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T E S I S D O C T O R A L I N T E R N A C I O N A L

"REDEFINIENDO EL ESTUDIO DE LA LÓGICA DOMINANTE A TRAVÉS DE UNA NUEVA CONCEPTUALIZACIÓN Y OPERATIVIZACIÓN: UNA EVALUACIÓN DEL RENDIMIENTO ORGANIZACIONAL EN EMPRESAS MEXICANAS"

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D O C T O R A L D I S S E R T A T I O N

"REDEFINING THE STUDY OF DOMINANT LOGIC THROUGH A NEW CONCEPTUALIZATION AND OPERATIONALIZATION: AN ASSESSMENT OF ORGANIZATIONAL PERFORMANCE IN MEXICAN FIRMS"

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D O C T O R A L D I S S E R T A T I O N

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En el nuevo entorno competitivo del siglo XXI, las estrategias emprendedoras se están convirtiendo en un elemento determinante tanto para las empresas nuevas como para las ya establecidas. Debido al aumento de la dinámica ambiental y la intensificación de la competencia global, las empresas se ven obligadas a implementar este tipo de estrategias para competir y sobrevivir (Hitt, Irleland, & Hoskisson, 2011). No hay duda de que estas estrategias emprendedoras están relacionadas con un mejor rendimiento organizacional. Su objetivo es cimentar en la identificación de oportunidades y desarrollar ventajas competitivas (Hitt, Ireland, Camp, & Sexton, 2001).

La estrategia implica que las empresas desarrollen y mantengan una ventaja competitiva para la creación de riqueza (Hitt et al., 2001). Sharma y Chrisman (1999:17) definen la estrategia como la manera en que las organizaciones alinean sus recursos clave con su entorno. La estrategia considera las competencias básicas de la organización, el despliegue de recursos y procesos competitivos. Por esta razón, una dirección estratégica emprendedora debería ser una forma de pensar. Una mentalidad estratégica requiere no solo centrarse en el análisis del entorno, además debe implicar una búsqueda continua de nuevos recursos que generen una ventaja competitiva (Kuratko & Audretsch, 2009). Por lo tanto, una dirección estratégica proporciona el contexto para iniciativas emprendedoras (Hitt et al., 2001), además de ser un requisito esencial para el crecimiento y el rendimiento organizacional en entornos dinámicos (Weismeier-Sammer, 2011). Según Fuchs, Mifflin, Miller, y Whitney (2001) la estrategia debe estar alineada con el entorno y todos los elementos de la estrategia deben ser orquestados por una lógica dominante. Varios modelos sobre la dirección estratégica organizacional y el emprendimiento consideran el análisis de una mentalidad emprendedora o una lógica dominante (por ejemplo, Ireland, Hitt, y Sirmon, 2003). Es por esta razón que la presente tesis doctoral profundiza en esta última, de tal forma que sea posible avanzar en el estudio de este interesante concepto con importantes vínculos con la dirección estratégica organizacional y el emprendimiento.

En 1986 Prahalad y Bettis dieron a conocer un concepto innovador al que titularon *lógica dominante de la dirección estratégica*, mejor conocido como *lógica*

dominante. El trabajo presentado por estos autores fue el primero en recibir el Premio al Mejor Artículo de la Revista *Strategic Management* y hasta la fecha ha resultado ser un estudio trascendental en su campo. En el mismo, los autores consideraron la lógica dominante como una solución al problema de la dirección estratégica de una empresa. Primero, presentándola como una respuesta a los diversos problemas o desafíos de la diversificación; y en estudios posteriores la relacionaban con el papel de la alta dirección en el favorecimiento de una alineación de la organización con su entorno (Bettis & Prahalad, 1995; Bettis, 2000).

Originalmente, la lógica dominante se define como "la manera en la cual los gerentes conceptualizan el negocio y toman decisiones críticas para asignar recursos" (Prahalad & Bettis, 1986:490). Así, el concepto está muy relacionado con la noción de estrategia cognitiva dado que la exploración (escaneo de información), la interpretación y el aprendizaje derivado de los eventos y condiciones del entorno toman forma a través de las estructuras cognitivas de la alta dirección; lo que a su vez influye en sus decisiones estratégicas, y subsecuentemente en las acciones realizadas por la empresa (Barr, Stimpert, & Huff, 1993; Hamel & Prahalad, 1993; Nadkarni & Barr, 2008; Nadkarni & Narayanan, 2007; Thomas, Clark, & Gioia, 1993).

Conjuntamente, el concepto de lógica dominante es relevante para la dirección estratégica organizacional al asignar importancia causal a las estructuras y procesos cognitivos en la definición y explicación de la misma (Narayanan, Zane, & Kemmerer, 2010), y enlazando con la acción estratégica que define el rumbo de la empresa (Eisenhardt & Zbaracki, 1992). La investigación acerca de qué es lo que determina la acción estratégica es un tema central dentro de la literatura en dirección estratégica (Nadkarni & Barr, 2008). Además, el efecto de la cognición en la dirección directiva es un campo de interés profuso (Gavetti, Levinthal, & Rivkin, 2005).

La multi-dimensionalidad del concepto lógica dominante abre la posibilidad de estudiar al misma bajo la perspectiva de la cognición estratégica. La cognición estratégica se refiere a la visión cognitiva en dirección estratégica, y se enfoca en "las relaciones entre las estructuras cognitivas y los procesos de decisión en la dirección

estratégica con respecto a la formulación e implementación de los planes de acción" (Porac & Thomas, 2002:156). Por lo tanto, la cognición estratégica es reconocida como una área justificada para desarrollar postulados teóricos e investigar empíricamente; favoreciendo el entendimiento de las estructuras cognitivas de la alta dirección en la elección de estrategias y en el rendimiento organizacional (Eisenhardt & Zbaracki, 1992; Hodgkinson & Healey, 2008; Hutzschenreuter & Kleindienst, 2006; Meindl, Stubbart, & Porac, 1994; Narayanan et al., 2010; Rajagopalan, Rasheed, & Datta, 1993).

La acción estratégica ha sido un tema central dentro de la literatura de dirección estratégica (Nadkarni & Barr, 2008). Subsecuente al trabajo de Burgelman (1983a, 1983b) y Mintzberg (1979, 1994) acerca de la importancia de la gestión de la información para los cambios estratégicos, Prahalad y Bettis (1986) -considerando fundamentos de la psicológica cognitiva- incorporaron el sesgo de la gestión cognitiva dentro de la idea de estrategia; y con esto introdujeron este concepto de lógica dominante en la dirección estratégica. La lógica dominante asigna una importancia causal a las estructuras y los procesos cognitivos de la alta gerencia para explicar la estrategia, conectando así con la acción estratégica (Eisenhardt & Zbaracki, 1992; Narayanan et al., 2010). Las líneas de literatura en dirección estratégica con teorías sobre la elección de estrategias (Child, 1972; Hrebiniak & Joyce, 1985) y las altas esferas administrativas (Carpenter, Geletkancz, & Sanders, 2004; Hambrick & Mason, 1984) subrayan la relevancia de la alta dirección en la formulación e implementación de la estrategia. Ambos temas argumentan que la alta dirección es esencialmente responsable de interpretar la información necesaria para la operación de la empresa. La toma de decisiones estratégicas involucra que la dirección examine grandes cantidades de datos incompletos, ambiguos y en muchos casos conflictivos (McCall & Kaplan, 1985).

La literatura en psicología cognitiva y social muestra que los ejecutivos trabajan bajo condiciones de racionalidad limitada, y que sus reacciones eventuales a la competencia reflejan las limitaciones en sus rutinas de procesamiento de información (Daft & Weick, 1984). En otras palabras, la alta dirección utiliza representaciones mentales como estructuras cognitivas que respaldan sus procesos cognitivos al procesar información y dar sentido a esta información, reconociendo además las oportunidades y

las amenazas del entorno; lo que adicionalmente afectará el rendimiento organizacional. Por lo tanto, estas representaciones mentales acerca de la organización y el entorno que le rodea son determinantes para definir el plan estratégico de la empresa (Burgelman, 1983a; Floyd & Lane, 2000). Las estructuras y procesos cognitivos de la gerencia representan la lógica dominante de la misma, lo cual tiene efectos significativos en las respuestas acerca de la categorización y designación de situaciones o eventos del entorno en forma de oportunidades o amenazas, con repercusiones directas en el rendimiento de la empresa.

El tiempo que transcurre entre los procesos cognitivos de la gerencia y la acción de la empresa es largo y complejo. Entretanto las organizaciones maduran y se vuelven más heterogéneas, la lógica dominante de la gerencia se incrusta en algunas peculiaridades de la empresa como sus estructuras, sistemas, rutinas y procesos, convirtiéndose éstos en conceptos de nivel organizacional (Kor & Mesko, 2013). Por lo tanto, en un sentido general, el estudio de la lógica dominante conlleva una dimensión cognitiva en el nivel de la alta dirección y, consecuentemente, una dimensión de acción en el nivel organizacional, señalizando así respectivamente la formulación e implementación de la estrategia organizacional (Narayanan et al., 2010).

Por un lado, al describir la dimensión cognitiva, las definiciones en la literatura relacionadas a la lógica dominante contienen referencias a estructuras cognitivas y procesos. En primer lugar, se han encontrado diferentes designaciones para referirse a las estructuras cognitivas tales como mapas cognitivos o mentales, infraestructuras, esquemas, puntos de vista globales, mentalidades, marcos estratégicos, filtros, paradigmas, entre otros, siendo para algunos autores conceptos análogos a la lógica dominante (Schneider & Angelmar, 1993; Walsh, 1995). En segundo lugar, los procesos cognitivos como la exploración de información (escaneo) y la interpretación de esta información, también representan elementos importantes en el análisis de la lógica dominante de la alta dirección; lo cual es una parte trascendental en la formulación de la estrategia (Schneider, 1989). Por otro lado, referente a la dimensión de acción, las definiciones igualmente contienen referencias a procesos y estructuras organizacionales tanto explícitas como implícitas, consideradas parte de la implementación de la

estrategia que consecuentemente forman parte de la lógica dominante de la organización.

Los esfuerzos por investigar la lógica dominante se han enfocado primordialmente en el refinamiento teórico y en menor medida en la investigación empírica (Phillips, Sewell, & Jaynes, 2007). Sin embargo, existen algunos estudios empíricos que han considerado principalmente elementos cognitivos (Garg, Walters, & Priem, 2003; Lampel & Shamsie, 2000); y otros que han combinado elementos cognitivos y de acción organizacional (Cote, Langley, & Pasquero, 1999; Kor & Mesko, 2013; K. Obloj & Pratt, 2005; T. Obloj, Obloj, & Pratt, 2010). Esta aparente inconsistencia en valorar adecuadamente las diferentes partes de la lógica dominante puede ser el motivo por el cual no se distingan claramente los elementos entre ambas dimensiones, lo que limita su operativización.

La revisión de literatura en esta tesis doctoral demuestra que hay una escasez de estudios empíricos que consideren tanto los elementos cognitivos como los de acción. En consecuencia, este estudio promueve un vocabulario común y también ofrece dirección y consenso a preguntas teóricas y empíricas subyacentes.

Augier y Teece (2009) sugieren que para mejorar el entendimiento acerca del crecimiento y desarrollo económico, se necesita una comprensión más completa acerca del rol de la alta dirección en el rendimiento de la empresa. Ambas, la lógica dominante y la estrategia deben trabajar en conjunto en una organización para tener un valor continuo que sirva como base hacia un rendimiento económico superior (Webb, Ketchen Jr., & Ireland, 2010). De esta manera, las perspectivas empresariales y estratégicas deben integrarse en el estudio de la lógica dominante para examinar aquellos elementos claves y estrategias emprendedoras que generen riqueza (Hitt et al., 2010). Por lo tanto, la lógica dominante opera contiguamente con la manifestación del comportamiento emprendedor.

Objetivos de la Investigación

Esta tesis doctoral presenta tres objetivos principales. El primer objetivo es proponer un marco teórico de referencia en el análisis del concepto de lógica dominante derivado de la revisión y análisis de la literatura. El propósito es avanzar en la conceptualización facilitando un marco teórico para su estudio posterior, así como la justificación de los elementos que integran sus dimensiones. Como resultado, este estudio provee un avance en la comprensión de la lógica dominante al explorar los principales elementos cognitivos y de acción comprendidos dentro de las definiciones y los supuestos que se han desarrollado a través del tiempo. Este estudio representa un esfuerzo contemporáneo, desde el promovido por von Krogh y Ross (1996), por proveer una revisión acerca de la plasticidad del concepto. Haciendo esto, y a partir de un sólido soporte teórico y empírico, se exhibe una clara distinción entre los elementos contenidos en ambas dimensiones. Así, se proporciona el sustento teórico requerido para que futuros estudios puedan progresar en la operativización de este concepto.

Algunos autores han declarado que un marco teórico de revisión es esencial para evaluar sistemáticamente la contribución encontrada en la literatura, así como los patrones percibidos (Ginsberg & Venkatraman, 1985; Rajagopalan et al., 1993). Como resultado, se propone un marco integrador que clasifique los elementos clave en forma de constructos agregados multi-dimensionales; que además, representen por un lado, la lógica dominante de la alta gerencia, y por el otro, la lógica dominante de la organización con una relación causal hacia el rendimiento organizacional.

Derivado de lo anterior, el segundo objetivo de esta tesis contrasta empíricamente una operativización para medir la lógica dominante en las organizaciones, en forma de constructos formativos multi-dimensionales. Este estudio utiliza la metodología PLS-SEM de ecuaciones estructurales basada en la varianza, proporcionado conclusiones interesantes sobre la estimación de la lógica dominante de la alta dirección, la lógica dominante de la organización, y los efectos correspondientes en el rendimiento organizacional.

Finalmente, el tercer objetivo es presentar una contrastación empírica de modelos en la medición de estos constructos y su relación con el rendimiento organizacional al utilizar una muestra de 295 empresas mexicanas. Los resultados proveen un soporte para la mayoría de las hipótesis formuladas en este estudio y demuestran que la lógica dominante de la organización tiene un efecto de moderación parcial entre la lógica dominante de la alta dirección y el rendimiento organizacional. Derivado de los resultados que se han obtenido en esta contrastación empírica se sugieren futuras líneas de investigación. Asimismo, se presenta una variedad de elementos y situaciones a considerarse como alternativas para el estudio de la lógica dominante dentro de las organizaciones y los diferentes efectos en el rendimiento organizacional, el emprendimiento corporativo, así como otros elementos que puedan representar factores distintivos en la creación de ventajas competitivas.

Estructura de la tesis doctoral

Esta tesis se estructura de la siguiente manera: En el Capítulo 1, se presenta una revisión de la literatura en lógica dominante registrada en el campo de la economía empresarial, específicamente en las áreas de estrategia y dirección. También se desarrolla un análisis de la plasticidad del concepto al estudiar las definiciones y supuestos que, a través de los años, se han considerado acerca del concepto; como resultado, se han identificado los elementos claves de las dimensiones cognitivas y de acción. La clasificación de estos elementos se ha realizado siguiendo a Ginsberg (1990) y Mintzberg, Quinn y Ghoshal (1988) en el estudio de formulación e implementación estratégica. Adicionalmente, se han analizado estudios empíricos en lógica dominante, además de realizar una discusión acerca de los diferentes esfuerzos por operativizar el concepto, las diferentes aplicaciones y sus resultados. En el Capítulo 2, se presenta un marco integrador para el estudio de la lógica dominante al unir las dimensiones cognitivas y de acción a la estrategia y el rendimiento organizacional. Así, las hipótesis se han formulado basándose en el soporte teórico y empírico del Capítulo 1. También se discute la operativización de la lógica dominante y se hace una revisión de las principales variables de este estudio. El Capítulo 3 presenta la recolección de los datos, la metodología, y el análisis de los resultados; el cual sustenta la mayoría de las hipótesis formuladas en este estudio. Para

finalizar, se desarrollan las conclusiones y una discusión sobre las contribuciones teóricas y la práctica de gestión, las limitaciones, y las sugerencias para futuras investigaciones.

Esta tesis clarifica el concepto de lógica dominante al identificar los elementos claves de cognición y de acción enclavados dentro de la literatura de lógica dominante y de estrategia. Por lo tanto, las dos dimensiones principales de la lógica dominante se pueden definir como constructos multi-dimensionales formativos que reflejan la lógica dominante de la alta gerencia y la lógica dominante de la organización. Es así que esta tesis doctoral representa un esfuerzo valido por profundizar en la teoría de la lógica dominante. Asimismo, esta tesis podría figurar entre un número reducido de investigaciones en dirección estratégica en transmitir avances teóricos al proponer, operativizar y validar constructos formativos de segundo orden, mismos que son escasos en la literatura pero además necesarios para desarrollar contribuciones teóricas. Además, se clarifica el concepto para valorar una lógica dominante en particular e identificar aquellos elementos que son críticos en el desarrollo de la empresa. Adicionalmente, al estudiar las dimensiones cognitivas y de acción, así como su implicación en los cambios del entorno, esta investigación vincula elementos de cognición estratégica en la dirección estratégica de la organización. Tal y como Grant (1988) y Ginsberg (1990) argumentaran, la lógica dominante puede ser un instrumento muy valioso para el análisis estratégico al considerar los diferentes elementos inmersos en sus dimensiones cognitivas y de acción.

INTRODUCTION

INTRODUCTION

In the new competitive environment of the 21st century, entrepreneurial strategies are becoming increasingly important for both new and already established companies. Due to the increase in environmental dynamics and intensifying global competition, companies are forced to build more entrepreneurial strategies in order to compete and survive (Hitt, Ireland, & Hoskisson, 2011). These entrepreneurial strategies are supposed to be related to improved organizational performance. Their aim is to build on the identification of opportunities and to develop competitive advantages (Hitt, Ireland, Camp, & Sexton, 2001).

Strategy implies that firms develop and maintain a competitive advantage for wealth creation (Hitt et al., 2001). Sharma and Chrisman (1999:17) define strategy as the way in which organizations align their key resources with their environment. The strategy includes the core competencies of the organization, resource deployment, and competitive methods. Furthermore, strategic management should be a way of thinking; a strategic mindset requires more than focusing on the external environment, and must involve a continuous search for new resources that support a competitive advantage (Kuratko & Audretsch, 2009). Thus, strategic management provides the context for entrepreneurial activities (Hitt et al., 2001), plus being the essential requirement for growth and performance in dynamic environments (Weismeier-Sammer, 2011). According to Fuchs, Mifflin, Miller, and Whitney (2001) comprehensive strategies must be aligned to the environment and all elements of the strategy must be orchestrated to a dominant logic. Several models of strategic management and entrepreneurship begin by considering an entrepreneurial mindset or a dominant logic (e.g. Ireland, Hitt, & Sirmon, 2003). Thus, this dissertation focused on the later, paving the way to advance the study of this interesting concept with important linkages to strategic management and entrepreneurship.

Prahalad and Bettis (1986) introduced the concept of *dominant general management logic,* better known as *dominant logic.* This work was the first recipient of the Strategic Management Journal Best Paper Prize, and has become a seminal study in this field. The authors regarded dominant logic as an equilibrium solution to the problem

of strategic management in the firm. First, conceived it as a response to the issues of diversification, and years later, emphasized the role of top management in facilitating organization-environment alignment and organizational performance (Bettis & Prahalad, 1995; Bettis, 2000).

As originally conceived, dominant logic refers to "the way in which managers conceptualize the business and make critical resource allocation decisions" (Prahalad & Bettis, 1986:490). The concept of dominant logic is closely tied to managerial cognition because perception, interpretation, and meaning of environmental events and conditions are shaped by the manager´s cognitive structures, which affect strategic decisions and subsequent firm action (Barr, Stimpert, & Huff, 1993; Hamel & Prahalad, 1993; Nadkarni & Barr, 2008; Nadkarni & Narayanan, 2007; Thomas, Clark, & Gioia, 1993). Furthermore, it is relevant to strategic management since it assigns causal importance to structures and processes of cognition in the explanation of strategy (Gioia & Chittipeddi, 1991; Narayanan et al., 2010), linking strategic action that further shape the course of the firm (Eisenhardt & Zbaracki, 1992). What drives strategic action has occupied a central position in the strategic management literature (Nadkarni & Barr, 2008). Moreover, the effect of cognition on managerial action represents an enormous area of inquiry (Gavetti et al., 2005).

The dimensionality of the concept of dominant logic opens up the possibility of studying dominant logic under a strategic cognition perspective. Strategic cognition refers to the cognitive view in strategic management, and focuses on the "linkages between cognitive structures and decision processes in strategic management with respect to strategy formulation and implementation" (Porac & Thomas, 2002:165). Thus, strategic cognition has been recognized as a legitimate area for theory building and empirical research, aiding the understanding of top manager´s cognitive structures on strategic choice, and organizational performance (Eisenhardt & Zbaracki, 1992; Hodgkinson & Healey, 2008; Hutzschenreuter & Kleindienst, 2006; Meindl et al., 1994; Narayanan et al., 2010; Rajagopalan et al., 1993).

Strategic action has occupied a central position in the strategic management literature (Nadkarni & Barr, 2008). Subsequent to the work of Burgelman (1983a, 1983b) and Mintzberg (1979, 1994) regarding the importance of information management for strategic change, Prahalad and Bettis (1986), borrowing from cognitive psychology, incorporated the managerial cognitive bias into the idea of strategy, hence introducing a novel concept in strategic management. Dominant logic assigns causal importance to top managers´ structures and processes of cognition in the explanation of strategy, linking strategic action (Eisenhardt & Zbaracki, 1992; Narayanan et al., 2010). Streams of literature in strategic management, such as strategic choice (Child, 1972; Hrebiniak & Joyce, 1985), and upper echelons (Carpenter, Geletkancz, & Sanders, 2004; Hambrick & Mason, 1984) highlight the relevance of top managers in strategy formulation and implementation. These two streams argue that it is ultimately the top management that is responsible for interpreting information for the firm´s action. Strategic decision making involves top managers examining and reconciling large amounts of incomplete, ambiguous, and most of the times conflicting data (McCall & Kaplan, 1985).

Literature in cognitive and social psychology show that top managers operate under conditions of bounded rationality, and their eventual choices regarding competitive response reflect the limitations of their information processing routines (Daft & Weick, 1984). In other words, top managers use mental representations as cognitive structures that support their cognitive processes of information processing and sense making recognizing opportunities or threats in the environment, which further affect organizational performance. Thus, these mental representations about the organization and its environment are influential in defining the firm's strategic planning (Burgelman, 1983a; Floyd & Lane, 2000). The managers´ cognitive structures and processes depict the managers´ dominant logic, which has significant effects on the responses to categorization and labeling of issues or events in the environment as either threats or opportunities with direct repercussions for the firm´s performance.

The time lapse between the top managers´ cognitive processes and firm action is long and complicated. As organizations mature and become more complex, the managers´ dominant logic becomes embedded in organizational features, such as

structures, systems, routines and processes, becoming an organizational-level concept (Kor & Mesko, 2013). Therefore, in a general sense, the study of dominant logic conveys a cognitive dimension at the top management level and a consequential action dimension at an organizational level. Moreover, these dimensions signal the strategy formulation and strategy implementation respectively (Narayanan et al., 2010).

On the one hand, when referring to the cognitive dimension, definitions of dominant logic in the literature contain references to cognitive structures and processes. First, different labels are found in the literature to refer to cognitive structures, and for many authors analogous to dominant logic, such as cognitive or mental maps, frameworks, schemas, world views, mindsets, strategic frames, filters, paradigms, and so on (Schneider & Angelmar, 1993; Walsh, 1995). Second, cognitive processes such as information processing and sense making also represent important elements in the analysis of the top managers´ dominant logic, which are also an important part in the strategy formulation (Schneider, 1989). On the other hand, in regards to the action dimension, references to implicit and explicit administrative/management processes and structures are also contained in the definitions. These are considered part of the strategy implementation, and which eventually depict the firm´s dominant logic.

Authors have stated that the main research efforts on dominant logic have focused on theoretical refinement rather than empirical investigation (Phillips, Sewell, & Jaynes, 2007). Notwithstanding, the few empirical studies on dominant logic in strategic management have considered mainly cognitive elements (Garg, Walters, & Priem, 2003; Lampel & Shamsie, 2000); and a few have addressed some combination of managerial cognitive and firm action elements (Cote, Langley, & Pasquero, 1999; Kor & Mesko, 2013; K. Obloj & Pratt, 2005; T. Obloj, Obloj, & Pratt, 2010). This apparent inconsistency in assessing different elements may have been consequential in not distinguishing elements between these two main dimensions, thus hampering its further operationalization.

The literature review in this research study demonstrates that there is a shortage of empirical studies, addressing both cognitive and action elements that should be adequately addressed. As a result of this gap in the literature, this research study helps to

clarify a common vocabulary, and also provide direction and consensus on underlying theoretical and empirical questions. The aim of this study is twofold, not only to advance a new conceptualization of dominant logic by proposing that dominant logic can be in fact assessed as two aggregate multidimensional constructs, but also to advance its operationalization by conducting an empirical study using a sample of Mexican firms.

Augier and Teece (2009) suggested that for a better understanding of economic growth and development, a more complete understanding of the role of management in business performance is needed. Both, the dominant logic and the strategy must work together for an organization to have a continuous value creation as the basis for superior economic performance (Webb, Ketchen Jr., & Ireland, 2010). Thus, the entrepreneurial and strategic perspectives should be integrated in the study of dominant logic to examine those key elements and entrepreneurial strategies that create wealth (Hitt et al., 2001). Hence, dominant logic operates in close proximity to the exhibition of entrepreneurial behavior.

Research objectives

This dissertation presents three main objectives. The first objective is to propose an augmented conceptualization of dominant logic. The aim is to advance the conceptualization of dominant logic by providing an integrative framework for its further study, as well as the justification of the elements that integrate its dimensions. As a result, this study provides an advance in the understanding of this concept by exploring key cognitive and action elements enclosed in the definitions and assumptions of dominant logic over time. This study represents a contemporary attempt since von Krogh and Roos (1996) to provide a review of the plasticity of the dominant logic concept in the literature on dominant logic and strategy. In doing this, a further distinction between the elements contained in both dimensions is presented derived from theoretical and empirical support. With this attempt a theoretical foundation needed for future research is provided that can advance as well its further operationalization.

Authors have stated that an analytical review scheme is essential for systematically evaluating the contribution of a given body of literature and discerning patterns

(Ginsberg & Venkatraman, 1985; Rajagopalan et al., 1993). As a result, an integrative framework is proposed, which further classifies these key elements to depict the top managers´ dominant logic and the firm´s dominant logic with a causal relationship to organizational performance.

