F., W. C. Black, B. J. Babin and R. E. Anderson (2014). *Multivariate Data Analysis. A Global Perspective*. Prentice Hall, Upper Saddle River NJ.
- Handika, R. F. and A. Wibowo (2018). 'Top management team diversity, the strategic isomorphism and firms'performance: a study in the indonesian banking industry', *Academy of Strategic Management Journal*, **17**, pp. 1-14.
- Hannan, M. T., and J. Freeman (1984). 'Structural inertia and organizational change'. *American Sociological Review*, **49**, pp.149–64.

- Haveman, H. A. (1993). 'Follow the leader: Mimetic isomorphism and entry into new markets', *Administrative Science Quarterly*, **38**, pp. 593-627.
- Hawley, A. H. (1968). *Human Ecology//International encyclopedia of social sciences*. L. NY: Macmillan, 328-337.
- He, H. and Y. Baruch (2010). 'Organizational identity and legitimacy under major environmental changes: Tales of two UK building societies', *British Journal of Management*, **21**, pp. 44-62.
- Heugens, P. P. and M. W. Lander (2009). 'Structure! Agency! (and other quarrels): A meta-analysis of institutional theories of organization', *Academy of Management Journal*, **52**, pp. 61-85.
- Hoffman, A. J. (1999). 'Institutional evolution and change: Environmentalism and the US chemical industry', *Academy of Management Journal*, **42**, pp. 351-371.
- Huo, B., Z. Han, X. Zhao, H. Zhou, C. H. Wood, and X. Zhai, (2013). 'The impact of institutional pressures on supplier integration and financial performance: Evidence from China', *International Journal of Production Economics*, **146**, pp. 82-94.
- Hult, G. T. M., D. J. Ketchen and M. Arrfelt (2007). 'Strategic supply chain management: Improving performance through a culture of competitiveness and knowledge development', *Strategic Management Journal*, **28**, pp. 1035-1052.
- Kauppi, K. (2013). 'Extending the use of institutional theory in operations and supply chain management research', *International Journal of Operations & Production Management*, **33**, pp. 1318-1345.

- Kaynak, H. and J. L. Hartley (2006). 'Using replication research for just-in-time purchasing construct development', *Journal of Operations Management*, **24**, pp. 868-892.
- Ketokivi, M. and R. Schroeder (2004). 'Manufacturing practices, strategic fit and performance', *International Journal of Operations & Production Management*, **24**, pp. 171-191.
- Kile, C. O. and M. E. Phillips (2009). 'Using industry classification codes to sample high-technology firms: Analysis and recommendations', *Journal of Accounting, Auditing & Finance*, **24**, pp. 35-58.
- Kleinbaum, D. G., L. L. Kupper, A. Nizam and E. S. Rosenberg (2013). *Applied regression analysis and other multivariable methods*. Nelson Education.
- Kondra, A. Z. and C. R. Hinings (1998). 'Organizational diversity and change in institutional theory', *Organization Studies*, **19**, pp. 743-767.
- Kostova, T., K. Roth and M. T. Dacin (2008). 'Institutional theory in the study of multinational corporations: A critique and new directions', *Academy of Management Review*, **33**, pp. 994-1006.
- Kostova, T., K. Roth, and M. T. Dacin (2009). 'Theorizing on MNCs: A promise for institutional theory', *Academy of Management Review*, **34**, pp. 171-173.
- Kotter, J. and L. Schlesinger (2008). 'Choosing change strategies', *Harvard Business Review*, **86**, pp. 130-139.

- Liedong, T. A., T. Rajwani and K. Mellahi (2017). 'Reality or illusion? The efficacy of non-market strategy in institutional risk reduction', *British Journal of Management*, **28**, pp. 609-628.
- Liker, J. (2004). *The toyota way*. Esensi.
- Liu, H., W. Ke, K. K. Wei, J. Gu and H. Chen (2010). 'The role of institutional pressures and organizational culture in the firm's intention to adopt internet-enabled supply chain management systems', *Journal of Operations Management*, **28**, pp. 372-384.
- Marquis, C. and M. Lounsbury (2007). 'Vive la r'esistance: competing logics and the consolidation of US community banking', *Academy of Management Journal*, **50**, pp. 799-820.
- McAfee, R. B., M. Glassman and E. D. Honeycutt Jr (2002). 'The effects of culture and human resource management policies on supply chain management strategy', *Journal of Business Logistics*, **23**, pp. 1-18.
- Mello, J. E. and T. P. Stank (2005). 'Linking firm culture and orientation to supply chain success', *International Journal of Physical Distribution & Logistics Management*, **35**, 542-554.
- Meyer, J. W. and B. Rowan (1977). 'Institutionalized organizations: Formal structure as myth and ceremony', *American Journal of Sociology*, **83**, pp. 340-363.
- Miemiczyk, J. (2008). 'An exploration of institutional constraints on developing end-of-life product recovery capabilities', *International Journal of Production Economics*, **115**, pp. 272-282.
- Miller, S. R. and L. Eden (2006). 'Local density and foreign subsidiary performance', *Academy of Management Journal*, **49**, pp. 341-355.