Due to the above, the second objective of this dissertation proposes an operationalization for measuring the dominant logics in organizations, as two aggregate multidimensional constructs. Multidimensional constructs are highly needed in order to develop theory. By doing this, this study becomes one among the limited number of studies in strategic management to deliver theoretical advances by proposing, validating and operationalizing formative constructs. In addition, by studying the cognitive and action dimensions, and the implication of changes in the environment, this study links the study to strategic cognition in strategic management.

And finally, the third objective is to conduct an empirical study by assessing three models in measuring these constructs and their relationship to organizational performance by using a sample of 295 Mexican companies. This study used structural equation modeling (SEM) based on variance, which provided interesting results in the assessment toward the managers´ dominant logic, the firm´s dominant logic, and the effects between these two upon organizational performance. The results provided support to most of the formulated hypotheses in this study. In addition, the discussion and conclusions from this empirical study highlight the need to address future lines of research.

With this work, the key elements and features of the dominant logic dimensions have been identified in response to the call to move beyond the purely conceptual stage. As a result, this study provides theoretical and empirical support to move a step closer toward the measurement of the constructs. In addition, this study provides a clarification of the concept in order to assess a particular dominant logic and to identify those elements that are critical to the firm´s performance. Furthermore, as Grant (1988) and Ginsberg (1990) discussed it, dominant logic could be a valuable instrument of strategic

analysis by considering the different elements contained in its cognitive and action dimensions.

Structure of the Doctoral Dissertation

This dissertation is structured as follows: in Chapter 1 a review of the literature on dominant logic is presented in the fields of business economics, and more specifically in the areas of strategy and management. An analysis of the plasticity of the concept is further developed by studying the definitions of dominant logic throughout the years. As a result, an identification of the key cognitive and action dimensions from these definitions follows. The classification of these elements was conducted by following Mintzberg, Quinn, and Ghoshal (1998) into the study of strategy formulation and implementation. In addition, empirical studies on dominant logic were assessed, aside from a discussion about the different attempts to operationalize this concept, and the different applications and results. In Chapter 2, an integrative framework is presented for the study of the dominant logics by linking the cognitive and action dimensions to strategy and organizational performance. Then, based on the theoretical and empirical support from Chapter 1, the hypotheses were formulated. Further, the discussion of the operationalization of dominant logic and the review of the main variables of study are discussed. Chapter 3 presents the methodology, the data collection, and analysis of the results, which provide support to most of the hypotheses formulated in this study. Finally, the conclusions, contributions to theory and managerial practice are presented, as well as the limitations and directions for future research. Due to the interesting results in this study, while assessing the relationship between the different dominant logics and organizational performance of firms in an emerging economy, further studies are suggested to replicate and compare the findings in this study. In addition, a wide variety of issues and elements can be further considered as alternatives to approaching the dominant logics inside the organizations, and the different effects on organizational performance and other key elements that may represent distinctive factors for competitive advantage.

CHAPTER 1

Literature review on Dominant logic

1. LITERATURE REVIEW ON DOMINANT LOGIC

This research study builds upon the seminal work of Prahalad and Bettis' (1986) concept of general management dominant logic better known as dominant logic. Although their original work referred largely to the relationship between diversification and performance, the authors established that this concept has continued to evolved, aiming at studying a larger class of strategic issues and more general properties of firms (Bettis & Prahalad, 1995).

Our literature review shows that further conceptualizations and applications of dominant logic have emerged throughout the years. Yet, the literature is not clear about what this concept should include (Cote et al., 1999; von Krogh & Roos, 1996). In this Chapter, the most relevant literature is reviewed on dominant logic in the social sciences and business economics with a focus in the strategic management field, which is generally acknowledge to be one of the younger sub-disciplines within the broader management domain (Boyd, Gove, & Hitt, 2005). First, a review of the literature is presented in the two most extensive databases, Elsevier's Scopus and Thomson Reuters´ Web of Science. Second, the importance to schema and information processing theories is addressed as an introduction to approach the analysis of dominant logic. Third, the conceptual plasticity of the concept of dominant logic is conducted by studying the most relevant definitions found in the literature in order to clarify the conceptualization and development path in the literature, and further approach its multidimensionality.

1.1 Literature analysis

To examine the conceptualization of dominant logic in strategic management literature, a comprehensive review of the academic literature was performed by conducting an analysis of the articles included in Elsevier´s Scopus and Thomson Routers´ Web of Science databases. These databases are the largest containing information for peer-reviewed journals, books, and conference proceedings. Moreover, both databases are well-recognized sources of quality and multidisciplinary content for researchers.

The article "The dominant logic: A new linkage between Diversity and Performance" published in 1986 by the Strategic Management Journal was the first

attempt to conceptualize dominant logic. This work and its authors, C.K. Prahalad and R.A. Bettis, are the pillar of the research schema in this study; therefore, it was essential to investigate the streams of research that have been generated from it.

In relation to the inquiry performed in Scopus, the first action was to analyze the number of items that have cited the article mentioned before. Results showed that 849 publications have cited the article. This initial search was redefined by considering those publications that contained Scopus´ pre-established keywords: cognition, dominant logic, strategy, strategic management, managerial cognition, management, and performance. This filter provided a total number of 109 documents, 92 of those were classified as articles, nine as reviews, two as book Chapters, one as editorial, and five as conference papers. Regarding the subject areas 89.9% of the documents that cited this article belong to the Business, Management, and Accounting subjects; 13.8% belong to the Economics and Finance subject, 11.9% were cataloged in decision sciences, and 11.9% were in social sciences. The remaining articles included a wide variety of subjects, such as Medicine, Mathematics, Psychology, Engineering, Computer Science and so on. Please refer to Figure 1 for these results. In addition, Figure 2 shows the distribution by year of publication. These results show a steady increased interest in the subject through the years.

Subject Area	Documents
Business, Management and Accou...	98
Economics, Econometrics and Fin...	15
Decision Sciences	13
Social Sciences	8
Engineering	7
Psychology	6
Computer Science	2
Medicine	2
Environmental Science	1
Health Professions	1
Mathematics	1
Total	109

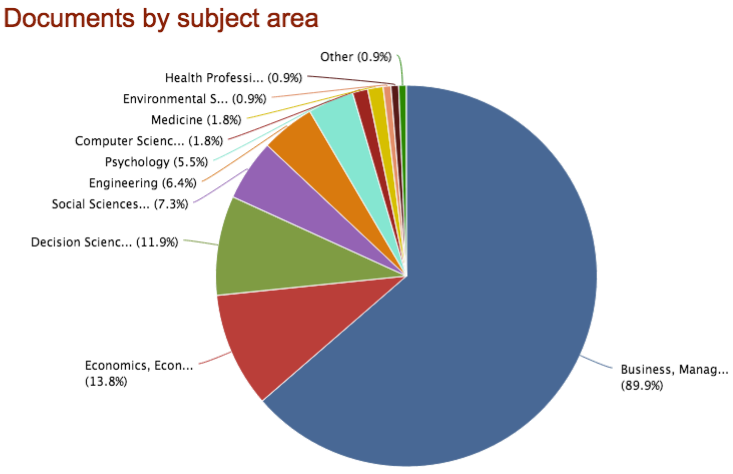
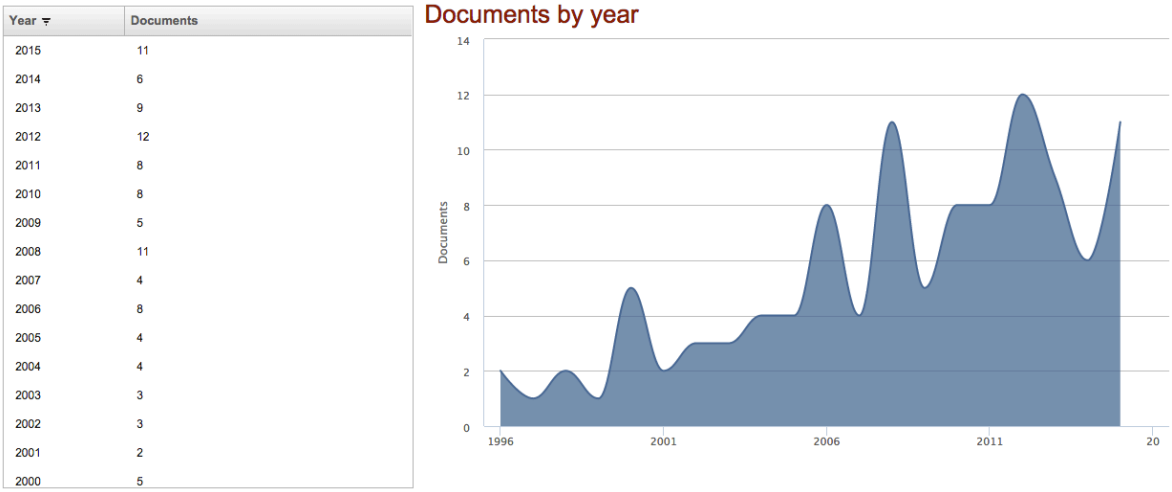


Figure 1. Scopus filtered results on publications citing Prahalad and Bettis (1986) using keywords

Source: Elsevier´s Scopus.
Note: The keywords used were pre-determined in Scopus: cognition, strategy, strategic cognition, strategic management, management, and performance.



Year	Documents
2015	11
2014	6
2013	9
2012	12
2011	8
2010	8
2009	5
2008	11
2007	4
2006	8
2005	4
2004	4
2003	3
2002	3
2001	2
2000	5

Figure 2. Number of published documents in each year citing Prahalad and Bettis (1986)

Source: Elsevier´s Scopus.

A similar search approach was followed using the Web of Science database, and the results were as follows: The article in query has been cited 737 times in all databases. The search was redefined by filtering those in the social science research domain, and business economics research area, and by selecting publications, reviews, and books in English and Spanish. The search provided a new total of 575 publications.

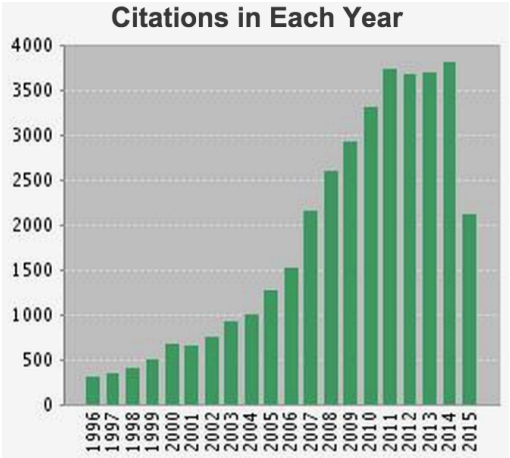


Figure 3. Number of citations per year on Prahalad and Bettis´ (1986) article

Source: Web of Science Database.
Note: This report reflects citations to source items indexed within all databases.

As opposed to Scopus, Web of Science does not provide a detailed categorization of the areas of study in which the article in query has been cited. However, results exhibited the evolution of the citations for the last 20 years by citations in each year and the published documents in each year (please refer to Figure 3 and 4). Thus,

indicating that the article by Prahalad and Bettis (1986) has been seminal in research, and the topic has been of extensive interest and further study.

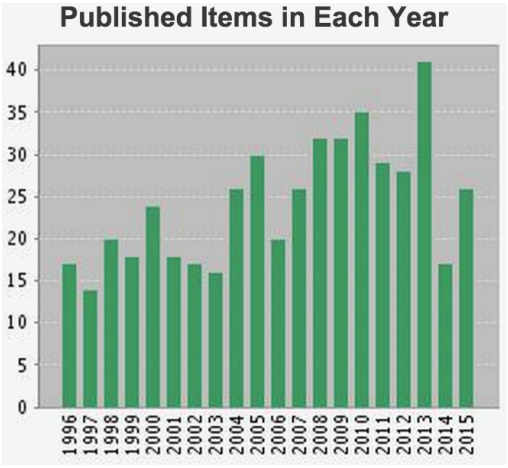


Figure 4. Number of published items in each year citing Prahalad and Bettis (1986)

Source: Web of Science Database.
Note: This report reflects citations to source items filtering in social sciences domain and business economics area.

Due to the large number of publications citing Prahalad and Bettis´ (1986) article, the search was redefined by searching within these results and using similar keywords as in the previous Scopus search to indicate strategy ("strateg*"), management ("manag*"), cognition ("cognit*"), performance ("perfor*). From this search, a total of 73 articles were disclosed.

In recognizing that some relevant publications might have been left out by using the previous search approach, other explorations were conducted in both databases; this time using mainly keywords as of the concept or search topic.

First, in Scopus, the search concept for the range "article´s title, abstract, keywords" employed was "dominant logic", focusing on all documents with no timespan limit. In this exploration, a total of 2,489 documents were found. However, by filtering these results using the pre-established keywords in Scopus, "dominant logic" was chosen, reducing the number of relevant documents to 32. No other keyword related to strategy, cognition, management or performance was available at this time.

Second, in Web of Science, the search concept "dominant logic" was used on the "Topic" with no timespan defined. A total of 2,279 results were shown. Moreover, the

authors redefined the search by limiting the research domain to social sciences, the research area to business economics, and by showing articles and reviews in English and Spanish. The refined search provided a total of 768 publications. The authors followed the same key words from the previous approach to imply the interest in strategic management, cognition, and performance, ("strateg*"), ("manag*"), ("cognit*"), and ("perfor*) correspondingly, and this new search within the total results showed 20 articles. Then, an individual review of the abstracts from each of the resulting articles from these searches was completed in order to screen-out those not related to the subject in query, duplicated articles, and those related to other fields of study.

These searches on dominant logic literature on the principal databases disclose the most representative body of literature on the fields of social sciences and business economics. The following sections present the resultant discussions and analyses from the literature review.

1.2 Conceptualizing dominant logic

Since dominant logic has its roots in cognitive psychology, for a better understanding of this concept is important to revisit some conceptual definitions rooted in managerial and organizational cognition. Thus, by building upon Walsh´s (1995) recommendations to relate knowledge structures to the practice of management, the aim of this study is to clarify the conceptualization of dominant logic by delivering a classification of the key elements contained in the different definitions throughout the years, and as will be discussed in the following sections. Prahalad and Bettis (1986) introduced dominant logic based on schema and information processing theories. Thus, a brief discussion of these theories is presented as an introduction to contextualize the further analysis of the definitions in this Chapter. In this section, the definitions of the original authors through the years are assessed.

1.2.1 Schema and information processing theories

Schema theory has its roots in cognitive psychology (Neisser, 1967), and information processing theory, proceeding in what became known as social cognition (Markus & Zajonc, 1985). Schemas refer to the dynamic, cognitive knowledge structures regarding

specific concepts, entities, and events used by individuals to encode and represent incoming information efficiently (Markus, 1977). Schemas are typically conceptualized as subjective theories derived from individual´s experiences about how the world operates that guide perception, memory, and inference (Fiske & Taylor, 1984). In addition, schemas guide the search, acquisition, and processing of information, as well as subsequent behavior in response to that information (Neisser, 1967). Taylor and Crocker (1981) and cited by Harris (1994) identified seven functions of schemas: They provide a structure against which experience is mapped, direct information encoding and retrieval from memory, affect information processing efficiency and speed, guide filling gaps in the information available, provide templates for problem solving, facilitate the evaluation of experience, and facilitate anticipations of the future, goal setting, planning, and goal execution.

In regards to information theory, which refers to the individual´s ability to transform, store, recover and use information, the individuals can approach information processing mainly in two ways: "top-down" or "theory-driven", and "bottom-up" or "data-driven" (Walsh, 1995). The first approach stresses that past experiences in similar circumstances are stored and retrieved from knowledge structures and guide present information processing from a particular environment (Fiske & Taylor, 1984; Kiesler & Sproull, 1982). On the contrary, in the second approach the current information context guide individual´s information processing.

As mentioned before, based on schema theory and a theory-driven approach to information processing, Prahalad and Bettis (1986) introduced dominant logic as "a mind set or a world view or conceptualization of the business and the administrative tools to accomplish goals and make decisions in that business. It is stored as a shared cognitive map, or set of schemas (p. 491). Hence, from this definition, dominant logic could be broadly conceptualized as both a knowledge structure and a set of caused management processes. This multidimensionality of dominant logic will be further analyzed in this Chapter; at this point the importance of knowledge structures in the definitions is addressed.

The importance of knowledge structures for managerial and organizational cognition researchers is evident since it can provide insights into the motivations behind managerial processes or actions and subsequent firm performance (Walsh, 1995). Furthermore, emphasizing the intention behind dominant logic to "add significantly to our managerial understanding of performance" (Prahalad & Bettis, 1986:485).

A knowledge structure is a mental template that individuals impose on an information environment to give form and meaning (Walsh, 1995). Moreover, knowledge structures (or set of schemas) are grounded on the individual's historical and past experiences, and "represents organized knowledge about a given concept or type of stimulus (or information domain)" (Fiske & Taylor, 1984:149). Therefore, the concept of knowledge structure is central to the theory-driven approach of information processing theory.

Authors have stressed a concern with knowledge structures on a theory-driven approach, since it can limit an individual´s ability to correctly interpret an information environment (von Krogh & Grand, 2000; von Krogh & Roos, 1996), which also translates into non-applicable representations of their current world, and consequently result in incorrect decision-making (Prahalad, 2004). Therefore, knowledge structures are grounded on the individuals´ past experiences, so their views of the world or mind sets lead to likely ignore important information while filing the gaps with fixed and perhaps inaccurate information. Put it in another way, managers operate on mental representations of the world and those representations are likely to be of based on past or historical environments rather than of current ones (Kiesler & Sproull, 1982).

From this analysis to the approaches to information processing theory, the importance in assessing the managers´ knowledge structures by following a theory-driven or a data driven approach can be recognized. Furthermore, the implications for dominant logic will be address in the following section.

1.2.2 Definitions of dominant logic

Authors have suggested to address the plasticity of a concept, which refers to study changes in its definition and identifying possible alterations in the meaning of such concept to better understand knowledge development (Brannback & Wiklund, 2001; von Krogh & Roos, 1996). In addition, retrofitting refers to the process of making new ideas adjust to old design principles. "How can new insights be incorporated into established patterns of thought? To what extent the original concept and/or its definition remain if the assumptions are changed?" (von Krogh, 1996:730). The identification of the cognitive and behavioral elements contained in the definitions of dominant logic, including a brief discussion about the origins of this concept is important in order to help clarify its further development and evolution in the literature. After having clarified the approaches to information processing theory in the previous section, a review of the definitions and assumptions proposed by the original authors through the years, and an identification of the key cognitive and action elements in the definitions is presented next.

Prahalad and Bettis (1986) introduced the concept of dominant logic pretty much in response to strategic problems of diversification. They defined dominant logic as "a mind set or a world view or conceptualization of the business and the administrative tools to accomplish goals and to make decisions in that business. It is stored as a shared cognitive map -or set of schemas- among the dominant coalition" (p. 491). Thus, as broadly put by the authors, the dominant logic can be considered as both a knowledge structure and a set of elicited management processes.

First, cognitive elements are present in this original definition comparing dominant logic to a mind set or a world view or conceptualization, referred in managerial and organizational cognition literature as knowledge structures (Walsh, 1995). Second, behavioral elements are enclosed as well in this original definition by referring to the administrative tools to accomplish goals. "Administrative tools like choice of key individuals, processes of planning, budgeting, control, compensation, career management and organizational structure" (p. 490). And third, the definition comprises "a shared cognitive map -or set of schemas- among the dominant coalition." In other

words, it referred to a group-level applicability in the definition, considering the top management team of a diversified organization.

In 1995, the same authors´ extension of their previous work in 1986, they came to view dominant logic as a general property of all kinds of organizations aimed at studying a larger class of strategic problems in response to environmental change. They viewed it as an information filter (a funnel). The authors explained that "relevant data" are filtered by the dominant logic and then "incorporated into the strategy, systems, values, expectations, and reinforced behavior", hence yielding organizational learning, which then provides feedback to the dominant logic (p. 7). First, it is interesting to note the authors referred to "relevant data," and "an information filter" which clearly depicts the shift to a data-driven approach to information processing. In a data-driven approach, the current information context from the environment shapes the individuals response to it.

Furthermore, the authors discussed dominant logic as another important emergent property of complex adaptive organizations seeking to adapt to the environment (1995:10-11). This new conceptualization on dominant logic endorses a data-driven approach to information processing, contrary to their definition in 1986. Bettis (2000) discussed that drastic changes in the environment were occurring at the time of the development of these two previous papers (1986 and 1995), which let them to consider a data-driven approach contrary to their definition in 1986.

On this topic, von Krogh and Roos (1996) approve this new anti-representationistic perspective of dominant logic (by retrofitting two basic concepts of cognition -self-reference and scale- into dominant logic). Bettis and Prahalad´s (1995) article contributed importantly to expand the possibilities of dominant logic as an organizational or firm-level construct to approach different organizational strategic problems, particularly under a data-driven approach. In fact, following up on this discussion, von Krogh and Roos (1996) recommended future research efforts on the development of dominant logic theory to follow a data-driven approach seeking anti-representationistic cognitive references (p. 736). This distinction among approaches to information processing is relevant since views of dominant logic as defined by the

original authors have switched from a theory-driven to a data-driven approach. Accordingly, an examination of the main definitions and assumptions of dominant logic throughout the years is shown in Table 1.

Table 1. Most relevant definitions and assumptions of dominant logic in strategic management literature.

Authors	Dominant logic
Prahalad and Bettis (1986:490-491)	"The way in which managers conceptualize the business and make critical resource allocation decisions –be in technologies, product development, distribution, advertising, or in human resource management. These tasks are performed by managing the infrastructure of administrative tools like choice of key individuals, processes of planning, budgeting, control, compensation, career management, and organizational structure." "The dominant logic can be considered as both a knowledge structure and a set of elicited management processes." "Dominant logic… is a mind set or a world view or conceptualization of the business and the administrative tools to accomplish goals and to make decisions in that business. It is stored as a shared cognitive map (or set of schemas) among the dominant coalition. It is expressed as a learned problem-solving behavior."
Grant (1988:640)	"But, because dominant logic is a cognitive concept, it is difficult to make much progress in specifying the strategic characteristics of business units which determine relatedness at the corporate level. To make further progress in this direction I propose that we examine corporate management, not as a `mind set´ or `collection of schemas´, but as a set of specific corporate-level functions. Corporate management can be regarded as undertaking three critical functions: allocating resources between businesses, formulating and coordinating business unit strategies, and setting and monitoring performance targets for business units."
Bettis and Prahalad (1995:7)	"…(O)ur thinking about dominant logic has evolved… We have come to view the dominant logic as an information filter, … a funnel. Organizational attention is focused only on data deemed relevant by the dominant logic. Other data are largely ignored. 'Relevant' data are filtered by the dominant logic and by the analytic procedures managers use to aid strategy development. These 'filtered' data are then incorporated into the strategy, systems, values, expectations, and reinforced behaviour of the organization… (T)he dominant logic can be viewed as a fundamental aspect of the organizational intelligence, whereas organizational learning can be thought of as occurring at the level of the strategy, systems, values, expectations and reinforced behavior, which then shape dominant logic through feedback. In other words this is not a simple case of one-way causality, but involves a feedback loop that ties the traditional variables to the dominant logic in an interactive fashion. The two are mutually interdependent."
von Krogh and Roos (1996:734)	"Whenever one speaks of the 'dominant logic' of an organization, a thorough specification of the history of that organization, its structure, systems, internal language, and strategies needs to be developed."
Cote et al. (1999:927)	"We see the firm´s dominant logic as influenced by two set of factors: (1) the administrative heritage of the firm defined as the cultural values and historical practices that have been successful in its core business… and (2) circumstantial factors, such as the ground experience of powerful top-management team members and fashionable trends in the industry or institutional environment… Some aspects of the dominant logic seem to be more deeply entrenched than others."
Zyglidopoulos, (1999:250)	"Dominant logic refers to the shared schemata that the firm´s managers use in decision making…A schemata is no more than a mental map that a manager uses to make decisions about the territory, and as any map it can be more or less accurate and more or less detailed. The dominant logic of a firm, as a set of shared schemata, is the result of the collective experience of the firm´s managers throughout the firm history, and can be seen as part of the firm´s administrative heritage in the sense that it restricts future choices. Dominant logic influences managerial decision making by framing problems and by providing explicit or implicit recommendations for the search for solutions.
Bettis (2000:169-	"Dominant logic develops as a result of experience with the characteristics of the core business

Authors	Dominant logic
170)	and the tasks critical for success over some substantial period of time." "The dominant logic bounds the structural characteristics (in an economic and strategic sense) of businesses that can be effectively managed by a firm. Problems arise when structural characteristics of the existing mix of businesses change rapidly as a result of environmental changes or acquisition or internal development of new businesses. The dominant logic will likely no longer be appropriate, but managers have a hard time recognizing this. In many cases, if failure is to be avoided, a difficult process of unlearning the old dominant logic must proceed, before developing a new one. In sum the dominant logic is clearly a mechanism of variance suppression oriented toward equilibrium."
von Krogh and Grand (2000:86)	"The dominant logic is an emergent property of complex organizations seeking to adapt to the environment. Dominant logic helps top managers (among others) to cope with the environmental complexity and enables them to filter information in order to sustain the capability to act. Thus, having a dominant logic is an efficient way of designing programs to deal with the changes in the environment, provided that the environment is relatively stable."
Lampel and Shamsie (2000:594-595)	"The basic elements of dominant logic consist of premises, beliefs, and assumptions that are shared by managers at all levels of the organization." "In more basic terms, therefore the concept of dominant logic is associated with a general management logic that produces a mindset, which governs decision making processes across all of the business units within a diversified firm."
Brannback and Wiklund (2001:203)	"Dominant logic is how manager perceives what happens outside the company in the business environment, which is taken into the organization in the form of perceptions, which are then explicated in terms of possible changes in the knowledge base, which in turn enables the company to generate new innovative products and services for their key markets… Consequently, effective action and therefore effective knowledge management will require an understanding of the current business environment or the dominant logic of business."
Chesbrough and Rosenbloom (2002:531)	"A set of heuristic rules, norms and beliefs that managers create to guide their actions. This logic usefully focuses managers' attention, as they seek new opportunities for the firm. It facilitates organizational coordination across different parts of the company."
D'Aveni, Ravenscraft, and Anderson (2004:367)	A dominant logic is a set of cognitive simplifications, analogies, conventional wisdom, and intuition about successful strategies. It is a way of conceptualizing the business and a set of decision-making rules that are stored as a set of schemata, shared among the members of the top management team.
Prahalad (2004:172)	"The dominant logic of the company is, in essence, the DNA of the organization. It reflects how managers are socialized. It manifests itself often, in an implicit theory of competition and value creation. It is embedded in standard operating procedures, shaping not only how the members of the organization act but also how they think. Because it is the source of the company's past success, it becomes the lens through which managers see all emerging opportunities. Over time, successful recipes—business models, processes, approaches to competition—become embedded in the organization and represent the dominant logic. A dominant logic limits the ability of people in the organization to drive innovation or see new opportunities and threats." "In stable competitive environments, the 'dominant logic' helps sustain organizations and strategy because it is internally consistent. If the competitive environment is subject to rapid changes, however, the blinders of dominant logic make it hard to recognize new threats and opportunities. Changing the dominant logic is extremely difficult. To change it, managers need to accept that the accumulated intellectual capital they have is suddenly devalued, accepting that we have to change to remain smart!"
K. Obloj and Pratt (2005:83)	Dominant logics are believed to guide strategic action, such as decision-making. That is, they serve as justifications for initiating certain activities and not others. These activities may be conceptualized broadly as exploration – the search for new opportunities, knowledge, and solutions, or exploration – the mobilization and use of resources and knowledge. Here, they view dominant logics as involving the interplay of perceptions (e.g., of environment and organization) and actions (e.g., operational plans and routines)… (W)e chose to concentrate on "dominant logics" – and the elements of dominant logics (sense making, learning, action/choices, and codification) – as a general guide when determining what processes to examine when collecting data.

Authors	Dominant logic
Phillips et al. (2007:7)	"A shared cognitive structure or template of how a particular firm should conduct itself that, in turn, leads managers to see the world in particular ways and, on that basis, go on to choose familiar solutions to similar problems. Thus, a dominant logic creates consistency in action and similarities in outlook among managers that can be operationalized using methods able to reveal structures of cognition or cultures that are, at least in part, external to the organization."
T. Obloj, Obloj and Pratt (2010:151-153)	"Dominant logic is the manner in which firms conceptualize and make critical resource-allocation decisions, and over time develop mental maps, business models, and processes that become organizational recipes." "Dominant logic does not refer to a single domain of knowledge or cognition; rather, it should be conceptualized as a set of "dominant themes" or "configurations" developed by the entrepreneur that over time becomes an organizational characteristic in a similar way as a market or entrepreneurial orientation." "There are two basic views of dominant logic that flow from this definition (referring to Prahalad and Bettis, 1986) – dominant logic as routines and dominant logic as an information filter."
Bettis, Wong, and Blettner (2011:178)	"Dominant logic is a conceptual framework for thinking about the process and results of cognitive simplification in top management teams." "As organizations grow and become more complex it becomes necessary and important to establish formal structure, procedures, systems, routines, and processes. These are usually designed in at least rough congruence with the dominant logic. In this sense the dominant logic begins to condense into 'visible' organization features. It also becomes 'invisibly' embodied as a significant part of the organization value system or culture. Formal structure, procedures, systems, processes, and controls are the hallmark of competent professional management. They standardize, simplify, and expedite decision making in line with the needs of the business. They focus attention on what are to be considered key issues. They establish priorities that conform to the strategic imperatives of the firm. In sum, they embody the dominant logic in the organizational features that direct attention and shape decisions for managers and employees throughout the organization."
Sabatier, Craig-Kennard, and Mangematin (2012:950)	"The dominant logic provides a general framework within which industry firms conceive what their customers want and define how to best serve their needs, and thus – depending on what opportunities they detect – design their strategies and business models. This shared logic guides the perceptions of top managers and leaders about how best to create and capture value in the industry, and so which business models will enable their company to be profitable — but they also risk becoming overly dependent on such mental models of their competitive landscape, leading to cognitive inertia."
Kor and Mesko (2013:235-236)	Based on previous experiments, accomplishments, and failures, managers develop these cognitive lenses through which they perceive and interpret the world. Managers' dominant logic for a firm is created as founders and managers; more specifically their cognitive models, interact with a particular business and firm environment, which yields assumptions and expectations for this firm context. Thus, managers´ dominant logic for a firm is the product of application of managerial mental models (along with their human and social capital) in a particular business context." "Dominant logic evolves to be an organizational-level phenomenon as a system of expectations, beliefs, and priorities that are embedded in the firm's routines, procedures, and resource commitments."
K. Obloj, Weinstein, and Zhang (2013:293-294)	"The concept of dominant logic quickly became a more general way to describe and explain a particular mindset, a mental model through which entrepreneurs perceive their environments, but also an organization´s practice, embedded in organizational systems and routines. Therefore, dominant logic can be viewed in two basic and related ways: cognitive frameworks and organizational routines. As a cognitive framework it is conceptualized as a set of dominant beliefs, sometimes described as "mindset" or "strategic frames" that allow a firm to expand its horizons and see more opportunities and resources or could limit the firm´s options and work as a blinder… As organizational routines, a firm´s dominant logic is embedded in standard operating procedures and methods of operations including the identification of opportunities and threats. In this way, routines that are part of the dominant logic can influence the effectiveness of firms in exploiting their existing organizational resources."

Source: Prepared by the authors.

From Table 1 it can be noted that further conceptualizations of dominant logic developed throughout the years has been applied at different levels of study such as individual (e.g. Garg *et al.*, 2003), group (e.g. Kor & Mesko, 2013; Prahalad, 2004), firm (e.g. Bettis, 2000; Cote *et al.*, 1999; von Krogh & Grand, 2000; Lampel & Shamsie, 2000; Lane & Lubatkin, 1998; Obloj, Weinstein, & Zhang, 2013; Obloj *et al.*, 2010), and industry (e.g. Brannback & Wiklund, 2001), considering different cognitive and behavioral elements and for different applications such as alliances (e.g. Lampel & Shamsie, 2000; Lane & Lubatkin, 1998), diversification (e.g. Ginsberg, 1990; Grant, 1988), acquisitions (e.g. Cote *et al.*, 1999), new ventures (e.g. Zyglidopoulos, 1999), organizational change (e.g. Bettis, 2000; Kor & Mesko, 2013; Prahalad, 2004), and performance studies (e.g. Garg *et al.*, 2003; von Krogh & Grand, 2000; Obloj & Pratt, 2005; Obloj *et al.*, 2013, 2010). In the following section, the multidimensionality of the concept of dominant logic is addressed in more detail.

1.3 The multidimensionality of dominant logic

Throughout the years, definitions of dominant logic have stated two basic views or dimensions, as pointed out by Prahalad and Bettis (1986), it can be considered as both "a knowledge structure and a set of elicited management processes." The authors themselves refer to it as "the elusive linkage" (p. 489). In this regard, Bettis (2000:167) reflecting back on such study in 1986 signaled these two dimensions, which dealt (most importantly), on the one hand with the mindset within a firm, and on the other hand with the managerial practices, systems, and processes. Furthermore, other authors have specified that it could be viewed in two basic and related ways, as cognitive frameworks and organizational routines (K. Obloj et al., 2013; T. Obloj et al., 2010).

This dimensionality appears evident when analyzing the different definitions and assumptions of dominant logic identified in the literature review as shown in Table 3. Most of these definitions have underlined to a certain extent references to these two views or dimensions. The first deals more with managerial cognitive elements, and the second deals with management practices or organizational action elements. In the rest of this analysis, the used of the terms cognitive and action dimensions is employed to distinguish between the two dimensions. Analyzing this multidimensionality allow us to

uncover distinct understandings or facets about dominant logic, which will be further developed in the form of hypotheses in this study. Please refer to Table 2 for a more detailed identification of cognitive and action elements from the previous definitions in Table 1.

Table 2. Detailed cognitive and action elements from the definitions and assumptions of dominant logic.

Authors	Study or Scope level	Cognitive elements	Action elements
Prahalad and Bettis (1986:490-491)	Managers, dominant coalition	Mindset, worldview, conceptualization of the business, shared cognitive map, set of schemas, knowledge structure. Learned problem solving behavior	Resource allocation, managing infrastructure of administrative tools, management processes, make decisions
Grant (1988:640)	Corporate-level	Not as a mind set, collection of schemas	Corporate level functions, management, allocating resources, coordinating strategies, monitoring performance
Bettis and Prahalad (1995:7)	Organization, managers	Information filter, funnel, expectations, organizational intelligence, analytic procedures managers use to aid strategy development, organizational learning	Values Systems, reinforced behavior of the organization
Von Krogh et al. (1996:734)	Organization		Internal language Structure, systems
Cote et al. (1999:927)	Top management team members, firm	Experience of top managers	Cultural values Historical practices
Zyglidopoulos (1999:250)	Firm, managers	Mental map, shared schemata, collective experience of the firm´s managers	Restricts future choices, managerial decision making
Bettis (2000:169-170)	Firm, managers	Experience with the characteristics of the core business	Tasks critical for success, bounds structural characteristics in an economic and strategic sense of businesses that can be effectively managed
Von Krogh et al. (2000:86)	Organizations, top managers	Information filter	Capability to act, designing programs to deal with changes in the environment
Lampel and Shamsie (2000:594-595)	Shared by managers at all levels of the organization, firm	Premises, beliefs, assumptions, mindset	Decision making processes
Brannback and Wiklund (2001:203)	Manager	Perceptions, changes in the knowledge base, effective knowledge management, understanding of the current business environment	Effective action, generate new innovative products and services for their key markets
Chesbrough and Rosenbloom (2002:531)	Managers	Heuristic rules, norms, beliefs Seek new opportunities	Organizational coordination

Authors	Study or Scope level	Cognitive elements	Action elements
D´Aveni et al. (2004:367)	Top management team	Cognitive simplifications, analogies, conventional wisdom, intuition, conceptualizing the business, stored as schemata	Decision making rules
Prahalad (2004:172)	Managers, company, organization	Lens to see emerging opportunities and threats	Shapes how members of the organization think. Standard operating procedures, shapes how members of the organization act, successful recipes, business models, processes, approaches to competition
K. Obloj and Pratt (2005:83)	Managers, organizations	Exploration – search for new opportunities, knowledge and solutions. Perceptions (environmental and organization) Sense-making, learning	Strategic action, decision-making, mobilization and use of resources and knowledge, actions (operational plans and routines) action/choice, codification
Phillips et al. (2007:7)	Firm, managers	Shared cognitive structure, see the world	Consistency in action and similarities in outlook among managers
T. Obloj et al. (2010:151-153)	Firms, organizational, Entrepreneur	Conceptualize, mental maps, information filter	Make critical resource allocation decisions, business models, and processes become organizational recipes, set of dominant themes or configurations, routines
Bettis et al. (2011:178)	Top management teams, organization, managers, employees	Conceptual framework, cognitive simplification	Invisible - organization value system or culture Visible -organizational features, formal structure, procedures, systems, routines, processes, and controls
Sabatier et al. (2012:950)	Firms, top managers, leaders	Shared logic guides perceptions, mental models, cognitive inertia Opportunities detected	Business models
Kor and Mesko (2013:235-236)	Founders, managers, organization	Cognitive lenses perceive and interpret the world, cognitive models, mental models, system of expectations, beliefs, and priorities, assumptions and expectations	Routines, procedures, resource commitments
K. Obloj et al. (2013:293-294)	Organizational	Cognitive frameworks, dominant beliefs, mindset, strategic frames, mental model. See opportunities, perceive their environments	Organization´s practice, embedded in systems and routines, standard operating procedures and methods of operations, exploiting organizational resources

Source: Prepared by the authors.

As mentioned before, Prahalad and Bettis (1986) first introduced the concept and defined it as "the way in which managers conceptualize the business and make critical resource allocation decisions." They referred to the dominant logic as a mechanism to explain the issues of corporate diversification, relying on a general management dominant logic applied to the diversified business units. This dominant logic manifests not only as a cognitive structure such as a mindset, implying a conceptualization of the business shared by the top management coalition, but as noted, it is also embedded in managing the infrastructure of administrative tools, such as the selection of key individuals, processes of planning, budgeting, control, compensation, career management, and administrative structure to get results and make decisions in the businesses (p. 490-491).

Bettis and Prahalad (1995) stated that their ideas about dominant logic had evolved, and referred to it as a property of organizations as complex adaptive systems. This new conceptualization broadens the scope of study from diversification strategies to organizations seeking to adapt to their environments, which is in congruence with the data-driven approach to information processing theory analyzed in the previous section.

At this point, the authors defined dominant logic not as a mindset (a knowledge or cognitive structure), but as an information filter (a cognitive process). Here, the managers´ cognitive processes of sense-making (information processing), which involve scanning, selecting, interpreting and validating information, appear determinant in filtering information from the environment and aiding subsequent strategy formulation (Barr et al., 1993; Chesbrough & Rosenbloom, 2002; Hutzschenreuter & Kleindienst, 2006; Schneider, 1989). Then, as posited by Bettis and Prahalad (1995), these data are incorporated into the systems, values, expectations, and organizational behavior, denoting management practices or organizational action elements of strategy implementation (Venkatraman & Camillus, 1984). Moreover, these action elements are in turn related to explicit and implicit management practices. Table 3 integrates the results of the literature review on dominant logic and classifies the references to cognitive and action elements contained in the definitions, and distinguish between cognitive structures, and cognitive processes, as well as implicit and explicit features of

management processes as action elements. The implications of these findings will be further discussed in the following sections.

Table 3. Classification of cognitive and action elements contained in definitions or assumptions of dominant logic in strategic management literature.

Authors´ definitions	Study or scope level	Cognitive structures	Cognitive processes	Implicit action elements	Explicit action elements
Prahalad and Bettis (1986:490-491)	Managers, dominant coalition	X	X		X
Grant (1988:640)	Corporate-level				X
Bettis and Prahalad (1995:7)	Organization, managers		X	X	X
von Krogh et al. (1996:734)	Organization			X	X
Cote et al. (1999:927)	Top management team members, firm			X	X
Zyglidopoulos (1999:250)	Firm, managers	X			X
Bettis (2000:169-170)	Firm, managers				X
von Krogh et al. (2000:86)	Organizations, top managers		X		X
Lampel and Shamsie (2000:594-595)	Shared by managers at all levels of the organization, firm	X			X
Brannback and Wiklund (2001:203)	Manager		X		X
Chesbrough and Rosenbloom (2002:531)	Managers	X	X		
D´Aveni et al. (2004:367)	Top management team	X			X
Prahalad (2004:172)	Managers, company, organization		X	X	X
K. Obloj and Pratt (2005:83)	Managers, organizations		X		X
Phillips et al. (2007:7)	Firm, managers	X			X
T. Obloj et al. (2010:151-153)	Firms, organizational, entrepreneur	X	X		X
Bettis et al. (2011:178)	Top management teams, organization, managers, employees	X		X	X
Sabatier et al. (2012:950)	Firms, top managers, leaders	X	X		X
Kor and Mesko (2013:235-236)	Founders, managers, organization	X			X
K. Obloj et al. (2013:293-294)	Organizational	X	X		X

Source: Prepared by the authors.

Bettis and Prahalad´s (1995) conceptualization of dominant logic is shared by other authors such as von Krogh and Grand (2000) who observed the importance of the filtering process of information "in order to sustain the capability to act." Also, Prahalad (2004) viewed dominant logic as a lens through which managers see all emerging opportunities and threats. Meanwhile, K. Obloj and Pratt (2005) in part conceptualized the cognitive dimension as exploration, or the search for new opportunities, knowledge,

and solutions. Accordingly, these authors referred in general terms to the cognitive processes of information processing and sense-making as a general way of filtering information from the environment and determining opportunities and threats. Furthermore, these cognitive processes revolve around the ability of the firm or its top management coalition to learn and adapt to the environment (Daft & Weick, 1984; Ginsberg, 1990).

Subsequent definitions and assumptions of dominant logic continued to include cognitive and action elements borrowed from previous definitions. This notion is recapped in K. Obloj et al. (2013:239) by stating, "dominant logic quickly became a more general way to describe and explain a particular mindset, a mental model through which entrepreneurs perceive their environments, but also an organization´s practice, embedded in organizational systems and routines." Again, the "elusive linkage" of which the original authors referred while conceptualizing dominant logic is still present in subsequent definitions; however, mixing elements between the cognitive and action dimensions, not really specifying an specific order and classification, from managerial to organizational practices, but not clearly outlining how these elements should be approached.

More recently others posited that dominant logic should be conceptualized as a set of "dominant themes" or "configurations" developed at the individual or group-level that over time becomes embedded in the firm´s routines, procedures, and resource commitments (Kor & Mesko, 2013; T. Obloj et al., 2010). Therefore, the cognitive dimension depicts the managers´ dominant logic, which over time develops into the dominant logic of the firm.

Although closely interrelated, an attempt to differentiate between these two cognitive and action dimensions will aid the understanding of dominant logic as an important concept of strategy. Having established the multidimensionality of the concept, in subsequent sections, a more detailed discussion of each of the dimensions is presented, as well as its relation to strategy.

1.3.1 The cognitive dimension of dominant logic

Authors have discussed dominant logic as a cognitive concept (Crilly & Sloan, 2012; Grant, 1988; Prahalad & Bettis, 1986) grounded in cognitive psychology to study how individuals think (Bettis, 2000; Cote et al., 1999). More specifically, dominant logic refers to the way in which top managers conceptualize the business (Bettis & Prahalad, 1995; Bettis, 2000; Garg et al., 2003; Grant, 1988). This assumption is linked to strategy in organizations, which becomes a reflection of how top managers understand the current business and its future (Brannback & Wiklund, 2001). As other authors have put it, dominant logic is a set of cognitive simplifications, analogies, conventional wisdom, and intuition about successful strategies (D'Aveni et al., 2004), which governs the decision-making processes (Lampel & Shamsie, 2000; K. Obloj & Pratt, 2005). Authors have stated that the cognitive dimension of dominant logic is critical to understand the role of managerial cognition in shaping the strategy (Ginsberg, 1990; Lampel & Shamsie, 2000), and consequently the "strategic conduct" of the organization (Cote et al., 1999). Therefore, the concept of dominant logic is determinant in understanding both strategy formulation and implementation.

Evidence of the cognitive dimension is contained in the definitions, in addition to the subject of analysis is clearly identified in the literature (please refer to Table 2). Dominant logic has been discussed as the managers´ conceptualization of the business (Crilly & Sloan, 2012; Prahalad & Bettis, 1986), the managers´ way of thinking (Bettis et al., 2011), the managers´ perceptions (Brannback & Wiklund, 2001; Sabatier et al., 2012), the managers´ sets of heuristic rules, norms and beliefs to guide their actions (Chesbrough & Rosenbloom, 2002), the founders´ cognitive models (Campos Montiel, Nuño de la Parra, & Solé Parellada, 2012; Kor & Mesko, 2013; Tripsas & Gavetti, 2000), or the entrepreneur´s cognitive models (T. Obloj et al., 2010). Moreover, it has been defined as a shared cognitive map among the dominant coalition (Phillips et al., 2007; Prahalad & Bettis, 1986), or top management team (Bettis et al., 2011), which eventually is shared by managers and people at all levels of the organization (Bettis et al., 2011; Lampel & Shamsie, 2000). In a few other cases, there are references to cognitive structure labels under an organizational perspective, defining dominant logic as a fundamental aspect of

the organizational intelligence, which becomes an organizational characteristic (K. Obloj et al., 2013; T. Obloj et al., 2010), and the DNA of the organization (Prahalad, 2004). Therefore, the cognitive dimension can be understood as happening at the top management and eventually is shared through the organization.

From the analysis of the definitions, this cognitive dimension of dominant logic has been associated with both cognitive structures and cognitive processes. On the former, different terms have been employed in the literature in association with dominant logic, such as mental maps, worldview, beliefs, assumptions, and a mindset shared by managers in the organization. On the later, references to cognitive processes of information processing and sense-making are enclosed as well, and broadly classified into scanning, interpretation, and learning (Daft & Weick, 1984; Ginsberg, 1990), which have a direct correspondence with the stages of information processing at an individual level (Corner, Kinicki, & Keats, 1994).

On this latter classification, Ginsberg (1990) recommends the assessment of cognitive elements by arguing that it is critical to understand the role of top management belief systems and the process of organizational learning in shaping the strategy of an organization. Moreover, this is one of the central contributions of dominant logic as a cognitive–based concept. Accordingly, the socio-cognitive model these authors proposed reflects the learning capacities of the top management associated with the abilities to collect and interpret information. Thus, these socio-cognitive capacities influence both behavioral and cognitive learning (p. 521).

Table 4 integrates the results of the literature review on dominant logic by classifying the references to both cognitive structures and cognitive processes. The several definitions and assumptions on dominant logic incorporate distinct references to cognitive structures or "labels" for interpretative constructs at the individual level of analysis found in the literature, most of which have been subject of extensive study in managerial and organizational cognition literature (Kaplan, 2011; Narayanan et al., 2010; Schneider & Angelmar, 1993; Walsh, 1995).

Table 4. The cognitive dimension of dominant logic.

Cognitive dimension Managers´ Dominant Logic	
Cognitive Structures	Cognitive Processes
causal or mental maps (Bettis et al, 2011; Lumpkin & Brigham, 2011; K. Obloj et al., 2013; von Krogh et al., 2000; T. Obloj et al., 2010; Zyglidopoulos, 1999) mental or cognitive model (Bettis et al, 2011; Kor & Mesko, 2013; Phillips et al., 2007) frames of reference (Bettis & Prahalad, 1995; K. Obloj et al., 2013) set of schemas (Prahalad & Bettis, 1986; D´Aveni et al., 2004; Lumpkin & Brigham, 2011; K. Obloj et al., 2013; Bettis, 2000; T. Obloj et al., 2010; von Krogh & Roos, 1996; Grant, 1988; Cote et al., 1999; von Krogh et al., 2000; Zyglidopoulos, 1999) world view (Prahalad & Bettis, 1986; Kor & Mesko, 2013; von Krogh & Roos, 1996; Cote et al., 1999) mindset (Bettis, 2000; Prahalad & Bettis, 1986; Lumpkin & Brigham, 2011; Nadkarni & Perez, 2007; Lampel & Shamsie, 2000; K. Obloj et al., 2013; Bettis et al., 2011; K. Obloj & Pratt, 2005) premises (Lampel & Shamsie, 2000) knowledge structure (von Krogh & Roos, 1996) paradigm (Prahalad & Bettis, 1986) beliefs (Lampel & Shamsie, 2000; Kor & Mesko, 2013; K. Obloj et al., 2013; Ginsberg, 1990; Chesbrough & Rosenbloom, 2002) memory (Kor & Mesko, 2013) expectations (Bettis & Prahalad, 1995; Kor & Mesko, 2013) heuristics rules (Chesbrough & Rosenbloom, 2002)	**Scanning** Scanning (Garg et al., 2003; Brannback & Wiklund, 2001; von Krogh et al., 2000; Nadkarni & Perez, 2007; Prahalad & Bettis, 1986) information filter (Kor & Mesko, 2013; Lumpkin & Brigham, 2011; T. Obloj et al., 2010; Nadkarni & Perez, 2007; Bettis & Prahalad, 1995; Lampel & Shamsie, 2000; von Krogh et al., 2000; Campos et al., 2012; Phillips et al., 2007) **Interpretation** perceptions (Brannback & Wiklund, 2001; K. Obloj & Pratt, 2005) sense-making (K. Obloj et al., 2013; T. Obloj & Pratt, 2005; Crilly & Sloan, 2012) lens (Kor & Mesko, 2013; T. Obloj et al., 2010; Prahalad, 2004; Lampel & Shamsie, 2000; von Krogh et al., 2000; T. Obloj et al., 2010) opportunity seeking (T. Obloj et al., 2010, Chesbrough & Rosenbloom, 2002; Crilly and Sloan, 2012) opportunity exploitation (T. Obloj et al., 2010; K. Obloj et al., 2013) **Learning** learning (Bettis & Prahalad, 1995; T. Obloj et al., 2010; Obloj & Pratt, 2005; Ginsberg, 1990; Lane & Lubatkin, 1998) strategic change: (K. Obloj et al., 2013; Bettis, 2000; Bettis & Prahalad, 1995; Brannback & Wiklund, 2001) learned problem solving behavior (Prahalad & Bettis, 1986)

Source: Prepared by the authors.

1.3.2 The action dimension of dominant logic

In addition to the cognitive dimension, dominant logic comprises an action dimension, associated with administrative tools or management processes, and critical resource allocation decisions (Bettis, 2000; Prahalad & Bettis, 1986). Evidence of the action dimension is contained in the definitions of dominant logic identified in the literature. Grant (1988) suggested studying dominant logic as a set of specific corporate-level functions, and not as a mind set or collection of schemas, in order to make significant progress. Grant referred to the "administrative tools to accomplish goals and make decisions", contained in Prahalad and Bettis´ (1986) definition, as a feasible way to assess the dominant logic of an organization. Hence, Grant discussed three critical functions of corporate management as an assessment to dominant logic: allocating resources between businesses, formulating and coordinating business strategies, and setting and

monitoring performance targets for business units. In this way, the author made clear to focus on the action elements of the organizations. For other authors, these critical functions refer to organizational action in the form of plans and routines (K. Obloj & Pratt, 2005; T. Obloj et al., 2010), or an organization´s practice embedded in organizational systems (Kor & Mesko, 2013).

Authors have differentiated between cognitive frameworks and organizational routines as two separate views of dominant logic (K. Obloj et al., 2013; T. Obloj et al., 2010). These management processes, systems, and practices are ultimately a function of the cognitive dimension, hence strategy formulation. Over time, the managers´ dominant logic becomes embedded in the major features of the organization (Bettis et al., 2011). As clearly put, "the filtered data are then incorporated into the strategy, systems, values, expectations, and reinforced behavior of the organization" (Bettis & Prahalad, 1995; Bettis, 2000).

According to Mintzberg et al. (1998), strategy implementation is comprised primarily of a series of administrative sub-activities, such as organizational structure and behavior and organizational processes and relationships. In addition to these explicit features, the action dimension also suggests implicit features embedded in the organization in the form of values and culture, which are also important elements of the firm´s dominant logic (Bettis et al., 2011). Table 5 integrates the results of the literature review on dominant logic by classifying references to explicit and implicit organizational processes.

Table 5. The action dimension of dominant logic.

Action dimension Firm´s Dominant Logic Organizational Processes – explicit features	Organizational Processes – implicit features
Organizational structure and relationships systems systems (Bettis, 2000; Bettis & Prahalad, 1995; von Krogh & Roos, 1996; Bettis et al., 2011) structures (Prahalad & Bettis, 1986; Bettis & Prahalad, 1995; von Krogh & Roos, 1996; Cote et al., 1999; Lane & Lubatkin, 1998; Obloj & Pratt, 2005; Obloj et al., 2013; Cote et al., 1999) **Organizational processes and behavior** administrative tools and tasks (Prahalad & Bettis, 1986 Ginsberg, 1990;	**Culture** culture (Bettis et al., 2011) internal language (von Krogh & Roos, 1996) values (Bettis & Prahalad, 1995; Brannback & Wiklund, 2001; Cote et al., 1999)

Action dimension Firm´s Dominant Logic Organizational Processes – explicit features	Organizational Processes – implicit features
Grant, 1988) controls (Bettis et al., 2011; Cote et al., 1999) decision making (K. Obloj & Pratt, 2005; Lampel & Shamsie, 2000; Zyglidopoulos, 1999) management processes, practices, standard operating procedures (Prahalad & Bettis, 1986; Bettis, 2000; Bettis & Prahalad, 1995; Kor & Mesko, 2013; T. Obloj et al., 2010) organizational recipes (T. Obloj et al., 2010; Prahalad, 2004) performance monitoring (Grant, 1988; Cote et al., 1999; K. Obloj et al., 2013) reinforced behavior - compensation (Bettis & Prahalad, 1995; Cote et al., 1999; Lane & Lubatkin, 1998; K. Obloj et al., 2013) resource allocation or commitments (T. Obloj et al., 2010; von Krogh & Roos, 1996; Grant, 1988; Ginsberg, 1990; Kor & Mesko, 2013) standardization - routines (K. Obloj & Pratt, 2005; T. Obloj et al., 2010; K. Obloj et al., 2013; Bettis et al., 2011; Kor & Mesko, 2013) strategic decisions and coordination (Prahalad & Bettis, 1986; Bettis & Prahalad, 1995; von Krogh & Roos, 1996; Grant, 1988)	

Source: Prepared by the authors.