- Miller, S. R., D. C. Indro, M. Richards and D. H. M. Chng (2013). 'Financial implications of local and nonlocal rival isomorphism: A signaling paradox', *Journal of Management*, **39**, pp. 1979-2008.
- National Institute of Statistics of Spain (2021, June). 'Ocupados en sectores de alta y media-alta tecnología', National Institute of Statistics of Spain, available at: https://www.ine.es/ss/Satellite?L=es_ES&c=INESeccion_C&cid=1259925527911&p=1254735110672&pagename=ProductosYServicios%2FPYSLayout¶m1=PYSDetalle¶m3=1259924822888
- Nicolini, D., G. Delmestri, E. Goodrick, T. Reay, K. Lindberg and P. Adolfsson (2016). 'Look what's back! Institutional complexity, reversibility and the knotting of logics', *British Journal of Management*, **27**, pp. 228-248.
- Oliver, C. (1997). 'Sustainable competitive advantage: combining institutional and resource-based views', *Strategic Management Journal*, **18**, pp. 697-713.
- Oliver, C. (1991). 'Strategic responses to institutional processes', *Academy of Management Review*, **16**, pp. 145-179.
- Orlando, M. J. (2004). 'Measuring spillovers from industrial R&D: on the importance of geographic and technological proximity', *The Rand Journal of Economics*, **35**, pp. 777-786.
- Peretz, H. and M. J. Morley (2021). 'A Preliminary Test of the Impact of De-Globalization on MNC Performance', *Management and Organization Review*, **17**, pp. 412-428.

- Podsakoff, P. M., S. B. MacKenzie, J. Lee, and N. P. Podsakoff (2003). 'Common method biases in behavioral research: a critical review of the literature and recommended remedies', *Journal of Applied Psychology*, **88**, pp. 879-903.
- Ramarajan, L., N. P. Rothbard and S. L. Wilk (2017). 'Discordant vs. harmonious selves: The effects of identity conflict and enhancement on sales performance in employee–customer interactions', *Academy of Management Journal*, **60**, pp. 2208-2238.
- Rogers, K. W., L. Purdy, F. Safayeni and P. R. Duimering (2007). 'A supplier development program: rational process or institutional image construction?', *Journal of Operations Management*, **25**, pp. 556-572.
- Rojo, A., J. Llorens-Montes and M. N. Perez-Arostegui (2016). 'The impact of ambidexterity on supply chain flexibility fit', *Supply Chain Management: An International Journal*, **21**, pp. 433-452.
- Scott, W. R. (2008). 'Approaching adulthood: the maturing of institutional theory', *Theory and society*, **37**, pp. 427-442.
- Scott, W. R. (1987). 'The adolescence of institutional theory', *Administrative Science Quarterly*, **32**, pp. 493-511.
- Sena, V., M. Marra, M. Demirbag and G. Lubrano Lavadera (2021). 'The Impact of Institutions on Collaborative Innovations and the Role of Equity-Based Entry Modes', *British Journal of Management*, **0**, pp. 1-17.

- Spector, P. E. (2006). 'Method variance in organizational research: truth or urban legend?', *Organizational Research Methods*, **9**, pp. 221-232.
- Tolbert, P. S. and L. G. Zucker (1983). 'Institutional sources of change in the formal structure of organizations: The diffusion of civil service reform, 1880-1935', *Administrative Science Quarterly*, **28**, pp. 22-39.
- Villadsen, A. R. (2013). 'Similarity or difference? The relation between structure and strategy isomorphism in public organizations', *British Journal of Management*, **24**, pp. S62-S75.
- Villena, V. H., T. Y. Choi and E. Revilla (2016). 'Revisiting interorganizational trust: is more always better or could more be worse?', *Journal of Management*, **45**, pp. 752-785.
- Villena, V. H., E. Revilla and T. Y. Choi (2011). 'The dark side of buyer–supplier relationships: A social capital perspective', *Journal of Operations Management*, **29**, pp. 561-576.
- Volberda, H. W. (1996). 'Toward the flexible form: How to remain vital in hypercompetitive environments', *Organization Science*, **7**, pp. 359-374.
- Volberda, H. W., N. van der Weerdt, E. Verwaal, M. Stienstra and A. J. Verdu (2012). 'Contingency fit, institutional fit, and firm performance: A metafit approach to organization–environment relationships', *Organization Science*, **23**, pp. 1040-1054.
- Wahab, S. A., Rose, R. C. and Osman, S. I. W. (2012). 'Defining the concepts of technology and technology transfer: A literature analysis', *International Business Research*, **5**, pp. 61-71.

- Westphal, J. D., R. Gulati and S. M. Shortell (1997). 'Customization or conformity? An institutional and network perspective on the content and consequences of TQM adoption', *Administrative Science Quarterly*, **42**, pp. 366-394.
- Wilson, D. and P. McKiernan (2011). 'Global mimicry: Putting strategic choice back on the business school agenda', *British Journal of Management*, **22**, pp. 457-469.
- Wu, G., J. Ding and P. Chen (2012). 'The effects of GSCM drivers and institutional pressures on GSCM practices in Taiwan's textile and apparel industry', *International Journal of Production Economics*, **135**, pp. 618-636.
- Wu, Z. and R. Salomon (2016). 'Does imitation reduce the liability of foreignness? Linking distance, isomorphism, and performance', *Strategic Management Journal*, **37**, pp. 2441-2462.
- Zbaracki, M.J. (1998). 'The rhetoric and reality of Total Quality Management', *Administrative Science Quarterly*, **43**, pp. 602-36.
- Zhu, Q. and J. Sarkis (2007). 'The moderating effects of institutional pressures on emergent green supply chain practices and performance', *International Journal of Production Research*, **45**, pp. 4333-4355.
- Zukin, S. and DiMaggio, P. (1990). *Structures of capital: The social organization of the economy*, CUP Archive.