1.4 Empirical studies on dominant logic

Several authors have considered different cognitive and action elements in their efforts to operationalize the concept of dominant logic. A differentiation between the cognitive and action dimensions is presented in order to provide an overview of the advancements in the operationalization of this concept (please refer to Table 6). In addition, Table 7 shows a summary of the main applications of the empirical studies on dominant logic.

Table 6. References to cognitive and action elements contained in empirical studies of dominant logic.

	Cognitive dimension	**Action dimension**	
Authors	Cognitive Processes	Explicit features	Implicit features
Quantitative Studies			
Lane and Lubatkin (1998)	X	X	
Garg et al. (2003)	X		
T. Obloj et al. (2010)	X	X	
Campos Montiel, Nuño de la Parra, and Solé Parellada (2012)	X		
Maijanen, Jantunen, and Hujala (2015)	X		
Qualitative Studies			
Cote et al., 1999		X	X
Tripsas and Gavetti (2000)	X	X	
von Krogh et al. (2000)	X		
Brannback and Wiklund (2001)	X		
K. Obloj and Pratt (2005)	X	X	

Authors	Cognitive dimension	Action dimension	
	Cognitive Processes	Explicit features	Implicit features
Crilly and Sloan (2012)	X		
K. Obloj et al. (2013)	X	X	
Schraven, Hartmann, and Dewulf (2015)*		X	

*The study used mixed qualitative and quantitative methods.
Source: Prepared by the authors.

Table 7. Empirical studies on dominant logic.

Authors	Method	Scope / Scale	Variable to be explained	Dominant logic definition base	Link to Dominant Logic	Study
Lane and Lubatkin (1998)	Quantitative- 69 alliances between pharmaceutical and biotechnology companies (regression analyses)	Firm-level	Firm´s success at interorganizational learning within the alliance.	Based on Prahalad and Bettis (1986, 1995).	A firm's dominant logic determines how it applies knowledge with implications for the commercialization of new external knowledge. Analyses firm´s structure in terms of formalization of management practices.	Alliances
Cote et al. (1999)	Qualitative- Case study of Group SNC Inc, Canadian engineering firm, 13 acquisitions and 6 joint-ventures	Firm-level	Performance	Based on Prahalad and Bettis (1986) and consistent with Grant (1988) and Ginsberg (1990)	Shows how firm´s acquisition strategy and management approach have evolved, providing an explanation of why organizations seem to have difficulty in adapting to changing conditions. The firm´s dominant logic is influenced by the administrative heritage and circumstantial factors.	Acquisitions
Lampel and Shamsie (2000)	Quantitative- 70 GE joint ventures (logistic regressions)	Firm-level (business units)	Early success or failure of the alliance	Based on Prahalad and Bettis (1986, 1995).	Dominant logic addresses the problem of balancing the needs of business units against those of the corporation as a whole. Failure of units can be linked to a shift away from corporate dominant logic.	Alliances
Von Krogh at al. (2000)	Qualitative- Case study of 2 telecommunications firms, Ericsson and Nokia	Firm-level	Performance, market share	Based on Prahalad and Bettis (1986, 1995).	Dominant logic includes the firms´ conceptualization of the business (external environment) and of themselves (internal environment) and	Firm performance in dynamic environments

Authors	Method	Scope / Scale	Variable to be explained	Dominant logic definition base	Link to Dominant Logic	Study
					performance, reacting faster and more successfully to changes in the environment.	
Tripsas and Gavetti (2000)	Qualitative- Case study of Polaroid Corporation historical involvement in digital imaging.	Individual -level and firm-level	Firm and industry change	Based on Prahalad and Bettis (1986)	Senior managers work together and develop a dominant logic for the firm based on their shared history.	Role of managerial cognition in driving dynamic capabilities (change).
Brannback and Wiklund (2001)	Qualitative- Case study of Finnish food industry (11 managers from 4 companies)	Firm-level and industry-level	Firm and Industry change	Based on Prahalad and Bettis (1986, 1995).	Dominant logic is how manager perceives what happens outside the company in the business environment, which is taken into the organization in the form of perceptions, which are then explicated in terms of possible changes in the knowledge base, which in turn enables the company to generate new innovative products and services for their markets.	Radical technological change together with changes in the business environment will introduce a new dominant logic
Garg et al. (2003)	Quantitative- 116 SMEs independent businesses (hierarchical regressions)	Individual -level and firm-level	Performance	Based on Prahalad and Bettis (1986).	Simultaneous match among relative scanning emphasis on external sectors, internal sectors, and dynamism in the external environment is associated with firm performance	Firm performance in dynamic environments
K. Obloj and Pratt (2005)	Qualitative- Case study of leaders and their alter egos in 5 industries in Poland	Firm-level	Performance	Based on Prahalad and Bettis (1995) and consistent with Grant (1988), von Krog et al (2000).	Integrated the two views of dominant logic as information filter, and routine codification and learning, and operationalized dominant logic as four interconnected elements (external opportunity orientation, proactiveness, learning, and codification of routines)	Firm performance in an emerging economy
T. Obloj et al. (2010)	Quantitative- 98 responses from top	Individual -level and	Performance	Based on Prahalad and	Dominant logic should be conceptualized as	Firm performance

Authors	Method	Scope / Scale	Variable to be explained	Dominant logic definition base	Link to Dominant Logic	Study
	managers in established SMEs in Poland (logistic regressions)	Firm-level		Bettis (1986) and Prahalad (2004).	a set of dominant themes or configurations developed by the entrepreneur that over time become organizational characteristics in a similar way as a market or entrepreneurial orientation.	in an emerging economy
Campos et al. (2012)	Qualitative- 158 Surveys to top managers-founders of new ventures (10 to 40 employees) manufacturing sector in Mexico	Individual -level	Performance	Based on Prahalad and Bettis (1986)	Dominant logic mediates the relationship between entrepreneurial orientation and performance. Dominant logic is approached as internal and external features.	Firm performance in an emerging economy
K. Obloj et al. (2013)	Qualitative- Case study of 6 Chinese firms in 3 industries	Firm-level	Performance	Based on Bettis and Prahalad (1995) and Prahalad (2004).	Dominant logic should integrate its cognitive structure and management routines that are both the product and component of the formation of knowledge filters and action.	Firm performance in an emerging economy
Maijanen et al. (2015)	Quantitative- employees in the Finnish broadcasting company	Individual -level	Need for change and dynamic capabilities	Based on Prahalad and Bettis (1986).	Analyzing how different internal subgroups in an organization share different mindsets in relation to the old and new dominant logic.	Shared mindsets and dynamic capabilities and their influence on organizational renewal.
Schraven et al. (2015)	Qualitative and quantitative study of INFRA, a public agency in Netherlands.	Individual -level evidence	Approach strategic change	Based on Prahalad and Bettis (1986)	Analyzing empirical individual-level evidence representative of the organization.	How to change organizational thinking after a change in strategy.

Source: Prepared by the authors

From the Tables above, assessments of the nature and the main characteristics of the empirical studies in dominant logic are summarized. Related to the original definition of Prahalad and Bettis (1996) initial studies have focused on issues of corporate management, such as alliances, and acquisitions. Later studies have assessed more general characteristics related to organizational performance and alignment with the

environment. Moreover, studies have assessed different cognitive and action features of dominant logic. Authors have stated that in spite of all the problems with its operationalization for empirical research (von Krogh et al., 2000), can be useful in understanding firm performance and success. Next, a discussion of those empirical studies related to organizational performance is presented, which is the area of interest in this research study.

Organizational performance in the area of strategic management represents the most important and frequently used variable of interest in evaluating organizations, their actions and their environments (Boyd et al., 2005). For the study of dominant logic, it has not been the exception. The different conceptualizations and operationalization of dominant logic have provided interesting results in the assessment of performance in organizations.

Lane and Lubatkin (1998) developed and tested a model of inter-organizational learning based on Cohen and Levinthal´s (1990) theory of absorptive capacity. In this study, the authors examine the role that partner characteristics play in the success of inter-organizational learning. These authors evaluated how the alliance has helped the pharmaceutical firm in terms of learning new skills or capabilities and technology or research developments. In addition, they refer to the dominant logic in determining how the applied knowledge has implications for the commercialization of new external knowledge, hence affecting organizational performance.

Cote et al. (1999) proposed a model of the management of growth through acquisition and used dominant logic as their central feature. The authors in a qualitative case study analysed Groupe SNC Inc., a large engineering Canadian firm. For these authors, the dominant logic will affect the strategic conduct, which refers to the approaches used by the top management in the choice, evaluation and operational management of the firm and business units. This strategic conduct is affected by the specific context of the firm. Moreover, the strategic conduct and the specific context affect the performance of the firm.

Lampel and Shamsie (2000) discussed how dominant logic as a cognitive framework develops a unified set of beliefs that reflects at every level within diversified firms, analyzing the case of General Electric (GE) and 70 joint ventures between 1984 and 1993. As a result, dominant logic is said to ease decision-making and to constrain how managers see business problems at both the corporate and the business level in large diversified firms. Dominant logic can be used to exert some degree of control over decision making at the business unit level through an attempt to influence how managers in these units interpret information, creating consistency in the way business units approach decisions, which in turn is expected to result in a consistency between the actions of business units and that of the guiding dominant logic as formulated by corporate headquarters.

von Krogh et al. (2000) aimed to extend the concept of dominant logic to provide a better understanding of why some firms react faster and perform better in changing environments. Their results suggest that there might be a positive correlation between the bandwidth of dominant logic (different sets of categories: internal and external) and performance of companies confronted with break points or a strong increase of the dynamic of their environments. Thus, the objective of this study was to conceptually extend and to operationalize the concept of dominant logic and show a possible link between the dominant logic and performance. They used the case of two corporate telecommunication companies, Nokia and Ericsson. In addition, the authors hypothesized that the higher the bandwidth of the company´s dominant logic, the more successful its reaction to substantial increases in the environment. Furthermore, for future studies, the authors recommend extending the number categories to measure the bandwidth, including different strategic actions in order to include a logical step from decisions about strategies to strategic actions, which then result in performance (p. 91).

Brannback and Wiklund (2001) described the changes in the dominant logic of the Finnish food industry. They argued that radical technological change together with changes in the business environment will introduce a new dominant logic, which will have an impact on all business processes requiring the creation of new knowledge and a change in how the business operations are to be coordinated, thus with subjacent

implications for performance. As a result, such changes in the dominant logic represent important implications for firms. For example, there are implications for knowledge management processes as well as strategy making, and the business success and performance is dependent upon how well these issues are understood and managed.

Garg et al. (2003) used the concept of dominant logic to develop predictions about which internal capabilities and which sectors of the external environment should receive more or less top management´s scanning emphasis in more or less competitive dynamic environments. In their model, the external environment domain included the market environment, technological environment, competitive environment, political/legal environment, economic environment, and sociocultural environment. Meanwhile, the internal environment domain included market research, product R&D, basic engineering, financial management, cost controls, and operational efficiency. Their results showed that simultaneous match among relative scanning emphasis on external sectors, relative scanning emphasis on internal sectors, and dynamism in the external environment was associated with firm performance. Higher sales growth also occurred when Chief Executive Officers (CEOs) facing more stable environments simultaneously increased their relative scanning emphases on the general sectors of the external environment and on efficiency functions in the internal environment. Also, higher sales growth resulted for the manufacturing firms when CEOs facing more dynamic competitive environments simultaneously increased their relative scanning emphases on the task sectors of the external environment and on innovation functions in the internal environment.

K. Obloj and Pratt (2005) conducted qualitative research by analyzing 10 companies from five different industries in Poland. In their case studies, the authors found important differences in the dominant logics of leaders, and those of losers in newly established markets in Poland. The authors stated that dominant logic is believed to guide strategic action. In addition, they focused on the elements of dominant logic, such as sense making, learning, action/choices, and codification of routines in turbulent markets. On the one hand, leader companies do not have coherent strategies and rigid designs, by following simple rules that enable them to create and leverage opportunities, establish standards, brand names, and publicity; and more importantly learn from difficult

experiences. On the other hand, loser companies are more limited, rigid, with more centralized and formalized designs; do not follow the logic opportunities, and forget previous experiences from failures.

T. Obloj et al. (2010) provided an inductive model of the structure of dominant logic of entrepreneurial firms in transition economies (K. Obloj & Pratt, 2005). For these authors, the dominant logic is a critical resource that serves as a means for organizations to recognize and manage their resources. Based on K. Obloj and Pratt (2005), the dominant logic construct associated the conceptualizations of managerial and organizational cognitive structures. The authors operationalized two dimensions, dominant logic as an information filter (external orientation/opportunity seeking, and proactiveness) and dominant logic as learning and routines (organizational learning, and codification of routines) into the determinants firms´ performance. Their results provided support for the concept of dominant logic to be useful in understanding firm performance as a result of external orientation, proactiveness, and routines. Authors found that there was a positive relationship between the firms´ external opportunity-seeking orientation, proactiveness, and routines codification, and their performance.

In their study, Campos et al. (2012) analyzed the mediation effect of dominant logic on the relation between entrepreneurial orientation and organizational performance. Their results showed that new ventures foster dominant logic by implementing strategic processes to maximize the effect of entrepreneurial orientation and performance. In addition, the authors argued that dominant logic could prove valuable in explaining why some firms are able to anticipate changes in their core business more successfully than other firms (p. 69).

K. Obloj et al. (2013) followed a qualitative methodology to study the impact of dominant logic upon strategic choices of average firms using the case of six Chinese companies. Their research extended the study of how cognitive frameworks and organizational routines complemented and reinforced each another to create an internally consistent system over time (p. 293). In addition, they found that the dominant logic of Chinese entrepreneurs focused more on risks, threats, and uncertainty as

opposed to dominant logics of emerging economies such as Poland, where opportunities and discovery were the main focus.

Maijanen et al. (2015) used a sample of employees as a Finnish broadcasting company to demonstrate how different subgroups share different mindsets in relation to the new and old dominant logics in the organization. They emphasized the importance of internal cognitive elements and capability determinants when an organization faces radical change. In their study, although they did not operationalized dominant logic, they linked the dynamic capability view and the dominant logic research. Following Teece´s (2007) operationalization of dynamic capabilities: sensing, seizing, and reconfiguring, as the resources and capabilities in a way the firm sustains its fitness in the new environment. Such elements can be interpreted as a learning process that enriches the organizational knowledge base by filtering, scanning, and combining information from the environment, and how these elements relate to organizational change and performance, with implicit associations to dominant logic.

From the early discussion in this Chapter, the dominant logic guide cognition and actions relative to information processing and decision making (Stubbart, 1989; Walsh, 1995), and it is related to strategic management because it involves the fundamental decisions that shape the direction of the firm (Eisenhardt & Zbaracki, 1992). Moreover, the research agenda on strategic management outlines to examine the impact of top manager´s cognitive structures on strategic choice and action, and organizational performance (Eisenhardt & Zbaracki, 1992; Hutzschenreuter & Kleindienst, 2006; Rajagopalan et al., 1993). Hence, the study of the cognitive and action dimensions of dominant logic and its further impact on organizational performance is justified. As a result, the most relevant literature on dominant logic and strategic cognition is addressed in this Chapter, signaling the multidimensionality of dominant logic, and the relevance to continue to redefine its study. Moreover, a classification of the most relevant elements for the further assessment of dominant logic has been presented as well, providing a clarification in the assessment of the concept, and its further conceptualization and operationalization. The analysis of the different empirical studies on dominant logic strengthen the case for a conceptualization and operationalization of the construct

regarding the elements that integrate dominant logic. Empirical studies also have described different relationships between dominant logic with performance and growth.

The qualitatively studies have mostly used case studies of big corporations (e.g. GE, Nokia, Ericsson, Groupe SNC Inc., Polaroid, among others) to address the strategic decisions and actions, which have a direct correspondence on the firm´s performance. Whereas, the quantitatively studies have employed small samples of firms from 69 to 158 most of them using regression analyses. The following Chapter presents a proposal to operationalize dominant logic based on the empirical and theoretical support from this Chapter. In addition, the corresponding hypotheses are presented and the dominant logic integrative framework is formulated and discussed to outline the empirical study.

CHAPTER 2

Operationalizing dominant logic

2. OPERATIONALIZING DOMINANT LOGIC

Authors have addressed both the necessity and difficulty in operationalizing the concept of dominant logic due to its cognitive nature (Grant, 1988; Prahalad & Bettis, 1986; von Krogh & Grand, 2000), and implicit methodological challenges. On this regard, Lampel and Shamsie (2000) noted that "attempting to tap, measure, and monitor dominant logic, given that it is designed to influence cognition as unobtrusively as is possible, presents special methodological challenges" (p. 594). As analyzed in the previous Chapter, the literature appears fragmented and depicts a lack of consensus about what this concept should include. Despite this, a few attempts have been made admitting its potential to turn it into a valuable instrument of strategic analysis (Cote et al., 1999; Kor & Mesko, 2013; Lampel & Shamsie, 2000; T. Obloj et al., 2010; von Krogh & Grand, 2000). Other authors have noted that there is only a "small amount of empirical work that has taken up Prahalad and Bettis´s challenge to operationalize dominant logics" (Phillips et al., 2007:8). More recently, Schraven et al. (2015) recognize the difficulty with measuring where the dominant logics become apparent in practice in a way that translates to the organizational level. As a result, authors have called for future studies to continue to refine the operationalization of dominant logic, and to report the veracity of the elements tested and their relationships (K. Obloj et al., 2013; T. Obloj et al., 2010). Moreover, as affirmed by Fuchs, Mifflin, Miller, and Whitney (2000) all strategic and organizational elements are orchestrated to a dominant logic, hence its assessment seems critical.

As previously discussed, Grant (1988) proposed to examine dominant logic as a set of specific corporate-level functions, and not as a mind set or collection of schemas, in order to make significant progress. Thus focusing on the action dimension. But, on the other hand, Ginsberg (1990) recommended researchers that in order to make further progress, it is critical not to forget the essence of dominant logic as a cognitive concept, and to understand the role of top management belief systems and the process of learning in shaping the strategy of an organization. Thus, incorporating more cognitive elements. Cote et al (1999) proposed to operationalize dominant logic as a combination of three dimensions in line with Hinings and Greenwood (1988), top manager´ conceptualization of the role of the firm, criteria for decision making and evaluation, and

the organizing and management principles adopted. Thus, delivering a combination of cognitive and action elements.

This Chapter assesses the strategic nature of the concept of dominant logic, and further analyzes the cognitive and action dimensions of dominant logic and their implications for strategic management, and formulate different hypotheses to further approach the study of dominant logic. In addition, the integrative framework in this research study is presented to propose an operationalization distinguishing between the managers´ dominant logic and the firm´s dominant logic and their linkage to organizational performance.

2.1 Dominant logic: a strategic concept

Since the 1950s (March & Simon, 1958; Simon, 1955) cognitive science has evolved exploring the relationships among the mind, management, and organization, significantly contributing to the field of managerial and organizational cognition, which is at the heart of strategic management (Mintzberg, 1978, 1979; Dan Schendel & Hofer, 1979; Smircich & Stubbart, 1985; Stubbart, 1989).

Interest in managerial and organizational cognition has developed significantly assisting the understanding of cognition as a key factor underlying social action and performance in organizations (Meindl et al., 1994). By cognition, the field refers broadly to the acquisition, uses, and implications of knowledge, beliefs, and intelligence (Laukkanen, 1994); in other words, cognitive structures and cognitive processes. Research on organizational cognition uses data that originates at the individual level; e.g., CEOs or a management team to serve as a proxy for the cognition in organizations, argued to represent what the organization thinks (Laukkanen, 1994). In addition, Laukkanen (1994:325) defined organizational cognition as "the core patterns of natural managerial thinking of the CEOs, and consider adequate to focus specifically on the phenomena the CEOs/organizations perceive in their worlds."

The concept of dominant logic is closely tied to the field of research on managerial cognition, which is at the hearth of strategic management. As a multidimensional concept involving a cognitive and an action dimension, dominant logic

is evidently related to strategy. Strategy is an organizational process, in many ways inseparable from the structure, behavior, and company culture in which it occurs (Mintzberg et al., 1998:52). Thus, strategy formulation and strategy implementation could be abstracted as two important and interrelated aspects in strategy. While conceptually different, strategy formulation and implementation are interdependent, in that a well-formulated strategy needs to take into account the way it will be implemented, and it is through the learning in its implementation that a company's strategy is refined and eventually reformulated (Gimbert, Bisbe, & Mendoza, 2010).

Although for the purpose of this study the analysis of the two sides of this dichotomy is presented separately, they represent intertwined aspects of strategy (Burgelman, 1983c; Mintzberg, 1978). In a broad sense, the former refers to cognitive processes, such as scanning and identifying opportunities and threats in the environment. The later concentrates mainly on two broad categories of action (explicit features), such as organizational structure and relationships, as well as organizational processes and behavior (Burgelman, 1983a; Mintzberg et al., 1998; Stubbart, 1989). Consequently, these organizational processes and structure elements are implicit in the organizational culture depicting an overall firm´s dominant logic. Thus, while assessing the culture of an organization (Cote et al. 1999), the subjacent elements of organizational processes and structure can be assessed, such as organizational structure, performance measurements, compensation practices, management development, and the system of incentives and control to carry out the strategic organizational behavior (Please refer to Figure 5).

Strategy formulation creates the context of strategic decision and implementation activities, and it plays a major role within the strategic management process (Schneider, 1989). Thus, strategy formulation is a critical direction-setting top management activity (Bower & Doz, 1979), which involves gathering and interpreting information in order to identify strategic issues or events (Schneider, 1989). As posited by Hutzschenreuter and Kleindienst (2006) organizations develop a dominant logic that condenses its orientation toward change and opportunities found in the environment leading to the establishment of a strategy. Hence, the dominant logic guides strategic action, justifying why certain

activities are initiated and not others (K. Obloj & Pratt, 2005; von Krogh et al., 2000). In line with Kor and Mesko (2013), who argued that it could serve as a stabilizing force in strategy implementation. Therefore, in an effort to better understand dominant logic as an instrument of strategic analysis, throughout this dissertation an association of the main cognitive and action elements of dominant logic is used interchangeably with strategy formulation and implementation (please refer to Figure 5).

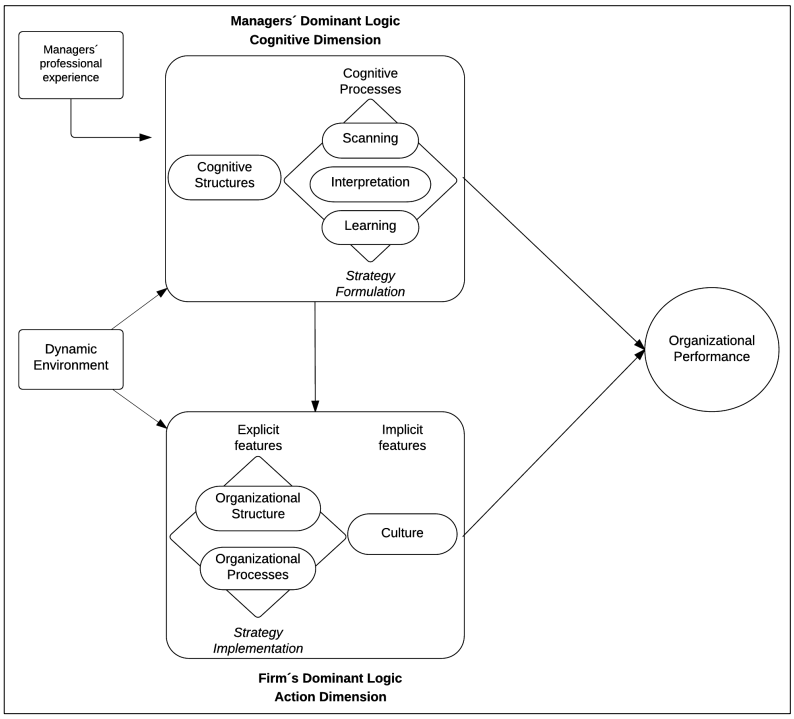


Figure 5. An integrative framework of dominant logic and organizational performance.

Source: Prepared by the authors.

In light of the theoretical arguments presented, dominant logic can be viewed as both a managers´ dominant logic in the form of a cognitive dimension, and a firm´s dominant logic in the form of an action dimension. According to the arguments presented in this study, it is feasible to conceptualize and operationalize dominant logic by analyzing these two broad dimensions separately, as originally defined by Prahalad and Bettis (1986) and later maintained by several authors (e.g. Kor & Mesko, 2013; T. Obloj et al., 2010). The evidence contained in the most relevant literature on dominant logic supports such multidimensionality by disclosing several cognitive and action elements at different points in time. The analysis has leaded us to hypothesize that

dominant logic is in fact a multidimensional concept. In the previous Chapter, the key elements associated to both cognitive and action dimensions have been identified, which in turn represent immersed features in strategy formulation and implementation. In this Chapter a discussion of the theoretical and empirical studies on dominant logic is presented to formulate the hypotheses in this study.

2.2 The cognitive dimension

Definitions of dominant logic discuss cognitive structures and cognitive processes, which are guided by the top management mental representations. Cognitive structures guide the cognitive processes of information processing and sense-making as determinant elements in the cognitive dimension of dominant logic. Furthermore, these mental representations provide support to the cognitive process elements that guide information processing and organizational adaptation to the environment, involving scanning, interpretation, and learning, guiding the strategic decisions and subsequent firm action (Nadkarni & Barr, 2008). Next, the implications of cognitive structures and processes in dominant logic are discussed.

2.2.1 Cognitive structures

Cognitive structures refer to representations of knowledge that contain and organize information (Schneider & Angelmar, 1993). Individuals process information differently from their perceived world and build mental representations, which are stored in and retrieved as schemas (Markus, 1977). These schemas are cognitive structures regarding specific concepts, entities, and events used by individuals to encode and represent incoming information efficiently (Markus, 1977; Nisbett & Ross, 1980). In fact, cognitive structures have been examined as cognitive strategic action generators (Laroche, 1995).

According to Prahalad and Bettis (1986), cognitive structures are the principal premise for understanding dominant logic. Based on their previous experiences, managers develop mental representations through which they perceive and interpret their world or reality as perceived through their senses (Walsh, 1995). Furthermore, the managers´ dominant logic is the product of application of cognitive structures (mental

models, frames of references, schemas, etc.) in a particular business context (Kor & Mesko, 2013). Thus, these cognitive structures are needed in order to deal with environmental complexity (K. Obloj & Pratt, 2005; Zyglidopoulos, 1999). And, they need to be revised in terms of their appropriateness to external conditions in the environment (Burgelman, 1983a; Schneider & Angelmar, 1993). In fact, according to Marcel, Barr, and Duhaime (2011) differences in cognitive frameworks are an important determinant of large-scale strategic change.

It has been stressed that assessing the content of cognitive structures and what truly means to an individual is a very difficult task (Ginsberg, 1990; Grant, 1988; Prahalad & Bettis, 1986; Stubbart, 1989). In fact, authors have argued that "is more defensible to do content-free analyses that examine structures and the placement of concepts than to puzzle over the meanings of the words themselves" (Weick & Bougon, 1986:114). For this reason, this study does not represent an additional attempt in the literature to turn into a long discussion about the differences between each of these labels to refer to cognitive structures, but rather understand the implications for dominant logic. Other authors have done that, in fact, for an interesting discussion about knowledge structures see Walsh (1995).

Accordingly, cognitive structures are central to the study of strategic management because perception, interpretation, and meaning of events and conditions are shaped by the manager´s representations, which are then translated into the organization. Extensive attention has been placed in describing these cognitive structures. Many different concepts at different levels of analysis have been used to label these cognitive structures, such as beliefs, cause or cognitive maps, mental models, frameworks, schemas and scripts, worldviews, mindsets, strategic frames, recipes, ideologies, templates, filters, paradigms, dominant logic, and so on (Schneider & Angelmar, 1993; Walsh, 1995).

Basically, top managers create cognitive structures to help them process information and make decisions, based on those representations. Moreover, these schemas are conditioned to the top managers´ background and experiences, which depict their realities (Prahalad & Bettis, 1986; von Krogh et al., 2000). According to the

echelon theory, top managers´ professional experience have been posited to influence their choices (Hambrick & Mason, 1984), organizational adaptation (Cyert & March, 2006), and organizational growth (Penrose, 1959).

Moreover, empirical support has frequently found relationships between top managers´ years of experience and firm performance (Gupta & Govindarajan, 1984, 1986). Managers´ judgments may also improve with experience (Garg et al., 2003). For example, managers´ understanding of relationships among strategy, structure, and environment variables has been argued to be reflected in their judgment for strategy-structure-environment alignment (Priem, 1994). Hence, suggesting an effect on the managers´ dominant logic over the organization. In addition, authors have proposed that the background and experiences of powerful top management members influence the dominant logic of an organization (Bettis, 2000; Cote et al., 1999; Maijanen et al., 2015; von Krogh et al., 2000; Zyglidopoulos, 1999). Top managers relay on these subjective representations and cognitive frameworks that extract from previous experiences, and subsequently shape their attention to and interpretation of the environment (Dutton & Jackson, 1987; Nadkarni & Barr, 2008). In fact, Cote el at. (1999) refer to circumstantial factors affecting the dominant logic, such as the background and experience of top-management team members. As a result, the following hypothesis is formulated:

Hypothesis 1: The top managers´ professional experience has a significant effect on the managers´ dominant logic.

2.2.2 Cognitive processes

As discussed before, cognitive structures support the cognitive processes. Cognitive processes refer to how knowledge is selected, organized, transformed, stored, and utilized (Schneider & Angelmar, 1993:351). The cognitive processes are vital in guiding and limiting decisions and strategic action (Combs, Ketchen, Ireland, & Webb, 2011; Garg et al., 2003; Lampel & Shamsie, 2000; Narayanan et al., 2010). Dominant logic has been described as an important emergent property of complex organizations seeking to adapt to the environment (Bettis & Prahalad, 1995; Bettis et al., 2011). This entail that

information is gathered, interpreted, stored, and utilized. Individuals process information from the environment and then base action on that information (Corner et al., 1994; Daft & Weick, 1984).

Cognitive processes of information processing at top management level are emphasized through the literature. The general idea is that managers´ cognitive structures guide cognition processes and actions relative to strategic choices (Stubbart, 1989). These structures in turn support the cognitive processes of information processing and sense-making, affecting the types of information that are sought and the way in which such information is processed (Lampel & Shamsie, 2000; Schneider, 1989).

Immersed in strategy literature, there are three basic processes regarding the adaptation to the environment, which influence strategic choices: environmental scanning, interpretation, and learning (Daft & Weick, 1984; Ginsberg, 1990; Nadkarni & Perez, 2007; Thomas et al., 1993). And, there is a direct similarity between these stages and stages of information processing at the individual level (Corner et al., 1994). This correspondence reflects the simultaneous influence of individual cognitive processing on strategic decision-making. In their study, K. Obloj and Pratt (2005:83) revealed elements central to most conceptualizations of cognitive structures linking them to cognitive processes including perception, sense-making, and learning.

On this regard, Brannback and Wiklund (2001:203) definition is very illustrative by specifying that dominant logic is how managers perceive what happens outside the company in the business environment (scanning), which is taken into the organization in the form of perceptions (interpretation), which are then explicated in terms of possible changes in the knowledge base (learning). In addition, much responsibility lies on top management, since scanning, interpreting and learning requires to be alert on the signals from outside and inside the firm to be able to do right strategic decisions affecting performance (Augier & Teece, 2009; Jantunen, 2005; Teece, Pisano, & Shuen, 1997; Teece, 2007). This challenge for top managers if further addressed in managerial capabilities studies regarding their own cognitive limitations and biases (Brannback & Wiklund, 2001; Teece, 2007; Tripsas & Gavetti, 2000). Correspondingly, an examination

of each of these cognitive processes is presented, which are fundamental to the formation of the managers´ dominant logic.

Scanning

In terms of cognitive processes, scanning is defined as the process of monitoring the environment and providing environmental data to top managers (Daft & Weick, 1984). Moreover, it refers to a mechanism used by top managers to choose which environmental stimuli to consider and to ignore (Nadkarni & Perez, 2007; Tang, Kacmar, & Busenitz, 2012). Mostly, top managers have access to more information than it can be used (Mintzberg et al., 1998). In addition, strategic decision making involves top managers examining and reconciling large amounts of incomplete, ambiguous, and most of the times conflicting data (McCall & Kaplan, 1985).

Literature in cognitive and social psychology show that top managers operate under conditions of bounded rationality and their eventual choices regarding competitive response reflect the limitations of their information processing routines (Daft & Weick, 1984). Top managers exercise greater decision over individual actions in strategy formulation such as scanning, so they must select and effectively scan the appropriate environments before they can hope to initiate actions to align their organization with the demands of the environment (Garg et al., 2003; Prahalad & Bettis, 1986). So, this emphasis on scanning is important for effective strategy formulation to take place.

As discussed before, dominant logic has been conceptualized as a filter of information, enabling managers to process substantial quantities of information (Bettis & Prahalad, 1995; Crilly & Sloan, 2012), and to screen and retain appropriate or relevant data, which is also supported by the cognitive structures (Kor & Mesko, 2013; Lampel & Shamsie, 2000; Prahalad, 2004). As an information filter, it helps managers to reach decisions and guide subsequent firm action upon the environment (Lumpkin & Brigham, 2011), and initiatives in configuring the firm´s resources and competencies (Kor & Mesko, 2013). Thus, scanning is an important process in understanding the organizational environment and necessary for effective strategy-making action (Brannback & Wiklund, 2001).

Authors refer to scanning as the process of conceptualizing the business by considering the assessment of either internal or external environments (Garg et al., 2003; K. Obloj & Pratt, 2005; K. Obloj et al., 2013; von Krogh et al., 2000). On the internal environment, several categories have been considered in qualitative studies such as the top manager´s conceptualization in terms of people, culture, and product and brand (von Krogh et al., 2000), as well as production processes, R&D, and pricing (Brannback & Wiklund, 2001). Concerning the external environment, authors have reviewed the manager´s conceptualization of the competition, customers and consumers, and technology (K. Obloj et al., 2013; von Krogh et al., 2000), as well as the market dynamics, market communication, and competitive scope (Brannback & Wiklund, 2001).

As far as quantitative studies, von Krogh et al (2000) define a multidimensional dominant logic and propose an operationalization based on the concept of bandwidth (Prahalad & Bettis, 1986). Their operationalization consisted of two domains (internal/external) and six categories (people, culture, product and brand/competitor, customers, and technology) to explore the link between dominant logic and performance in dynamic markets. Their hypotheses reflected the higher the bandwidth (number of categories) of the company´s dominant logic, the more successful its reaction to substantial increases in the environment´s variety will be. The proposed framework categorizes managers´ statements reflected in executives´ statements, and uses a numerical measure of the bandwidth of dominant logic. In addition, Campos et al. (2012) used this operationalization of dominant logic in their model, when assessing the mediation effect between entrepreneurial orientation and performance.

In addition, Garg et al. (2003) measured the CEO-perceived importance of the external and internal environment by using twelve questionnaire items. On the one hand, the external environment included the market, technological, competitive, political/legal, economic, and sociocultural environments. On the other hand, the internal environment comprised the importance of cost controls, operational efficiency, product R&D, market research, financial management, and basic engineering. The authors based on dominant logic argue that scanning the internal domains is necessary in conjunction with scanning

the external environment for effective organizational adaptation. An adaptive strategic fit requires relating the firm´s strengths and weaknesses to specific opportunities and threats embedded in the external environment; thus, simultaneous scanning of the firm´s external environment and internal circumstances is necessary (Garg et al., 2003:272).

Interpretation

Interpretation involves the development or application of ways of comprehending the meaning of information. Hence, interpretation gives meaning to data, but it occurs before learning and action (Corner et al., 1994; Daft & Weick, 1984). Brannback and Wiklund (2001) emphasized the managers´ perception or interpretation of the environmental issues is translated into possible changes in the structure of strategic management of the organization. Thus, these knowledge base components are in line with learning and subsequent action. Kirzner´s (1973, 1979) early work discusses the linkages between the consistent scanning and search for information considering changes in the environment, which eventually constitutes entrepreneurial opportunities. This conceptualization is closer to the cognitive theory of entrepreneurship (Alvarez & Busenitz, 2001; Mitchell et al., 2007) suggesting a more active attitude towards the search for information.

The principal activities of strategy formulation as a cognitive activity include identifying opportunities and threats in the environment (Mintzberg et al., 1998; Thomas et al., 1993). After scanning and filtering the information, dominant logic becomes the lens through which managers make sense of the data, and see these opportunities and threats (K. Obloj et al., 2013; Prahalad, 2004; von Krogh et al., 2000). Managers utilize environmental scanning to interpret and then find suitable opportunities to enhance the firms´ resources and avoid potential threats (Kor & Mesko, 2013; K. Obloj & Pratt, 2005).

As previously stated, dominant logic is a cognitive structure, a mindset that impacts the processes by which managers attend to and process information (Lampel & Shamsie, 2000), then the study of dominant logic can provide additional insights regarding how managers recognize the options available to the firm. Barney points out that "managers are important in the resource-based model, for it is managers that are able to understand and describe the economic performance potential of a firm's

endowments. Without such managerial analyses, sustained competitive advantage is not likely" (Barney, 1991:117). Top managers choose between conducting exploratory activities that entail venturing into new activity areas and exploitative activities involving the refining of existing practices and capabilities (Gupta, Smith, & Shalley, 2006; March, 1991).

In qualitative studies authors have addressed the interpretation or sense-making of the environment by asking the CEOs in terms of opportunities, supportive institutions, or threats, problems to be solved, relationship with vendors, customers, and competitors (K. Obloj & Pratt, 2005; K. Obloj et al., 2013). Meanwhile, in quantitative studies, authors using different scales have assessed the importance of the external domain by considering the strategic orientation of the firm, such as external orientation and the proactive orientation, in terms of facilitating opportunity seeking and further exploitation (T. Obloj et al., 2010). As previously discussed, dominant logic, as an information filter, screens information form the environment only considered relevant by the dominant logic. As a result, the cognitive processes of information scanning and interpretation have an impact on strategy formulation, decision-making and strategic action of the organization.

Learning

According to Daft and Weick (1984) learning is distinguished from interpretation by the concept of action. In other words, learning involves a new response or action based on interpretation. Thus, learning is another important element considered in the study of dominant logic. As with the processes of scanning and interpretation, learning becomes codified via cognitive structures (K. Obloj & Pratt, 2005). Bettis and Prahalad (1995:7) posited that dominant logic could be viewed as a fundamental aspect of the organizational intelligence, thus involving the interaction of scanning, processing, and learning.

Authors have addressed the importance of the managers´ cognitive capacities in scanning and processing data from the environment, and relating new information to previous information, hence generating new knowledge and learning (Lampel & Shamsie,

2000; Porac, 2015; von Krogh & Roos, 1996). On this regard, Ginsberg (1990) mentioned that the functions of corporate management team should be viewed in terms of their ability to learn. So, top managers´ scanning efforts in their firms´ environments are needed for effective organizational learning and adaptation to the environment (Garg et al., 2003) and to begin to assess viable strategies (Daft & Weick, 1984). Moreover, Prahalad and Bettis (1986) stated that the dominant logic of the firm is dependent upon the composition of the top management team, their experiences, and their attitude toward learning. The capacity to learn and translate knowledge into action is determinant for the organization to adapt to the changing conditions in the environment, and as a result signaling corresponding changes to the dominant logic, hence determining strategic action, thus affecting the organizational performance (Bettis & Prahalad, 1995; T. Obloj et al., 2010).

Learning involves a feedback loop from the actions occurring at strategy implementation and then shape the managers´ dominant logic through feedback (Bettis & Prahalad, 1995). For this reason, organizational learning and dominant logic are mutually interdependent (p. 7). Interestingly, the relationship between learning and organizational processes in strategy implementation, such as routines, is posited to be causal (T. Obloj et al., 2010).

Literature suggests that management learning is an essential prerequisite for entrepreneurial strategic awareness and effective strategy development (Berry, 1996; Dodgson, 1991). In other words, dominant logic limits the ability of the organization to learn.

In qualitative studies, authors have attempted to assess this learning element by asking CEOs about the different events, solutions, key teaching points, and consequences of these events (K. Obloj & Pratt, 2005; K. Obloj et al., 2013). For example, in K. Obloj and Pratt (2005) leader organizations learn from difficult experiences, while non-leaders forget previous experiences from failures.

Furthermore, in quantitative studies, Lane and Lubatkin (1998) while studying strategic alliances, used a learning index to see how such alliances had helped the firms

in terms of learning new skills or capabilities. In addition, T. Obloj et al. (2010) posited that firms that are able to learn from dramatic failures should make stronger links between their actions and the consequences of those actions. As a result, the firm´s strategic orientations become more complex and their actions more effective. Thus, learning, while supplying feedback to the dominant logic, has important implications for the strengthening of cognitive structures and processes, which further translate into organization´s strategic actions.

Recent conceptualizations of dominant logic have placed a greater emphasis on the cognitive processes of environmental scanning, interpretation, and learning as a result of environmental change (Bettis & Prahalad, 1995; K. Obloj et al., 2013; von Krogh et al., 2000; von Krogh & Roos, 1996). The previous theoretical and empirical support leads us to formulate the following hypotheses regarding the top managers´ dominant logic:

Hypothesis 2: The cognitive elements of information processing, scanning, interpretation, and learning are strongly linked and foundational to the development of the top managers´ dominant logic.

Hypothesis 3: The top managers´ dominant logic has a significant effect on organizational performance.

2.3 The action dimension

In terms of the action dimension, and as addressed in Chapter 2, several references have been identified in terms of explicit features of organizational structure and processes, as well as implicit features of culture and values. These processes are discussed in more detail in the following sections.

As organizations grow, the establishment of formal structures, systems, procedures, routines, and processes becomes not only needed but also essential for the strategic management of the firm. As discussed before, these action features are in congruence with the cognitive dimension. Bettis (2000) described that dominant logic has dealt with the strategic managerial practices, systems, and processes.

In this study´s view, the action dimension is associated with strategy implementation and depicts the firm´s dominant logic. According to Mintzberg et al. (1998), strategy implementation is comprised primarily of a series of administrative sub-activities, such as organizational processes and relationships and organizational structure and behavior. In addition to these explicit features, the action dimension also suggests implicit features embedded in the organization in the form of culture, which are also important elements of the firm´s dominant logic.

2.3.1 Organizational processes and behavior

Over time, dominant logic develops into management processes in the form of organizational recipes (T. Obloj et al., 2010; Prahalad, 2004), which become embedded into the organization. Prahalad and Bettis (1986) discussed the action dimension of dominant logic of the firm by specifying administrative tools and tasks or management processes to shift its strategic direction. The authors partly defined dominant logic as the "elicited management processes," derived from the cognitive elements discussed in the previous section. The exemplification of these management processes by these authors is particularly useful denoting the mobilization and use of resources and knowledge, such as "the choice of key individuals, processes of planning, budgeting, control, compensation, career management and organizational structure" (p. 490). Moreover, these administrative tools are necessary to accomplish goals and to make decisions in the business.

Similarly, Grant (1988:640) argued that dominant logic should be assessed as three firm specific processes, allocating resources, coordinating strategies, and setting and monitoring performance targets. From latest definitions, authors seem to agree on routines to be closely aligned to these three firm specific processes, associated to procedures (Bettis et al., 2011; Kor & Mesko, 2013; K. Obloj et al., 2013), resource commitments (Kor & Mesko, 2013), and seen as the result of codification of learning (K. Obloj & Pratt, 2005; T. Obloj et al., 2010). Organizations have been characterized as routine-based, history-dependent systems that adapt incrementally to past experience, and target-oriented (Baum, Li, & Usher, 2000).

As previously discussed, dominant logic deals with the ability of firms to respond to uncertain environments through internal strategic and structural adaptation (Gavetti, 2005; McMullen & Shepherd, 2006). These processes emphasize action-based mechanisms for organizational adaptation, and are often referred to as routines or repetitive patterns of task-oriented actions involving multiple actors (Dosi, Nelson, & Winter, 2000; Winter, 2003). Under the dominant logic, organizations draw on existing routines developed in prior environments and initiate actions to execute specific tasks. Managers import routines they know from previous professional experience (Helfat & Peteraf, 2003). Over time, the dominant logic becomes embedded in an organization´s routines and standard operating procedures, in its processes, structures, and culture and norms about how things are to be done (Levitt & March, 1988; Walsh & Ungson, 1991). As a result, some authors have differentiated between cognitive frameworks and organizational routines as two separate views of dominant logic (K. Obloj et al., 2013; T. Obloj et al., 2010).

Organizational routines

As previously discussed, firms develop capabilities and resources in order to respond to an environment through strategic and structural adaptation (McMullen & Shepherd, 2006). These capabilities refer to the ability to arrange a combination of resources and processes to achieve objectives (Amit & Schoemaker, 1993). Winter (2003:991) defines the concept of organizational capability as organizational routines: "An organizational capability is a high-level routine (or collection of routines) that, together with its implementing input flows, confers upon an organization´s management a set of decision options for producing significant outputs of a particular type." Thus, these organizational routines are patterns of activities or processes that a firm performs at the operations level.

This capability building is a cumulative activity facilitated by concentrating in areas of established competence, and the higher likelihood of enhancing organizational functioning in areas of prior experience creates strong incentives for exploitation (Baum et al., 2000). Thus, routines imply action, and refer to behaviors that are learned, repetitious. These routines must be fostered within the organization facilitating the

diffusion of knowledge for use everywhere that it has value (Hitt et al., 2011). In other words, when top management performs important tasks to advance success, the results are usually positively reinforced by economic outputs. Then, managerial processes, administrative tools, and organizational routines, are developed and well accepted.

As a result, routines are based on past experiences and feedback from organizational outcomes, such as performance. In addition, routines adapt to experience incrementally in response to feedback about outcomes. Both new and established organizations are based on existing routines developed in previous environments and implement actions to execute specific tasks (Autio, George, & Alexy, 2011). According to Levitt & March (1988:320) routines include the forms, rules, procedures, conventions, strategies, and technologies around which organizations are constructed and through which frameworks, paradigms, they operate. Routines are transmitted through socialization, education, imitation, professionalization, personnel movement, mergers, and acquisitions. And routines change depends on interpretations of history, and specifically on the evaluation of outcomes. As pointed out by Baum et al. (2000) as a rule, the more certain rewards of exploiting routines learned in the past distract organizations from exploring new, potentially superior, routines and behaviors from which returns are less certain.

Better execution of similar operational routines leads to superior firm performance (Peng, Schroeder, & Shah, 2008). Operational capabilities are the firm's proficiency in using a collection of interrelated operational routines to solve operational problems and implement the operations strategy (Wulf, Stubner, & Blarr, 2010). T. Obloj et al. (2010) measured the level of routinization of procedures within organizations, which accordingly relates to the degree to which learning is transformed into routines. On the other hand, such authors suggested that the operationalization of dominant logic should integrate its cognitive structure and management routines that are both the product and component of the formation of knowledge filters and action (T. Obloj et al., 2010). The multidimensionality of dominant logic is acknowledged, and recommendations to include both dimensions in its analysis are encouraged. For this reason, in this study the

organizational routines are considered as part of the firm´s dominant logic, and as a clear way to define the organizational visible processes.

2.3.2 Organization structure and relationships

The literature on organizational theory discusses the relevance of structure (Child, 1972). Just as organizational processes, organizations have a variety of structural forms from which to choose when implementing a strategy. Thus, the selection of a particular structure, in terms of people, task, reward systems, information and decision processes clearly has important implications in organizational performance (Chandler, 1962). In fact, Chandler´s general thesis is that structure follows strategy, which is represented as the contingency theory (Ginsberg & Venkatraman, 1985).

Structure is probably the most studied dimension of the organizational form that intervenes between the strategy and performance. Attention has been placed in organizations to explain how managers can effectively establish structures such as rules, strategies, and norms to direct behavior (Scott, 2004). Structure refers to those aspects that make the organization an instrument through which goals are achieved. When in place, systems, procedures, controls, and processes are meant to be difficult to change. Structure represents the codification of the organization´s historic pattern of roles, as well as the perception of the environment, influences communication processes, and it's strongly related to problem-solving behavior (Lane & Lubatkin, 1998). Consequently, once the firm´s dominant logic becomes rooted in its structure is difficult to change. Over time, these organizational features are in correspondence with the managers´ dominant logic (Bettis et al., 2011).

The longer the period the dominant logic stays within an organization, the more reluctant the organization to change. For this reason, when assessing the dominant logic of a firm, it is feasible to analyze its structure and relationships. Such change difficulty is addressed by Bettis (2000) who compared the concept of dominant logic to isomorphism in organizational fields (DiMaggio & Powell, 1983). The end result of isomorphism is bureaucracy (Bettis, 2000:169-170). For these authors, the formal structure, organizational

culture, goals, and mission are some dimensions within organizations subject to bureaucracy (p. 149). When exploring dominant logic authors have suggested a complete specification of the history of that organization, including its shared experiences, structure, systems, and internal language (Tripsas & Gavetti, 2000; von Krogh & Roos, 1996).

A few quantitative studies have operationalized organizational structure features in dominant logic. For example, Lane and Lubatkin (1998) using different scales measured compensation practices and organizational structure. In terms of compensation, the authors used a pay scale based on position and tenure, versus individual skills, performance, and contribution to the company. The organizational structure was measured in terms of formalization of management practices and the extent to which decisions were centralized.

In addition, Cote et al. (1999) refer to the administrative heritage of the firm understood as cultural values and practices that have been successful in its core business, some of them refer clearly to organizational structure and relationships in this section. Therefore, it is important to mention that in their analysis of a firm´s dominant logic let the authors to recognize at least two main features. On the one hand, the authors discussed the structures of organizations, differentiating between those that put a greater emphasis on individual autonomy and development versus a more centralized or monolithic practices. Second, firms with emphasis on collaboration (group orientation) facilitating fluid structures. These are the two principal characteristics as organizational structure and relationships addressed in this study as determinants of the firm´s dominant logic, which are also in line with the structural mechanisms an organization uses to support exploration and exploitation as depicted by Ireland and Webb (2007).

Decentralized structure

Changes in the firm´s strategy results from the awareness of opportunities in the environment. As a result, in order to cope with the uncertainty or levels of dynamism in the environment, a greater decentralization in the structure is needed (Chandler, 1962; Ginsberg & Venkatraman, 1985). Decentralization of authority and responsibility allows

for decision making at lower levels in the hierarchy. As a result, this structure allows for faster response to demands in the environment, reducing the need for communication and information processing (Galbraith & Kazanjian, 1986). As a result, decentralization enhances the potential of a firm´s exploration behavior (Ireland & Webb, 2007).

One basic aspect of decentralization is to make decisions at the level where the proper expertise is available. Kuratko, Ireland, & Hornsby (2001) found that decentralizing decision-making authority empowered employees to regulate their own behavior and enabled rapid, creative responses to market opportunities as they surfaced. However, not all decision-making can be decentralized. Siggelkow and Levinthal (2003) found evidence that temporal decentralization yields the higher long-term performance. In addition, this organizational structure allows the firm both to avoid low-performing activity configurations and to eventually coordinate across its divisions. In addition, Kuratko et al. (2001) reported that decentralization facilitated the forming of teams, expected to be the primary source of process, product, and market innovations.

Group orientation

Top management plays an important role in establishing and strengthening a group (team) orientation within the organization, promoting an open atmosphere to share freely and discuss ideas, perspectives, and beliefs (Mintzberg, 2009). A firm´s dominant logic cultivation of a group orientation will maintain open channels of communication to feed important information to the top management (Kor & Mesko, 2013). Literature on groups underlines higher levels and refinement of common knowledge, language, and shared meaning within organizations (O´Reilly & Chatman, 1996), making it easier to incorporate unique insights and specialized knowledge bases (Grant, 1996). A group orientation is a catalyst to organizational learning and be open to new possibilities (Kor & Mesko, 2013). Moreover, a group orientation is associated with superior levels of performance (Ancona & Caldwell, 1992; Ancona, 1990; Banker, Field, Schroeder, & Sinha, 1996).

2.3.3 Organizational culture

As previously discussed, it is until the management structure and processes are established that the dominant logic becomes somehow "visibly represented" as organizational features or characteristics; however, implicit features also develop as part of the organization value system or culture (Bettis & Prahalad, 1995; Bettis et al., 2011; Brannback & Wiklund, 2001; Cote et al., 1999).

Culture consists of the shared beliefs, the ideologies, and the norms that influence organizational action-taking, and it can be used to predict the actions taken (Fiol & Lyles, 1985; Ireland, Hoskisson, & Hitt, 2008). In other words, culture is the deeply rooted set of values and beliefs that provide norms for behavior in the organization (Slater & Narver, 1995). Thus, culture is clearly an element of action, and is an important strategic resource that firms can use to gain a competitive advantage. As a result, the dominant logic of the firm shapes the values and expectations of their members, affecting how they act and think (Delgado, 2006; Prahalad, 2004), and the internal language (von Krogh & Roos, 1996). Thus, becoming a form of social control (O´Reilly & Chatman, 1996), which develop increasingly aligned with the managers´ dominant logic over time.

Bettis and Prahalad (1995) describe the impact of the cognitive processes of filtering information from the environment and then incorporating such data into the values, expectations, and reinforced behavior of the organization. Thus, these intrinsic elements are as important as the explicit ones to strengthen the dominant logic in the organization. From the previous definitions, organizational culture include the shared norms, the way human resources are valued, management and leadership styles, sets of common values and beliefs on how things are done (Brannback & Wiklund, 2001; Ginsberg, 1990).

Qualitative studies on dominant logic have referred to the administrative heritage, defined as the cultural values and historical practices that have been successful in the firm´s core business (Cote et al., 1999). Similarly, other authors suggested the analysis of the internal language or culture (von Krogh et al., 2000; von Krogh & Roos, 1996). Moreover, Kor and Mesko (2013) posits that the CEO plays a key role in establishing and

strengthening a culture where ideas, perspectives, and beliefs are shared, discussed, and negotiated. The significance of the cultural dimensions is regularly limited only to the effects on performance and competitive advantage (Barney, 1986, 1991; Detert, Schroeder, & Mauriel, 2000; George & Zahra, 2002; Zahra, 1993).

External cultural orientation

High-performing firms usually depict a higher market-oriented approach, which considers changes as opportunities, and will behave in a more entrepreneurial way and have greater success (Delmar & Shane, 2003; Zahra, Hayton, & Salvato, 2004). Thus, external orientation cultures place an emphasis on their external environment, markets, competitors, customers, suppliers, and trends that provide important insights into entrepreneurial opportunities (Kanter, 1984; von Hippel, Thomke, & Sonnack, 1999). One key characteristic of dominant logic for more entrepreneurial firms in transition economies is whether they view their environment as an opportunpity or as a threat (T. Obloj et al., 2010). Which is why "a market driven culture supports the value of full market intelligence and the need of functionally coordinated actions directing at gaining a competitive advantage" (Day, 1994:43).

Short-term versus long-term cultural orientation

Salter (1973) suggested that management analyze the strategy to examine the appropriate time horizon in evaluating objectives (short versus long-term). Short-term performance measures have been until recently emphasized, usually at the expense of long-term strategic goals. In the ambidexterity research in organizations, the exploration and exploitation debate has received much attention as being essential to performance (Stettner & Lavie, 2014). Exploration refers to developing new knowledge to avoid obsolescence and remain competitive, whereas exploitation deals with leveraging existing knowledge, which is essential for efficiency and securing market position (March, 1991). These activities are essentially different, thus rely on distinctive organizational processes and routines (Dosi et al., 2000). Those associated with exploitation facilitate consistency, stability and control (Benner & Tushman, 2003). According to Ireland and Webb (2007), the system of shared values supporting exploitation activities includes a

need for greater certainty regarding tasks and outcomes, thus a preference for meeting short-term goals. In exploitation decision rules and behavior are standardized and formalized, hence a higher level of organizational routines are also expected. Corporate firms companies emphasize financial reporting in measuring performance, by using formal budgets and information systems (Zahra, 1995, 1996). Thus, a financial orientation is related to short-term cultural orientation.

On the other hand, a long-term cultural orientation encourage long-term investments in projects that influence the firm's value, thus requiring an understanding of the tasks at hand, the risks involved, and the potential compromises. In fact, long-term orientation is associated with exploration, searching new knowledge, facilitating experimentation, flexibility and risk-taking (McGrath, 2001). In addition, it encourages spending on innovation and corporate entrepreneurship activities (Hitt, Hoskisson, & Ireland, 1990; Hitt, Hoskisson, Johnson, & Moesel, 1996). The previous theoretical and empirical support leads us to formulate the following hypotheses regarding the firm´s dominant logic:

Hypothesis 4: The action explicit elements of organizational routines, decentralized structure, and group orientation, as well as the action implicit elements of external cultural orientation, and short-term versus long-term orientation have a significant effect on the formulation of the firm´s dominant logic.

Hypothesis 5: The firm´s dominant logic has a significant effect on organizational performance.

2.4 Environmental change and implications for dominant logic

The ability of organizations to respond to changes in the environment is a core premise of strategy (Mintzberg, 1990; Sanderson & Taylor, 1999). Dominant logic as an strategic concept is associated to the assessment of changes in the environment (Barr et al., 1993; Cote et al., 1999). As a property of complex organizations, the dominant logic must adapt to the environment (Schneider & Angelmar, 1993), which is critical in shaping the strategy of the organization (Ginsberg, 1990). This adaptation to the environment is the essence of strategic management and involves the continuous process of making

strategic choices. Significant changes in the environment questions the validity the current cognitive and action dimensions of dominant logic. Thus, important implications for both dimensions as discussed below.

Some definitions in the literature have underlined the importance of change in external conditions and their implications to dominant logic. In this line, some authors emphasized the significance of change, implying changes in the organizations´ internal knowledge base (Brannback & Wiklund, 2001; Kor & Mesko, 2013; K. Obloj & Pratt, 2005) to cope with those changes in order to survive and remain competitive (Bettis, 2000; Prahalad, 2004; von Krogh & Roos, 1996). In fact, Cote el at. (1999) refer to circumstantial factors affecting the dominant logic, such as the fashionable trends in the industry or institutional environment. For the authors, the notion of dominant logic is attractive because it provides an explanation of why organizations seem to have difficulty in adapting to changing conditions (p. 944).

On the one hand, cognitive structures allow individuals to shape their perceptions, interpretation, and meanings of environmental events and conditions (Barr et al., 1993; Laroche, 1995; Porac, 2015). Prahalad (2004) posited that the organization´s response to the environment is constrained by the top management cognitive structures and processes, and such response to the environment is characterized by action elements embedded in the organizational systems and management processes. On the other hand, Bettis and Prahalad´s (1995) conceptualization of dominant logic as a property of complex systems adapting to the environment makes room to study the different approaches identified in the literature regarding either stable or changing/dynamic environments.

According to Prahalad (2004:172) if the environment is stable the dominant logic helps support organizations and strategy because it is internally consistent and changes are not required. As a result, the dominant logic could guide all decision-making processes with a degree of consistency dealing with a stable environment (Bettis & Prahalad, 1995). By the contrary, if environmental changes are significant, the managers´ dominant logic may act as a blinder limiting the search for information and sense-making

processes, such as opportunities or threats (K. Obloj et al., 2013). This is in line with Burgelman´s (1983a) bottom-up analysis on executives in large diversified firms who kept ascending until reaching top management. During this time, they have developed strong cognitive structures and processes to evaluate business strategies and resource allocation decisions in the organization, and whose strategic premises are unlikely to change. Burgelman accentuates that "it is not surprising that corporate managements focuses on the manipulation of the structural context to keep strategic behavior in line with the current concept of strategy" (p. 67). As a result, important changes in the environment cause managers´ cognitive structures to become obsolete because the cognitive structures that support the cognitive processes overlook important information or interpret it incorrectly (Kiesler & Sproull, 1982; von Krogh et al., 2000). Thus, important changes in the environment creates discrepancy with the current dominant logic, which in turn needs to be changed in accordance to the new corresponding environment (Bettis, 2000).

Dominant logic deals with the ability of firms to respond to uncertain environments through endogenous strategic and structural adaptation (Gavetti, 2005; McMullen & Shepherd, 2006). These processes emphasize action-based mechanisms for organizational adaptation, and are often referred to as routines or repetitive patterns of task-oriented actions involving multiple actors (Dosi et al., 2000; Winter, 2003). Consequently, if organizational structure is not adapted to its context, opportunities are lost, and the maintenance of the organization is threatened (Child, 1972). Thus, when environmental conditions change significantly, a new dominant logic must be learned. Consequently, significant changes are needed as well in the organizational structure and systems, unlearning the old dominant logic (Bettis & Prahalad, 1995; Bettis, 2000; Prahalad & Bettis, 1986). Therefore, organizations with an ability to fit their structures and strategies with a new dominant logic accordingly to changes in the environment are more likely to survive (Bettis & Prahalad, 1995; Brannback & Wiklund, 2001; Stace, 1996; von Krogh & Roos, 1996).

Research in managerial cognition argue that a dominant logic should reflect the complexity of the firm´s environment; as a result, this implies for our study that both the managers´ and the firm´s dominant logic must be aligned to the environment, so that the cognitive and action are adapted with the dynamic environment (Nadkarni & Narayanan, 2007; Walsh, 1995). The previous theoretical support leads us to formulate the following hypothesis regarding the influence of the environment on the managers´ and firm´s dominant logics:

Hypothesis 6. The dynamic environment has a significant effect on the managers´ dominant logic.

Hypothesis 7. The dynamic environment has a significant effect on the firm´s dominant logic.

2.5 Integrative framework

In light of the theoretical arguments presented, dominant logic can be viewed as both a managers´ dominant logic in the form of a cognitive dimension, and a firm´s dominant logic in the form of an action dimension. According to the arguments presented in this study, it is feasible to conceptualize and operationalize dominant logic by analyzing these two broad dimensions separately, as originally defined by Prahalad and Bettis (1986) and later maintained by several authors (e.g. Kor & Mesko, 2013; T. Obloj et al., 2010).

In line with Grant (1988), we believe that dominant logic could be a valuable instrument of strategic analysis, considering the different elements contained in both of its dimensions. On the one hand, the cognitive dimension, which encompasses the managers´ dominant logic involves identifying and interpreting strategic events from the environment that may have a potential impact on organizational performance, as to recognizing opportunities and threats. Thus, these cognitive processes associated to scanning, interpretation, and learning have a direct effect on the action dimension signified by the firm´s dominant logic, which in turn affects organizational performance.

As shown in Figure 5 at the beginning of this Chapter, this study proposes that the managers´ and the firm´s dominant logic have a causal relationship, the managers´

dominant logic supports the corresponding change in the firm´s dominant logic by adjusting the corresponding managerial processes thus affecting organizational performance, which led the formulation of the following hypotheses:

Hypothesis 8. The top managers´ dominant logic has a significant effect on the firm´s dominant logic.

Hypothesis 9. The firm´s dominant logic mediates the link between managers´ dominant logic and organizational performance.

A major challenge for firms is to achieve and maintain competitiveness, derived from the strategic combination of resources and capabilities towards the consolidation of competitive advantage and performance. Several authors refer in one way or another to the primary demands of companies in their quest for competitiveness and growth.

The construct of dominant logic offers alternatives for addressing some issues in strategic management. Further, managers´ dominant logic is believed to guide strategic behavior, hence over time a corresponding resource configuration such as explicit and implicit management practices conform the firm´s dominant logic. Due to the nature of dominant logic as hard to change, organizations tend to keep doing what they know, misapplying existing solutions or rely on previous abilities that have become core rigidities (Prahalad, 2004). The following Chapter discusses the methodology followed in this research study, as well as the empirical study to test the formulated hypotheses.

CHAPTER 3

Data collection, methodology, and analysis

3. DATA COLLECTION, METHODOLOGY, AND ANALYSIS

In this Chapter, the results of this study are presented while using Structural Equation Modeling (SEM) for data analysis and assessment. IBM SPSS version 21 software was used for the initial evaluation of the data collected. Subsequently, partial-least squares or PLS path modeling SEM (PLS-SEM) followed to perform the comprehensive data analyses and assessments of the three different models in this study. The validation of the structural models was attained using SmartPLS version 3 (Ringle, Wende, & Becker, 2015). The assessment and refinement of adequacy of the measurement models was first completed in order to proceed with the final assessment and evaluation of the structural models.

This Chapter is organized as follows: the first section includes a general overview of the business situation in Mexico in order to evaluate the sample representativeness. The second section includes a brief discussion regarding the sampling method and the design of the questionnaire. Finally, the third section presents an introduction to the methodology used, implications for the use of formative multidimensional constructs, descriptive statistics, and the assessments of the three models proposed, managers´ dominant logic, firm´s dominant logic, and the integrative model including both managers´ and firm´s dominant logics.

3.1 Business situation in Mexico

There are at least two government institutions in Mexico that integrate statistic-economical and geographical information regarding the national business network; this material is relevant for different purposes, including the academic part of scientific research. The first one is the National Institute of Statistic and Geography (INEGI for its acronym in Spanish), which provides economic censuses. Here, the information is acquired fortnightly and is the main source of national economic statistic information. The second one is the Information System of Mexican Business (SIEM for its acronym in Spanish), sponsored by the Under Secretary Office for Industry Promotion and Foreign Business of the Economy Department.

The latest economic censuses in Mexico took place in 2014, and as of this 2015 it is possible to look up the official documents issued by INEGI regarding preliminary numbers from the Economic Censuses of 2014. Also, the INEGI has issued the sixth edition of the National Statistic Directory of Economic Units (DENUE for its acronym in Spanish). This directory offers data regarding identification, location, sector and size of the active businesses in Mexico updated as of 2014. The system represents an innovative and interactive source for the general public enquiry and for Internet searches that contemplates active businesses located in the Mexican territory, mainly in the urban areas.

As part of the methodological and conceptual framework, INEGI considers the economic units located in the Mexican territory as 32 federal entities, with its corresponding towns and rural/urban zones. The Mexican legislation establishes an obligation for all companies registered within the different tax regimes to participate in the economic censuses, and to register in the DENUE maintaining updated information. It also requires that all state governments must provide to INEGI all the required information. It is important to mention that INEGI makes a distinction between the economic units in two ways. On one hand it contemplates them regarding its establishment (physical location of the economic unit), and on the other hand as a company (either an organization or a property with legal entity). Therefore it is important to detail the figures presented in the preliminary results of the Economical Census 2014 and the DENUE, and consider the type of economic units to compare; also, the different economic activities included in each sector said private, semi-official, public or religious organizations.

Some other sources to analyze the business situation in Mexico are the registries generated by the different chambers of commerce in the country. However, the diversification that comes from specific orientations and interests, the difference among its rules and methodological frames to generate and update information, and the complexity to access that information, represent very important limitations. From this demand, in 1996 the Under Secretary Office of Industry Promotion and Foreign Business

of the Economy Department in Mexico started the Information System for Mexican Business (SIEM for its acronym in Spanish). The SIEM integrates national business figures that are available for the general public and accessible through Internet. The system provides data by geographical zone, sector, size, scope; it also works as a commercial directory that includes general records about the companies like address, demand or supply of products and services, and contact information.

As part of its methodological and conceptual framework, the information presented within this system is captured through more that 300 chambers of commerce -authorized by the Secretary of Economy- in coordination with the Confederations of Commerce and Industry, and they must comply with a regulative structure to strengthen trust warranties in the information. The Mexican law requires that all companies, legally established in Mexico and liable to tax regimes, must register and annually update its information. Therefore, it is possible to obtain an adequate description of the business situation in Mexico through official resources. Consequently, this research presents relevant information encompassed in INEGI.

In accordance to the preliminary results presented in the Economic Census 2014 a total of 5,664,515 establishments registered, where 5,256,884 (92.8%) had economic activities in 2013 and the difference 407,631 (7.2%) started operations in 2014. For the purpose of registering information, the census considerer the results of 4,505,569 establishments, including public and private sectors, whereas 752,315 establishments belong to the rural areas. For this research, the official information regarding the 4,201,162 economical units of the private sector was employed.

Table 8 shows the composition of the business sectors by number of employees and economic activity. According to this Table the retail sector is the activity that encompasses the greatest number of economical activities (48.3%), followed by the services sector (38.1%), and the manufacturing industry (11.5%). At the same time, the companies with up to 10 employees represent 95.4% of the total of economic units in Mexico, followed by companies with 11 up to 50 employees (3.6%), from 50 up to 250 employees (0.8%) and more that 251 employees (0.2%) correspondingly.

Table 8. National distribution of the economic units by number of employees and economic activity.

Economic Activity	Number of Employees of the Economic Units				Totals
	Less than 10	11 up to 50	51 up to 250	251 or more	
Manufacturing industry	451,401	19,995	7,308	3,543	482,247 (11.5%)
Retail	1,965,895	50,379	11,190	829	2,028,293 (48.3%)
Private services	1,525,490	63,442	9,963	2,230	1,601,125 (38.1%)
Reminder of activities	63,984	19,324	5,130	1,059	89,497 (2.1%)
Totals	4,006,770 (95.4%)	153,140 (3.6%)	33,591 (0.8%)	7,661 (0.2%)	4,201,162 (100%)

Source: INEGI (2015). Timely Results. Preliminary Figures. Economical Census 2014.
Note: Numbers in parenthesis show the national percentage.

Table 9 shows the national distribution of the economic units by economic activities. In addition, Table 10 details the distribution of economic units by number of employees considering the four federal entities in this study (Chihuahua, Queretaro, Nuevo Leon and San Luis Potosi).

Table 9. National distribution of the economic units by economic activity.

Federal entities	Manufacturing Industries	Retail	Private Services	All other activities	Total Economic Units
Aguascalientes	4,611	21,234	20,657	879	47,381
Baja California	7,142	41,061	43,981	2,819	95,003
Baja California Sur	2,349	10,983	12,306	1,690	27,328
Campeche	3,403	15,293	12,311	1,612	32,619
Coahuila	7,760	39,284	34,276	1,867	83,187
Colima	2,536	12,218	13,008	1,239	29,001
Chiapas	16,318	78,143	52,287	3,204	149,952
Chihuahua	**8,087 (8.5%)**	**44,619 (46.8%)**	**40,260 (42.2%)**	**2,437 (2.6%)**	**95,403 (2.3%)**
Distrito Federal	30,881	209,914	166,912	5,602	413,309
Durango	4,879	23,778	20,498	1,095	50,250
Guanajuato	27,548	106,972	82,365	3,114	219,999
Guerrero	26,645	63,642	42,084	3,333	135,704
Hidalgo	11,762	49,254	36,177	1,461	98,654
Jalisco	32,937	150,717	121,537	5,092	310,283
Mexico	51,444	289,656	188,948	3,798	533,846
Michoacán	30,048	91,666	70,402	3,316	195,432
Morelos	8,419	42,335	32,105	1,571	84,430
Nayarit	3,973	19,508	19,772	2,059	45,312
Nuevo Leon	**12,158 (9.3%)**	**59,630 (45.5%)**	**55,760 (42.6%)**	**3,486 (2.7%)**	**131,034 (3.2%)**
Oaxaca	36,503	78,391	54,821	6,231	175,946
Puebla	40,792	123,648	82,387	3,795	250,622
Queretaro	**6,588 (9.6%)**	**32,598 (47.4%)**	**28,082 (40.8%)**	**1,515 (2.2%)**	**68,783 (1.6%)**
Quintana Roo	2,903	19,877	20,152	1,046	43,978
San Luis Potosi	**8,756 (9.9%)**	**41,717 (47.3%)**	**36,006 (40.9%)**	**1,661 (1.9%)**	**88,140 (2.1%)**
Sinaloa	8,879	40,555	39,703	4,538	93,675
Sonora	10,228	37,502	38,553	3,499	89,782
Tabasco	5,028	27,146	24,463	3,374	60,011
Tamaulipas	8,216	48,048	44,377	3,988	104,629

Tlaxcala	9,473	29,925	18,069	639	58,106
Veracruz	24,341	114,429	94,879	5,517	239,166
Yucatan	22,462	38,663	34,072	2,972	98,169
Zacatecas	5,178	25,887	19,915	1,048	52,028
Total Economic Units	**482,247 (11.5%)**	**2,028,293 (48.3%)**	**1,601,125 (38.1%)**	**89,497 (2.1%)**	**4,201,162**

Source: INEGI (2015). Timely Results. Preliminary Figures. Economical Census 2014.
Note: The state percentage distribution is shown in parenthesis in the four columns of economic activities. Both the economic units column and row shows in parenthesis the national percentage distribution.

Table 10. Distribution of the economic units by number of employees.

Federal entities	Number of Employees of the Economic Units				Totals
	Less than 10	11 up to 50	51 up to 250	251 or more	
Chihuahua	88,838 (93.1%)	5,044 (5.3%)	1,112 (1.2%)	409 (0.4%)	95,403
Nuevo León	117,857 (89.9%)	9,738 (7.4%)	2,720 (2.1%)	719 (0.5%)	131,034
Querétaro	64,449 (93.7%)	3,262 (4.7%)	836 (1.2%)	236 (0.3%)	68,783
San Luis Potosí	84,071 (95.4%)	3,194 (3.6%)	701 (0.8%)	174 (0.2%)	88,140
National Total	*4,006,770 (95.4%)*	*153,140 (3.6%)*	*33,591 (0.8%)*	*7,661 (0.2%)*	*4,201,162*

Source: INEGI (2015). Timely Results. Preliminary Figures. Economical Census 2014.
Note: The state percentage distribution is shown in parenthesis in the four columns of number of employees of the economic units. Both totals column and row shows in parenthesis the national percentage distribution.

3.2 Data collection

The research conducted took place from April of 2013 to February of 2014. A collection of data took place from firms in four federal entities in Mexico characterized by their industrial growth, thus with a high concentration of manufacturing firms. The four-targeted states in Mexico were Chihuahua, Queretaro, Nuevo Leon, and San Luis Potosi. The research team was composed of four members from these states.

Data was gathered through a field study using questionnaire-based surveys and obtained responses from CEOs, who many times were the founders of the firms targeted in the sample. CEOs were used as key informants, since they receive information from a wide range of departments, and therefore are a very reliable source for evaluating the different variables of the organization. CEOs also play a major role in apprising and shaping the management process. In fact, the CEO is ultimately responsible for strategizing, and setting out the organization's objectives, as well as for guiding the actions carried out to achieve them (Westphal & Fredrickson, 2001). CEOs constitute a valuable source for evaluating and molding the different variables under study by

determining the types of behavior that are expected and supported (Bolivar-Ramos, Garcia-Morales, & Garcia-Sanchez, 2012). The same type of informant was chosen, since this means that the level of influence among the organizations is constant, increasing the validity of the variables' measurements.

Initially, five different CEOs were asked from local firms in the cities of Queretaro, and San Luis Potosi in Mexico to carefully read and complete the questionnaire, which served as a pre-test to ensure the correct wording, overall structure, and all the response options were given. Once the pre-test was completed, both a printed and an online version of the questionnaire were used to gather the data. Qualtrics was the online survey software (qualtrics.com) used to correctly administer the delivery, response progress, statistics, and follow-up of the surveys.

Three different sources to gather reliable contact information for the surveys were considered in this study. The first one was an internal database provided and trusted by the *Instituto de Emprendimiento Eugenio Garza Lagüera* at the Tecnológico de Monterrey (ITESM). Such database contained a long listing of Mexican firms including their corresponding CEOs contact information. Companies located in the four provinces in this study were targeted. The second source was to contact the ITESM´s business incubators and technological parks located in the four different states in this study. These campuses are located in the capital cities of Chihuahua, Queretaro, Nuevo Leon, and San Luis Potosi. These institutions provided us as well with a list of companies with their corresponding CEO´s contact information. A third source was to contact currently enrolled graduate and post-graduate students at ITESM, many of which were either CEOs or had the authorization to supply the contact information of the CEO in their companies.

In the first stage of this study, CEOs were contacted individually through their personal email. A cover letter including an invitation to participate in this study was sent (please refer to Appendix A) to the CEOs, including a personalized link to access the questionnaire, in addition to a link to opt out of the study. Respondents have the choice to answer by using alternative mobile devices such as tablets or smartphones, at any time

the respondent could resume answering the survey from where they left (please refer to Figure 6 for a screenshot of the online questionnaire).

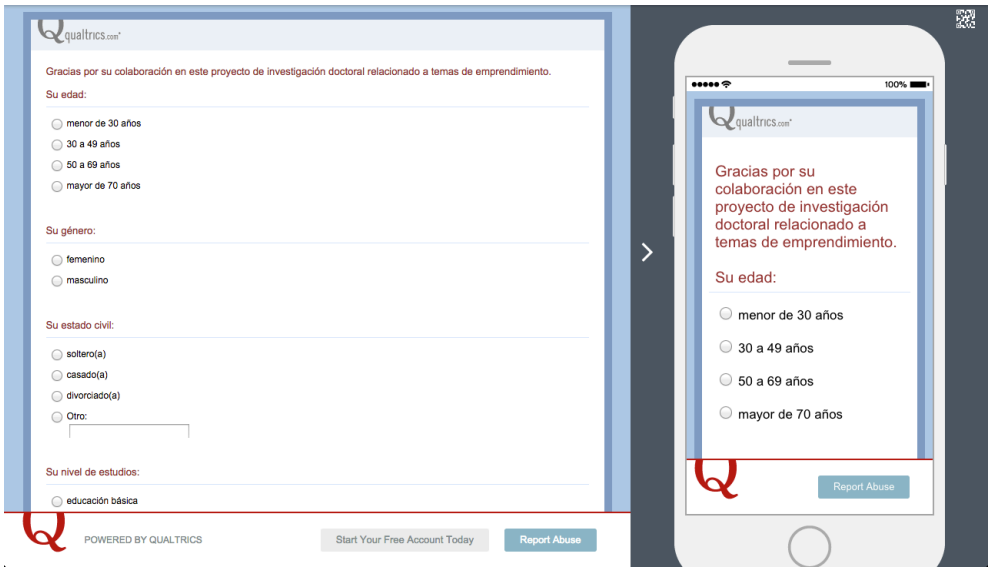


Figure 6. Online version of the questionnaire.

No incentives were offered or given for survey completion. Moreover, the participants were not coerced into participating and were free to withdraw at any time. Through the used of Qualtrics, the correct delivery of these emails was confirmed. Moreover, this software generated a unique link to the questionnaire, associated to each of the email addresses used. To ensure the correct survey administration, this software generated a very complete set of statistics (please refer to Figure 7).

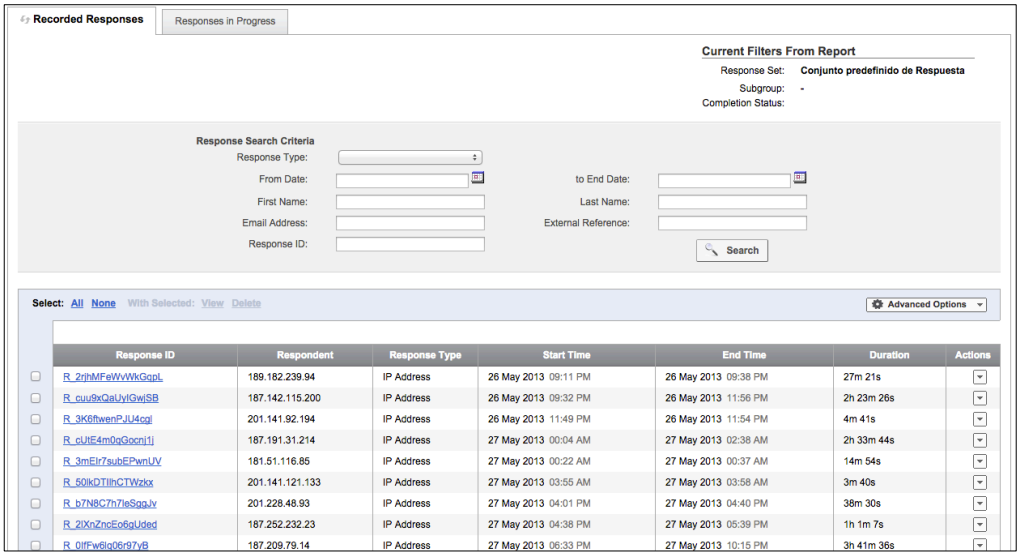


Figure 7. Screenshot of Qualtrics software recorded responses.

For example, response ID, respondent name or IP address, the start and end date and time, duration, among other actions. For those cases in which the CEOs had not started the survey, or left it uncompleted, a remainder was sent to either start or resume the survey from the last question answered. Most survey took from ten to forty minutes to be completed (please refer to Figure 8).

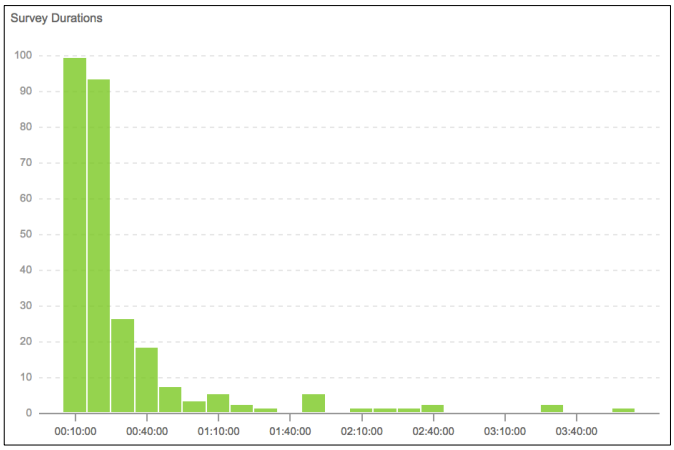


Figure 8. Qualtrics´ statistics of survey durations.

In a second stage, a printed version was also offered as an alternative to the online version for those CEOs who were contacted by currently enrolled graduate students. In these cases, ITESM´s professors ensured the correct delivery of the cover letter and the printed questionnaire to the CEO, and when necessary follow-up phone calls were made to ensure the CEO answered the survey and/or to retrieve the questionnaire. After all these printed questionnaires were retrieved, these surveys were entered into the Qualtrics software for further data treatment. As a result, all surveys data were exported as a SPSS .sav data file (string width: extra long 32,000), which followed the exact structure of the questionnaire, and included all raw data, variable, the corresponding pre-assigned value labels when designing the questionnaire, and all the individual values for each variable recorded by the respondents.

3.2.1 Sample representativeness

The total number of surveys in both formats delivered was 627, out of which 350 complete responses were received and 277 were incomplete. After proceeding to the removal of incomplete questionnaires, as well as those surveys that were no answered by a CEO (Question A5 of the survey indicated if the person completing the questionnaire

was at the time the current president of the firm, general director, CEO or equivalent), 295 questionnaires were considered valid. Table 11 shows the data collection statistics and response rates.

Table 11. Data collection statistics.

Questionnaire Type	Invitations Sent	Complete Respondents	Incomplete and Non-Respondents	Usable (Final Sample)
Online Chihuahua	82	35	47	31
Online Queretaro	81	44	37	44
Online Nuevo Leon	140	53	87	37
Online San Luis Potosi	21	8	13	5
Total Online	*324*	*140 (43.2%)*	*184 (56.8%)*	*117 (36.1%)*
Printed Queretaro	70	65	5	65
Printed San Luis Potosi	90	76	14	76
Total Printed	*160*	*141 (88.1%)*	*19 (11.9%)*	*141 (88.1%)*
Online Post-graduate	*143*	*69 (48.3%)*	*74 (51.7%)*	*37 (25.3%)*
Totals	**627**	**350**	**277**	**295**

Source: Prepared by the authors.

The distribution of the sample encompassed firms of all sizes from different economic activities. When comparing the total percentages of the sample and the national distribution from Tables 12 and 13, the sample contains an interesting mix of large Mexican companies, most of them from an industrial context, which was expected from the selection of the federal entities to participate in this study.

Table 12. Sample distribution by economic activity versus the national percentage distribution.

Federal entities	Manufacturing industries	Retail	Private Services	Totals
Chihuahua	19 (61.3%)	3 (9.7%)	9 (29.0%)	31 (10.5%)
Nuevo León	30 (40.5%)	20 (27.0%)	24 (32.4%)	74 (25.1%)
Querétaro	40 (36.7%)	32 (29.4%)	37 (33.9%)	109 (37.0%)
San Luis Potosí	35 (43.2%)	23 (28.4%)	23 (28.4%)	81 (27.5%)
Sample Totals	**124 (42.0%)**	**78 (26.5%)**	**93 (31.5%)**	**295**
Versus National Percentage Distribution	*11.5%*	*48.3%*	*40.2%*	*100% (4,201,162)*

Source: Prepared by the authors.

Note: National percentage distribution is collected from Table 10.

Table 13. Sample distribution by number of employees.

Federal entities	Number of Employees of the Economic Units				Totals
	Less than 10	11 up to 50	51 up to 250	251 or more	
Chihuahua	12 (37.8%)	13 (41.9%)	4 (12.9%)	2 (6.5%)	31 (10.5%)
Nuevo León	12 (16.2%)	15 (20.3%)	17 (23.0%)	30 (40.5%)	74 (25.1%)
Querétaro	35 (32.1%)	34 (31.2%)	31 (28.4%)	9 (8.3%)	109 (37.0%)
San Luis Potosí	33 (40.7%)	24 (29.6%)	14 (17.3%)	10 (12.3%)	81 (27.5%)
Totals	**92 (31.2%)**	**86 (29.2%)**	**66 (22.3%)**	**51 (17.3%)**	**295**
Versus National Percentage Distribution	*95.4%*	*3.6%*	*0.8%*	*0.2%*	*100% (4,201,162)*

Source: Prepared by the authors.

Note: The federal entities percentage distribution is shown in parenthesis in the four columns of number of employees of the economic units, and in both totals column and row.

In addition in Table 14 other descriptions about the sample are provided, such as the market orientation, the age of the company in terms of the year of foundation, as well as the corresponding CEO´s seniority in the company. Information that was assessed upon the time the CEO´s answered the questionnaire.

Table 14. Description of the sample in terms of market orientation, age of the company, and CEO´s seniority.

Market orientation	**Number of firms in the Sample**	**Percentage**
Local or Regional	137	46.4%
National	98	33.2%
International	60	20.3%
Age of the Company		
5 years or less	61	20.7%
6 to 15 years	67	22.7%
16 to 30 years	98	33.2%
More than 30 years	69	23.4%
CEO´s seniority in the company		
10 years or less	130	44.1%
11 to 25 years	128	43.4%
More than 25 years	37	12.5%

Source: Prepared by the authors.

The description shows an interesting composition of the sample, where 46 percent of companies focused on the local and regional markets, while the other 53 percent targeted national and international markets. Moreover, the sample clearly considers companies that are consolidated with several years of experience, where 44 percent with less than 15 years in the market, and the other 56 percent with more than 15

years. In fact, about 23 percent of the firms have more than 30 years of experience. Finally, it is important to consider the seniority of the respondents where about 44 percent had 10 years or less, another 43 percent had from 10 to 25 years of experience inside the company, and close to a 13 percent had more than 25 years of experience. This information also has important implications about the quality of the information gathered in this questionnaire, since the respondents can be considered well experienced and knowledgeable about the company in general, its operations, and can provide a valid assessment about the several variables assessed in this study.

After the analysis of the sample previously discussed, we can conclude that the sample is not representative of the actual configuration of firms in Mexico, where more than 95% are small businesses with less than 10 employees. However, this is not to be considered a drawback, but on the contrary. The information assessed in this study is from mainly large firms, many of them corporations, which explains the national and international market orientation, the age of the company, and the CEOs´ seniority in the firm. Therefore, the results and discussions in this study need to be sensibly considered, and should provide an interesting discussion and implications.

In terms of the size representative of the sample, the confidence interval was 5.71, calculated by considering the margin of error at 95 percent confidence = $0.98/\sqrt{n}$. In most survey research, confidence intervals typically lie between 2.0 and 6.0 percent at 95 percent confidence limits (Särndal, Swensson, & Wretman, 2003). Therefore, despite the sample has a bias through industrial and large companies, it can be considered a representative size of the general population. Therefore, the results from this study could have important implications for further research.

Finally, it is important to highlight the distinctive roll that played the ITESM in this study. The institution has a special interest to develop quality research in Mexico, mirrored in the close collaboration among colleagues and the researchers involved in this study towards fulfilling the objectives.

3.2.2 Questionnaire structure

The questionnaire consisted of seven sections. Section A and B included questions pertaining to demographic characteristics of the CEO and the firm, including ownership structure the firm and board composition. Section C contained distinctive variables about the firm including strategy, objectives, and performance assessment. Section D included questions related to the CEOs assessment of information, opportunities, and social capital. Section E comprised questions about innovation. Section F included questions regarding corporate entrepreneurship. Finally, section G presented questions regarding the assessment of environmental conditions, such as dynamism and hostility. Table 15 shows the overall structure and the number of items in each section (please refer to Appendix B for the sections used in this dissertation).

Table 15. General structure of the questionnaire.

Section	Number of Items
A. Demographics and Ownership Structure	23
B. Firm´s Characteristics	5
C. Strategy	12
D. Scanning and Opportunities	8
E. Innovation	8
F. Corporate Entrepreneurship	6
G. Environment	2
Total	64

Source: Prepared by the authors.

The survey contained both closed-format such as categorical, five-point Likert scales, and check lists, in addition to open-ended questions. Out of the 64 items that made up the total of the questionnaire, the several items that were consistent with the theoretical and conceptual support required in this study were selected. The selected items are described in the following section, including the construction of the variables (dependent and independent) related to this study.

3.3 Structural equation modeling (SEM)

For the past twenty years, scholars have increasingly been turning to statistical methods of second-generation such as structural equation modeling (SEM) to overcome the

limitations of first-generation techniques (Bagozzi & Yi, 1988). First-generation techniques, such as multivariate confirmatory (e.g. multiple regression, logistic regression, and analysis of variance) and exploratory (e.g. cluster analysis, exploratory factor analysis, and multidimensional scaling) methods, belong to the core set of statistical instruments which can be used either to identify or confirm theoretical hypothesis based on the analysis of empirical data (Haenlein & Kaplan, 2004).

Compared to regression-based approaches, which analyze only one layer of linkages between independent and dependent variables at the same time, SEM allows the simultaneous modeling of relationships among multiple independent and dependent constructs (Gefen, Straub, & Boudreau, 2000). In addition, SEM provide more powerful tests and analyses in order to answer research questions in a single, systematic, and comprehensive analysis (Bagozzi & Yi, 1988; Gefen et al., 2000). As a result, SEM has been adopted gradually in business research fields of social sciences, such as information systems, operations management, and strategic management (Peng & Lai, 2012).

There are two types of SEM, covariance-based SEM (CB-SEM) and partial-least squares or PLS path modeling SEM (PLS-SEM). Based on covariance, the former is primarily used to confirm or reject theories, while the later is based on variance and typically used to develop theories in exploratory research (Hair, Hult, Ringle, & Sarstedt, 2014). In this research study, the methodology is based on PLS-SEM.

3.3.1 PLS-SEM

Partial-least squares structural equation modeling (PLS-SEM) is particularly suited to research in strategic management. As mentioned before, PLS-SEM is a strong approach for work intended to develop and refine theoretical models (Robins, 2012). PLS-SEM has several advantages, one of them is that path modeling requires less demanding assumptions about models and can produce unbiased estimates with small data sets. A second advantage is that PLS-SEM challenges scholars to think about theory in different ways. For example, while attempting to predict the effects of a set of independent variables on a dependent phenomenon, without assuming that all variables in a model

provide full accountability of the dependent phenomenon. In addition, while uncovering different relationships among the variables that were not previously considered. A third advantage is that PLS-SEM, unlike CB-SEM approaches, allows the measurement of formative indicators and a combination of reflective and formative measurements. This brings new possibilities for analysis, but it also demands that scholars make sure to use the appropriate domain of constructs and consider the larger context in which research is carried out. On this regard, a discussion of the importance of reflective and formative measurements is presented next, which also imply important considerations in the following sections in this study.

3.3.1.1 Reflective and formative measurements

There are two types of measurement scale in structural equation modeling; it can be reflective or formative (Wong, 2013). On the one hand, reflective refer to those indicators that are highly correlated and interchangeable. In this case, their reliability and validity should be thoroughly examined (Hair, Ringle, & Sarstedt, 2013; Petter, Straub, & Rai, 2007). On the other hand, formative constructs are characterized according to the following: (1) the direction of causality is from indicators to constructs, such that changes in indicators cause changes in the constructs; (2) the indicators are not conceptually interchangeable since they do not have the same or similar content; (3) they do not have to co-vary with each other (Petter et al., 2007). PLS-SEM assumes that the formative indicators fully capture the content domain of the construct under consideration. Therefore, other criteria than the ones employed in reflective measures must be considered to assess the quality of these formative measurement models (Hair, Sarstedt, Pieper, & Ringle, 2012; Hair, Sarstedt, Ringle, & Mena, 2012).

In general terms, formative indicators can have positive, negative or no correlations among each other (Petter et al., 2007). In this case, there is no need to report indicator reliability, internal consistency reliability, and discriminant validity (Wong, 2013). This is due to the fact that outer loadings, composite reliability, and square root of average variance explained (AVE) are meaningless for a latent variable made up of uncorrelated measures (Hair et al., 2014). According to the literature there are other

specific indicators to evaluate formative measures, and which will be followed in the following sections.

Finally, proposing formative measures may represent a challenge for scholars. First, considering that many of the editors of major journals up-to-date lack the knowledge base to correctly evaluate a formative construct. Second, the use of other SEM software, such as LISREL, EQS, or AMOS have shown to lead to specification problems since they are not fully capable to estimate the models even when there is only one formative construct. However, the use of PLS-SEM software, such as SmartPLS (Ringle et al., 2015) allows researchers to estimate both reflective and formative measurement models, which has been very strongly recommended (Chin, 1998; Petter et al., 2007).

3.3.1.2 Multidimensional constructs

There are instances in which either reflective or formative constructs can be operationalized at a higher level of abstraction. Such models are referred to higher-order or hierarchical component models (HCMs). Most often these higher-order models involve testing second-order structures that contain two layers of constructs. For this reason, they are also referred in the literature as multidimensional constructs (Edwards, 2001; Polites, Roberts, & Thatcher, 2011). Thus, multidimensional constructs are constructs with more than one dimension, and each dimension can be measured using either reflective or formative indicators (Edwards, 2001). These constructs refer to a single theoretical concept, and from multiple dimensions regarded as distinct but related concepts rather than a single overall concept (Hattie, 1985). In other words, these dimensions are grouped under the same multidimensional construct and each dimension represents some portion of the overall latent construct (Law, Wong, & Mobley, 1998).

The multidimensional constructs are used primarily to reduce the number of relationships in the structural model, making the PLS path model more parsimonious and easier to understand (Hair et al., 2014). The constructs of a multidimensional model can be conceptualized under an overall abstraction, and it is theoretically meaningful and

parsimonious to use this abstraction as a representation of the dimensions (Law et al., 1998). Each dimension represents a unique content domain of the broader construct (Polites et al., 2011). This is to capture complex concepts in comparatively simple abstractions.

Jarvis, MacKenzie, and Podsakoff (2003) determined four types of multidimensional constructs, type I (superordinate: reflective-reflective) constructs refer to reflective first-order, reflective second-order. This type is the most used in the literature and has also received the most critical questioning due to its content, theoretical and practical contributions. One of the reasons for criticism relates to the limitations of the use of SEM software based on covariance such as AMOS or EQS, which does not allow change to multidimensional models from reflective to formative. Type II constructs (aggregate additive: reflective-formative) are reflective first-order and formative second-order. This type specifies dimensions that are related to each other, but are conceptually distinct. If a dimension is removed, it affects the model, contrary to the type I constructs. Type III constructs (superordinate: formative-reflective) are formative first-order and reflective second-order. Finally, type IV constructs (aggregate additive formative-formative) are formative at first-order and second-order. Due to their potential to advance theory, multidimensional constructs have appeared more frequently in top journals in recent years as is shown below.

3.3.1.3 Reviews of multidimensional constructs in social sciences

This section presents an overview of the frequency of appearance and types of multidimensional constructs published in the main journals in the fields of management information systems, and strategic management; fields that are clearly related to the content of this dissertation, linking information processing and strategy discussions. This comparison is useful in identifying the various forms of multidimensional constructs across journals and the relevance of SEM methodology for their assessment, which is particularly interesting denoting the opportunities for further PLS-SEM application.

Management information systems

Polites, Roberts, and Thatcher (2011) reviewed multidimensional constructs and their use in the management information systems literature. These authors conducted a review of the published articles incorporating multidimensional constructs from 2000 to 2009, in four major journals in this field (*European Journal of Information Systems - EIJS, Information Systems Research - ISR, Journal of Management Information Systems - JMIS, and Management Information Systems Quarterly - MISQ*). Their findings revealed, out of a total of 1,160 research articles, only 72 (6.21%) used multidimensional constructs. In addition, the authors also classified the articles according to the type of construct used. Type I constructs are the most common in 33 articles (45.8%), followed by Type II constructs in 19 articles (26.4%). It is also important to consider that 16 articles (22.2%), although a set of dimensions was identified, the authors decided not to use multidimensional constructs. In some cases it was the authors´ choice not to specify a particular construct, and in some other cases because of a lack of understanding. In addition, the authors specified the breakdown of articles by statistical tool used. Out of 72 articles using multidimensional constructs, three used EQS, nine used AMOS, 10 used LISREL, and 29 used PLS. The remaining articles used other tools such as regressions, ANOVA, cluster analysis or regressions.

Strategic management

Hair, Sarstedt, Pieper, et al. (2012) reviewed the use of multivariate analysis methods in strategic management. These authors conducted a review of the articles published in eight of the leading journals in management (*Academy of Management Journal, Administrative Science Quarterly, Journal of Management, Journal of Management Studies, Long Range Planning, Management Science, Organization Science and Strategic Management Journal)* during a period of thirty years from 1981 to 2010 to identify all empirical applications of PLS-SEM. The authors identified only 37 articles containing 112 PLS-SEM model estimations. Their findings show that the use of PLS-SEM in strategic management research has grown linearly as a function of time. Some of the conclusions in their study show the benefits of PLS-SEM in strategic management particularly when dealing with small sample sizes, facilitating the estimation of complex models including

those incorporating formative measures especially when analyzing the sources of competitive advantage.

The previous overviews to the literature in these two fields of study highlight the opportunities and challenges for scholars in applying multidimensional constructs. In methodological terms, these two fields provide great opportunities for advancement. The evidence of several sets of dimensions in the literature reflects the need to apply multidimensional constructs, and at the same time denotes limited knowledge and urges applications in PLS-SEM methodology. It is possible that the estimation of certain constructs is fairly unknown by researchers or the software techniques that have been used so far do not allow the estimation of multidimensional constructs, particularly formative or a combination of formative and reflective.

3.3.1.4 Approaches for estimating multidimensional constructs

The multidimensional types of constructs previously addressed, Type I to IV, can be estimated by using PLS-SEM software such as SmartPLS (Ringle et al., 2015). The literature documents two main approaches to estimate multidimensional constructs. The first approach for measuring interaction is called PLS product-indicator or repeated-indicator (Chin, Marcolin, & Newsted, 2003; Wetzels, Odekerken-Schröder, & van Oppen, 2009). It is relatively an easy approach to implement. In one single step, first and second order constructs are estimated. However, its use is limited to the same number of indicators across lower-order components, otherwise the relationship between lower and higher order components will be significantly biased (Becker, Klein, & Wetzels, 2012). In addition, this approach is recommended for Type I multidimensional constructs, since the same measurement model evaluation criteria apply to the higher-order component as for any other construct in the PLS path model (Hair et al., 2014).

The second approach is called the two-step or two-stage approach and represents the current dominant approach used in research (Chin et al., 2003). The procedure is more elaborated than the repeated indicator approach. In a first step, the *Latent Variables Scores (LVS)* are obtained from the lower-order components. Then, in a

second step, these *LVS* are used as indicators of the higher-order components (Chin, 2010). Thus, the use of this approach leads to suboptimal estimates by avoiding some inaccurate inferences, and provides the basis for making meaningful interpretations about theoretical constructs and their interrelations (Anderson & Gerbing, 1988). For these reasons, in this study a two-step approach is followed.

3.3.1.5 Minimum sample size

The minimum sample size has to be determined based on the proposed structural model. Prior research suggests that a sample size of 100 to 200 is usually a good starting point to perform a path modeling (Hoyle, 1995). There is also known an acceptable rule of thumb, which suggests that the sample size should be at least 10 times the largest of two possibilities: (1) the block with the largest number of indicators or (2) the dependent variable with the largest number of independent variables impacting it (Chin, 1998). Therefore, for a more concrete sample size, the guidelines suggested by Marcoulides and Saunders (2006) were considered, depending on the maximum number of arrows pointing at a latent variable as specified in the structural equation model. For all the three models in this study, the sample size complied with the size requirements, as well as with the rule of thumb mentioned above. Table 16 shows the suggested sample sizes cited as suggested by these authors. From this information, the sample size used in this research study (295) is valid and acceptable for the proposed structural models.

Table 16. Suggested sample size for PLS-SEM.

Minimum sample size required	Maximum # of arrows pointing at a latent variable in the model
52	2
59	3
65	4
70	5
75	6
80	7
84	8
88	9
91	10

Source: Adapted from Marcoulides and Saunders (2006) and cited by Wong (2013).

3.4 Top managers´ dominant logic

In the first model of this research study, top managers´ dominant logic is the key endogenous variable and is operationalized as a multidimensional construct, type II reflective first-order and formative second-order construct (Jarvis et al., 2003). As discussed in Chapter 2, the three main latent variables or dimensions that define the managers´ dominant logic are scanning, interpretation, and learning (hypothesis 2). The managers´ dominant logic ultimately has an effect on organizational performance, which is the dependent variable in this study (hypothesis 3). Moreover, the characteristics of the dynamic environment (hypothesis 6), as well as the manager´s years of professional experience (hypothesis 1) are the main control variables affecting the mangers´ dominant logic. Figure 9 shows the top management dominant logic conceptual model. Hypotheses 1, 2 and 6 correspond to the operationalization of the managers´ dominant logic, and hypothesis 3 correspond to the assessment of its relationship with performance, in accordance to the second and third research objectives in this dissertation.

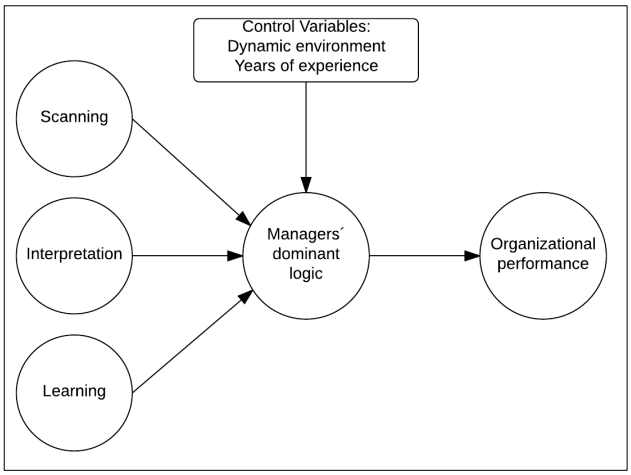


Figure 9. The Managers´ dominant logic conceptual model.

Source: Prepared by the authors.

Scanning

Scanning was measured as a reflective first-order construct determined by three indicators, which assess the manager´s processes related to the acquisition of information, and at the same time relates to information previously obtained by the

individual in accordance to his or her cognitive structures. This latent variable finds its theoretical support in Kirzner´s (1979) latest conceptualizations regarding the searching and constant scanning of information and considering changes in the environment, which eventually constitutes opportunities.

This conceptualization amends the alertness state definition originally proposed by Kirzner (1973) related to a more passive attitude towards the search for information, and is closer to the cognitive theory of entrepreneurship (Alvarez & Busenitz, 2001; Mitchell et al., 2007) suggesting a more active attitude towards the search for information. Scanning is the latent variable used in this study to explore the influence of this variable at the individual level, and an important dimension in the manager´s dominant logic. The section of the questionnaire to analyze this variable is constructed similarly to previous studies developed by Busenitz (1996) and Tang et al. (2012). The questionnaire examined the independent variable through a five-point Likert-type scale with values from 1=totally false to 5=completely true. Table 17 shows the questions used in this section as well as the descriptive statistics in Table 18.

Table 17. Scanning scale items.

Scanning	
D1_1	I have frequent interactions with others to acquire new information
D1_3	I read news, magazines, or trade publications regularly to acquire new information
D1_4	I browse the internet every day

Source: Prepared by the authors based on Tang et al. (2012).

Table 18. Descriptive statistics of Scanning.

Scanning					
Items	Min	Max	Mean	Std. Deviation	Variance
D1_1	1	5	4.17	0.712	0.507
D1_3	1	5	4.06	0.873	0.762
D1_4	1	5	3.90	0.954	0.910

Source: Prepared by the authors.

Interpretation

Interpretation was measured as a reflective first-order construct determined by four indicators, which assess the manager´s cognitive processes related to the association and

connection, and evaluation and judgment of information. Interpretation is the latent variable used in this study to explore the influence of this variable at the individual level, and an important dimension in the manager´s dominant logic. The section of the questionnaire to analyze this variable is constructed similarly to previous studies developed by Busenitz (1996) and Tang et al. (2012). The questionnaire examined the independent variable through a five-point Likert-type scale with values from 1=totally false to 5=completely true. Table 19 and 20 show the questions used in this section, as well as the descriptive statistics.

Table 19. Interpretation scale items.

Interpretation	
D1_2	When searching for information I always perceive new business ideas
D1_5	I see links between seemingly unrelated pieces of information
D1_6	I have a gut feeling for potential opportunities
D1_7	When facing multiple opportunities, I am able to select the good ones

Source: Prepared by the authors based on Tang et al. (2012).

Table 20. Descriptive statistics of Interpretation.

Interpretation					
Items	Min	Max	Mean	Std. Deviation	Variance
D1_2	1	5	4.12	0.763	0.582
D1_5	1	5	3.66	0.883	0.781
D1_6	1	5	3.88	0.860	0.740
D1_7	1	5	3.99	0.716	0.512

Source: Prepared by the authors.

Learning

Learning was measured as a reflective first-order construct determined by four indicators. The capacity to learn and translate knowledge into action is crucial to firm performance. In addition, the ability to learn from business failures or traumas is important (Levinthal & March, 1993). Hogarth´s (2001) research in cognition refers to learning structures as the characteristics of the task in which people learn from experience. The author suggests that learning is constrained by the characteristics of the lenient and exacting environment, thus the environment must provide adequate and quick feedback (Hogarth, 2008). In an exacting environment, as in the strategy and overall direction of an

organization, the cost of minor error can be costly and with important consequences. Therefore, according to Hogarth as tasks move from lenient to exacting, one would expect the accuracy of learning to increase. Learning signifies an important dimension in strategy formulation, thus in the manager´s dominant logic. The section of the questionnaire to assess Learning is based on T. Obloj et al. (2010). The questionnaire examined the independent variable through a five-point Likert-type scale with values from 1=totally false to 5=completely true. Table 21 shows the questions used in this section as well as the descriptive statistics in Table 22.

Table 21. Learning scale items.

Learning	
C9_1	Failures are more a source of frustration than interesting experiences used for improvement
C9_2	Communication in my firm was always fast, frequent, but sometimes chaotic
C9_3	Always quickly exit from wrong strategic decisions
C9_4	Since the beginning we develop and improve our business model incrementally

Source: Prepared by the authors based on Obloj et al. (2010).

Table 22. Descriptive statistics of Learning.

Learning					
Items	Min	Max	Mean	Std. Deviation	Variance
C9_1	1	5	4.07	0.822	0.675
C9_2	1	5	3.50	0.940	0.884
C9_3	1	5	3.57	0.821	0.673
C9_4	1	5	3.63	0.916	0.840

Source: Prepared by the authors.

Managers´ professional experience

The managers´ experience was assessed as a single item construct, which assess the seniority or number of years of professional experience within the company. Values were coded 1 for less than 10 years, and 2 for more than 10 years. This represents a control variable in this study.

Dynamic Environment

Dynamic environment was measured as a reflective first-order construct initially determined by four indicators according to the semantic differentials scales used in

previous research (Lumpkin & Dess, 2001). The scale developed by Casillas, Moreno, and Barbero (2011) was used through a five-point Likert-type scale with values from 1=totally false to 5=completely true. This represents another control variable in this study. Table 23 shows the questions used in this section as well as the descriptive statistics in Table 24.

Table 23. Dynamic environment scale items.

Dynamic Environment	
G1_2	Product and service obsolescence is very rapid in the sector
G1_3	It is difficult to predict the actions of our competitors
G1_4	It is difficult to predict the demands and tastes of our customers
G1_5	Production/service technology changes rapidly and significantly

Source: Prepared by the authors based on Casillas, Moreno, and Barbero (2011).

Table 24. Descriptive statistics of Dynamic Environment.

Dynamic Environment					
Items	Min	Max	Mean	Std. Deviation	Variance
G1_2	1	5	2.88	1.063	1.130
G1_3	1	5	2.97	0.963	0.928
G1_4	1	5	2.81	0.996	0.992
G1_5	1	5	3.25	1.043	1.089

Source: Prepared by the authors.

Organizational performance

Organizational performance was measured as a reflective first-order construct determined by eight indicators. Organizational performance represents the dependent variable in this study. Organizational behaviour and strategic management disciplines have frequently relied on subjective performance indicators, including managers´ self reports. Thus, the use of subjective measure has been justified by the difficulties in obtaining objective data (Dess & Robinson, 1984; Lubatkin, Simsek, Ling, & Veiga, 2006; Schoenberg, 2006; Venkatraman & Ramanujam, 1987). For example, prior research has shown that key respondents prefer perceptual performance measures because objective measures such as profits or costs are seen as confidential (Gruber, Heinemann, Brettel, & Hungeling, 2010). In our sample, the firms are privately owned, and so were not obligated to reveal objective performance data.

The use of subjective evaluations regarding the domain of financial performance, operational or business performance and organizational effectiveness are included in the scale (Venkatraman & Ramanujam, 1986). The CEOs are knowledgeable informants, particularly with regards to their firm´s performance. In addition, evidence suggests that CEO self-reports of performance highly correlate with some objective measures of performance (Dess & Robinson, 1984). Accordingly, questions were asked to evaluate the firm versus its major competitors during the last two years. A five-point Likert-type scale with values from 1 to 5 was used in order to resemble if the level of performance was smaller than competitors to higher than competitors respectively. Table 25 shows the questions used in this section as well as the descriptive statistics in Table 26.

Table 25. Organizational performance scale items.

Organizational Performance	
C4_1	Quality of the products/services
C4_2	Productivity of the labor hand
C4_3	Customers´ satisfaction with the products/services
C4_4	Responsiveness to customers´ demands
C4_5	Fast response to customers´ demands
C4_6	Increase in market share
C4_7	Access to new markets
C4_8	Firm´s revenues

Source: Prepared by the authors

Table 26. Descriptive statistics of Organizational Performance.

Organizational Performance					
Items	Min	Max	Mean	Std. Deviation	Variance
C4_1	1	5	3.97	0.669	0.448
C4_2	1	5	3.73	0.749	0.561
C4_3	2	5	4.11	0.647	0.418
C4_4	2	5	3.96	0.754	0.568
C4_5	2	5	3.90	0.778	0.605
C4_6	2	5	3.80	0.788	0.620
C4_7	1	5	3.68	0.896	0.803
C4_8	1	5	3.73	0.813	0.660

Source: Prepared by the authors.

3.4.1 Empirical analysis

As previously discussed, PLS-SEM was employed to evaluate both the measurement and structural models. IBM SPSS version 21 and SmartPLS version 3 were used in this study. SmartPLS represent one of the leading software tools for PLS-SEM. It is appropriate to use the PLS-SEM technique to conduct this study for the following reasons. First, PLS is a variance-based SEM technique that has been used in previous research (Peng & Lai, 2012). Second, the use of PLS-SEM has been recommended when theoretical knowledge about a topic is scarce (Barroso, Carrión, & Roldán, 2010; Petter et al., 2007). Third, to the extent that this study proposes multidimensional constructs that have not been examined before, and reveals the degree to which prior theory is limited by using traditional statistical models, hence PLS-SEM estimation is justifiable and relevant. Fourth, all of the constructs are identified as reflective at first-order level and formative at second-order level, and PLS-SEM is more appropriate for estimating this type of model than for covariance-based SEM techniques, since the use of the latter has been shown to lead to identification problems (Chin, 1998).

3.4.2 First-order reflective evaluation of measurement models

Model assessment concentrates on the measurement models, in terms of evaluating the reliability and validity of the construct measures. For each of the constructs in this study, several variables were employed to indirectly measure a concept. These variables have been used before in the literature to assess a particular concept, as shown in the previous sections.

For an initial assessment of the PLS-SEM model, and by following Hair et al. (2014), an evaluation of the reflective measurement models is needed before proceeding to the evaluation of the structural model. In this case, an evaluation of the reflective first-order constructs was conducted considering the following elements:

- Internal consistency reliability
- Indicator reliability
- Convergent validity
- Discriminant validity

3.4.2.1 Internal consistency reliability

Cronbach´s alpha is probably the most used and traditional estimate of internal consistency reliability in social science research. It estimates the reliability based on the inter-correlations among the items within a scale (values range from 0 to 1). Thus, Cronbach´s alpha is sensitive to the number of items within a scale, and generally tends to underestimate the internal consistency reliability because it assumes that all items are equally reliable (i.e. all indicators have equal outer loadings in the construct). For this reason, it tends to provide a conservative measurement in PLS-SEM (Wong, 2013). In contrast to Cronbach´s alpha, the *composite reliability* does not assume equal factor loadings among the measures. Thus, prior literature highly suggests the use of composite reliability measure in PLS-SEM (Bagozzi & Yi, 1988; Hair, Sarstedt, Ringle, et al., 2012). Consequently, it is more precise to apply a *composite reliability* measure of internal consistency than to evaluate the traditional Cronbach´s alpha (Chin, 2010). There may be researchers more familiarized with traditional measures than with PLS-SEM, so both measurements are included in this study as a reference point, although it is not required in PLS-SEM.

There are some disagreements over the minimum acceptable standards for scale reliability in Cronbach´s alpha. Some regard 0.70 as the minimally acceptable level (Nunnally 1978), while others accept >0.50 as an indicator of good internal consistency reliability (Cronbach 1951). Nunnally (1967) also argues that the reliability of 0.60 is sufficient to carry out an explorative study but a higher Cronbach´s alpha is always desirable (see Peterson (1994) for an analysis on Cronbach´s alpha). On the other hand, *composite reliability* values of 0.60 to 0.70 are acceptable in exploratory research, values between 0.70 and 0.90 can be regarded as satisfactory (Hair et al., 2014; Nunnally & Bernstein, 1994), and values below 0.60 indicate a lack of internal consistency reliability.

From Figure 10 and 11, Cronbach´s alpha and Composite reliability values are shown. As stated before, Cronbach´s alphas in most of the latent variable are below the threshold of 0.7, ranging 0.532 to 0.794. Again, Cronbach´s alpha assumes that all the indicators have equal outer loadings, which in PLS-SEM is not the case. In contrast, the

composite reliability values range from 0.794 to 0.858. Thus, high levels of internal consistency reliability are demonstrated among all latent variables in this model.

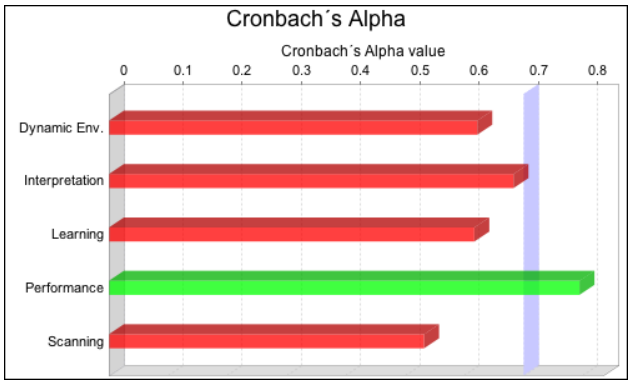


Figure 10. Cronbach´s alpha of the reflective measurement models of managers´ dominant logic.

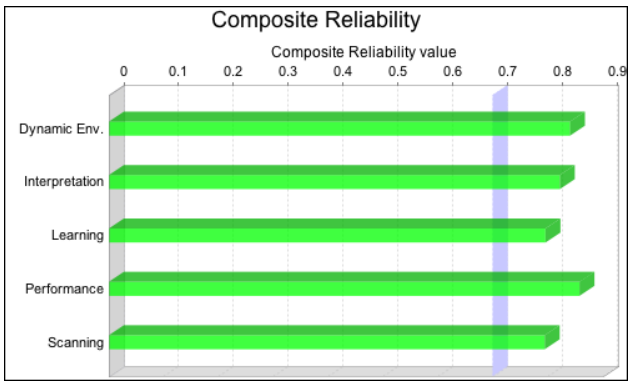


Figure 11. Composite reliability of the reflective measurement models of managers´ dominant logic.

3.4.2.2 Indicator reliability

In reflective measurement models, indicators are regarded as consequences of the latent variable to which they belong. In addition, the reflective indicators can be used interchangeably and even to a certain extent be discarded (Henseler & Fassott, 2010). Loading is the absolute contribution of an indicator to the construct; that is, it refers to the bivariate correlation between the indicator and the construct (Cenfetelli & Bassellier, 2009). The cut-off value for the loadings is 0.708 since that number squared equals 0.50. Therefore, the latent variable should explain a substantial part of each indicator´s variance, usually at least 50 percent. A value of 0.70 is considered close enough to 0.708 to be acceptable (Hair et al., 2014). Weaker outer loadings are usually observable in social science studies, and specifically when newly developed scales are used (Hulland, 1999). For this reason, Hair et al. (2014) recommend to carefully assess the reflective

indicators´ loadings composite reliability and content validity rather than just directly eliminating those below the threshold of 0.70.

There are two main considerations. First, reflective outer loadings between 0.4 and 0.7 should be considered for removal only when deleting the indicator leads to an increase in composite reliability or in the average variance extracted (AVE) above the suggested threshold value. Second, weaker loadings are sometimes retained on the basis of their contribution to content validity (Hair et al., 2014). Indicators with outer loadings below 0.40 should always be eliminated (Hair, Ringle, & Sarstedt, 2011). Table 28 shows all the individual indicators outer loadings, some of which were dropped by following the discussion above. Moreover, all remaining but two indicators´ loadings (D1_3 and C9_1) were above the threshold value of 0.70. These particular two were very close below the 0.7 level. On these cases, when attempted to remove them, but the result did not increase the composite reliability and AVE, so the items were retained. In addition, their corresponding p-value was highly significant at <0.001. In some cases, other studies have followed this rule and obtained valid results (e.g. Braojos-Gomez, Benitez-Amado, & Llorens-Montes, 2015).

3.4.2.3 Convergent validity

A common measure to establish convergent validity on the construct level is through the *average variance extracted (AVE).* It refers to the sum of the square outer loadings of the indicators divided by the number of indicators in a construct. A value of 0.50 or higher indicates that on average the construct explains more than 50 percent of the variance of its indicators (Hair et al., 2014).

Figure 12 shows that all AVE values are greater than the acceptable threshold of 0.5, so convergent validity is confirmed (Bagozzi & Yi, 1988; Chin, 2010). Overall, this analysis suggests good properties for the measures (Chin, 2010).

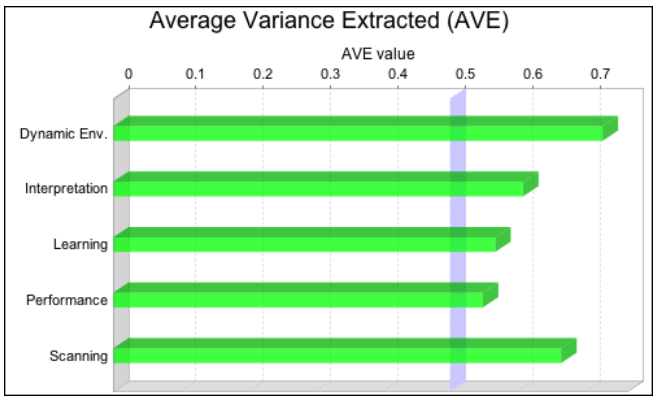


Figure 12. Average variance extracted of the reflective measurement models of managers´ dominant logic.

3.4.2.4 Discriminant validity

Discriminant validity refers to the extent to which a construct is truly different from other constructs by empirical standards (Hair et al., 2014). This means that the constructs are unique and do not capture the same phenomena than any other construct within the model. One conservative approach for assessing discriminant validity is by using the *Fornell-Larcker criterion*. Only reflective constructs can be evaluated using this approach. This particular approach compares the square root of the average variance extracted with the other constructs´ correlations within the model. Therefore, the square root of each construct´s AVE must be larger than its correlations with other constructs. Table 27 shows the correlations and establishes the discriminant validity according to this approach.

Table 27. Discriminant validity and inter-construct correlations of managers´ dominant logic model.

Latent Variables	1	2	3	4	5	6
1. Dynamic Env.	**0.852**					
2. Interpretation	0.148**	**0.779**				
3. Learning	0.189***	0.475***	**0.752**			
4. Performance	0.127*	0.349***	0.477***	**0.740**		
5. Scanning	0.134*	0.618***	0.288***	0.277***	**0.815**	
6. Experience	0.063	-0.036	-0.111*	-0.041	0.005	**1.000**

N=295. Boldface values are the square root of the average variance extracted. It shows the variance shared between a construct and its measures. Boldface diagonal elements should be larger than off-diagonal elements in order to satisfy discriminant validity requirements. ^{t} p<0.10; * p<0.05; ** p<0.01; *** p<0.001 (one tailed tests).

Table 28 summaries the results of the reflective measurement model assessment. As can be seen, all model evaluation criteria have been met, providing support for the measures´ reliability and validity.

Table 28. Result summary for reflective measurement models of managers´ dominant logic.

Latent Variable	Indicators	VIF	Weights	Loadings	Cronbach´s Alfa	Composite Reliability	AVE	Discriminant Validity?
Scanning	D1_1	1.151	0.783***	0.928***	0.532	0.794	0.664	Yes
	D1_3	1.151	0.399***	0.683***				
	D1_4		Dropped					
Interpretation	D1_2	1.372	0.487***	0.826***	0.683	0.822	0.608	Yes
	D1_5	1.319	0.312***	0.709***				
	D1_6		Dropped					
	D1_7	1.300	0.471***	0.799***				
Learning	C9_1	1.147	0.430***	0.693***	0.617	0.796	0.566	Yes
	C9_2		Dropped					
	C9_3	1.348	0.402***	0.772***				
	C9_4	1.276	0.497***	0.788***				
Performance	C4_1		Dropped		0.794	0.858	0.548	Yes
	C4_2		Dropped					
	C4_3		Dropped					
	C4_4	2.355	0.244***	0.737***				
	C4_5	2.264	0.247***	0.710***				
	C4_6	1.691	0.304***	0.792***				
	C4_7	1.556	0.280***	0.726***				
	C4_8	1.576	0.273***	0.733***				
Dynamic Environment	G1_2	1.255	0.556**	0.834***	0.622	0.841	0.725	Yes
	G1_3		Dropped					
	G1_4		Dropped					
	G1_5	1.255	0.618**	0.868***				
Experience	A6d	1.021	1.000	1.000	1.000	N/A	1.000	N/A

[t] p<0.10; * p<0.05; ** p<0.01; *** p<0.001 (one tailed tests), N/A=not applicable.

3.4.3 Second-order formative evaluation of measurement models

As previously stated, due to the nature of this study as a multidimensional construct, the evaluation of the formative measurement models was conducted before the evaluation of the structural model. So, by following Hair et al. (2014) an evaluation of the formative second-order constructs considers the following elements:

- Collinearity among indicators
- Significance and relevance of outer weights

3.4.3.1 Collinearity among indicators

The estimation of path coefficients in a formative structural model is based on OLS regressions of each endogenous latent variable on its corresponding predecessor constructs. Just as in a regular multiple regression, the path coefficients may be biased if the estimation involves significant levels of collinearity among the constructs. So, excessive collinearity among indicators makes it difficult to separate the distinct influence of the individual indicators on the latent variable.

Collinearity may be desirable in reflective measures, but in formative indicators can lead to problems, such as the estimation of outer weights and their statistical significance (Hair et al., 2014). Moreover, when deleting formative indicators due to collinearity, the content coverage may decrease having an effect on the construct´s definition (Cenfetelli & Bassellier, 2009).

To assess collinearity levels, authors recommend assessing the *tolerance statistic* and *the variance inflation factor (VIF). Tolerance* represents the amount of variance of one formative indicator not explained by the rest of the indicators in the same block (Hair et al., 2014). Therefore, using IBM SPSS v.21, an assessment of the *tolerance* of formative indicators was conducted by computing the R^2 of each of the indicators on all remaining indicators in the same dimension. A linear regression was used and placed as a dependent variable the first indicator and regress it on all remaining indicators as independent variables. No other information was further assessed but the corresponding R^2 for these linear regressions. Then, the *tolerance* was computed by using 1-R^2 (Cenfetelli & Bassellier, 2009). In the context of PLS-SEM, a tolerance value lower than 0.20 indicate a potential collinearity problem (Hair et al., 2011, 2013). Table 29 shows the tolerance values for the multidimensional construct well above the 0.20 cut-off value.

In addition to tolerance, the collinearity is also assessed through the variance inflation factor (VIF). For some authors VIF values should be less than 10 (Gruber et al., 2010), or less than 5 (Hair et al., 2011). According to some authors a general cut-off value of 3.3 is recommended for identifying suspect variables, and values above 10 indicate a serious collinearity issue (Petter et al., 2007). Table 29 shows the corresponding

assessment of collinearity of the formative second-order constructs. The values range from 1.290 to 1.912 at second-order level, suggesting that collinearity is not a problem in the data.

Table 29. Tolerance and variance inflation factor results formative second-order of managers´ dominant logic.

Latent Variable	R^2	Tolerance (1 - R^2)	VIF (1 / Tolerance)
Scanning	0.381	0.619	1.616
Interpretation	0.477	0.523	1.912
Learning	0.225	0.775	1.290

Source: Prepared by the authors.

3.4.3.2 Significance and relevance of outer weights

Weight refers to the relative contribution of an indicator to a construct. In other words, weight is the effect of an indicator on a construct, controlling for the effects of all other indicators on that construct (Hair et al., 2014). In formative measurement models, the latent variable or construct is regarded as a consequence of its respective indicators; therefore, changing indicators alter the meaning of the construct (Cenfetelli & Bassellier, 2009). The importance of a formative indicator is shown in its weight. In formative measures authors even recommend to keep non-significant and negative weights according to certain criteria in order to preserve content validity (Chin, 2010; Petter et al., 2007).

In order to assess the significance of the weights and loadings, a *bootstrap resampling procedure* needs to be conducted in SmartPLS under the command bootstrapping routine (Benitez-Amado & Walczuch, 2012; Chin, 1998; Hair et al., 2014). *Bootstrapping* is a nonparametric procedure applied to test the significance of coefficients such as outer weights, outer loadings and path coefficients. Moreover, in *bootstrapping*, subsamples are generated with observations randomly drawn from the original set of data, which are then used to estimate the PLS path model. To ensure the stability of results, authors recommend the use of large subsamples (Hair et al., 2011; Preacher & Hayes, 2008; Ringle et al., 2015). The value of 5,000 was used as the recommended value for subsamples for final results preparation to the original number of

295 observations. In addition, other authors recommendations in bootstrapping were considered, such as allowing for individual sign changes (Hair et al., 2011; Hair, Sarstedt, Ringle, et al., 2012).

In the case of formative indicators, as is the case of the second-order multidimensional construct, authors suggest that a formative dimension/indicator should be retained when its weight is significant or when its weight is non-significant but its loading is significant (Cenfetelli & Bassellier, 2009). Table 30 shows the second-order indicators in this model, all weight are significant and their corresponding loadings too.

Table 30. Outer weights significance-testing results of managers´ dominant logic.

Latent Variable	Outer Weights	p Value	T Statistics	Outer Loadings	p Value	T Statistics
Scanning	0.199*	0.035	1.807	0.543***	0.000	5.379
Interpretation	0.180[t]	0.065	1.510	0.686***	0.000	8.900
Learning	0.808***	0.000	9.397	0.951***	0.000	25.918

[t] p<0.10; * p<0.05; ** p<0.01; *** p<0.001 (all tests are one tailed).

The previous results provide support to Hypothesis 2, the three latent variables or dimensions, scanning, interpretation, and learning, belong to a second-order formative construct top managers´ dominant logic. These results provide empirical support to the formulation of the managers´ dominant logic.

3.4.4 Evaluation of the structural model

Once the construct measures have been confirmed to be reliable and valid, an assessment of the structural model results followed. This assessment involves examining the model's predictive capabilities, as well as the significance and relevance of the relationships among the constructs.

The key criteria for assessing the structural model in PLS-SEM are to evaluate the significance of the path coefficients or the relationships among the constructs, the level of the R^2 values, the effect size f^2, and the predictive relevance (Q^2), which are the measures of how well a model is performing (Chin, 1998). Applying the PLS-SEM algorithm can assess these criteria.

The PLS path modeling method was developed by Wold (1982) and the PLS algorithm is essentially a sequence of regressions in terms of weight vectors (Ringle et al., 2015). After applying the PLS-SEM algorithm, estimates are obtained for the structural model relationships or the path coefficients, which represent the hypothesized relationships between the constructs. The path coefficients for the structural model are shown in Figure 13. As previously discussed, the two-step approach was used to assess the measurement of the interaction among the constructs.

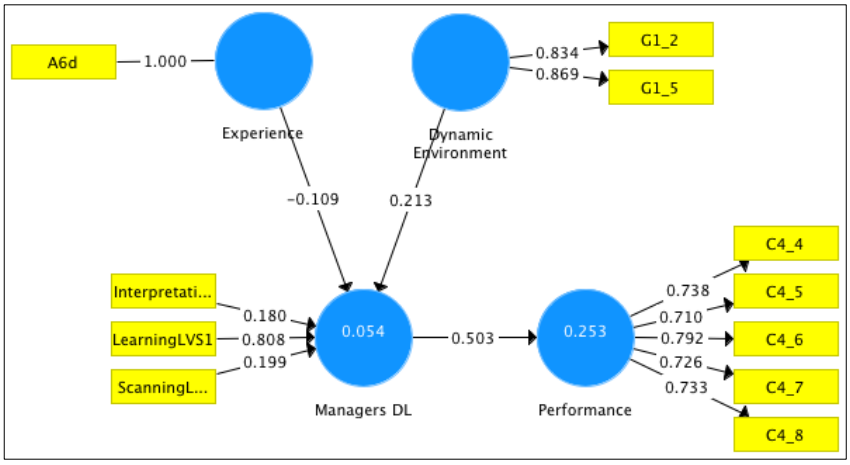


Figure 13. Managers´ dominant logic path modeling estimation (Two-step approach).

Path coefficients need to be higher than 0.2 to be statistically significant and their p-values to be significant. As shown in the Table 31 the path coefficient of the key construct in the model, managers´ dominant logic is 0.503 with a p-value of 0.000 significant at the 0.01 level. The dynamic environment (as a control variable) to managers´ dominant logic is 0.213 and highly significant. The professional experience is -0.109 although significant is not large enough to reach the threshold of 0.20. However, since it is a control variable in this construct, it should be consider accordingly.

Table 31. Significance testing results of the structural model path coefficients of managers´ dominant logic.

Path	Path Coefficients	T Statistics	p Value
Managers´ dominant logic ➔ Organizational performance	0.503***	11.327	0.000
Dynamic environment ➔ Managers´ dominant logic (control variable)	0.213***	3.408	0.000
Professional experience ➔ Managers´ dominant logic (control variable)	-0.109*	1.917	0.028

[t] p<0.10; * p<0.05; ** p<0.01; *** p<0.001 (one tailed tests).

These results provide partial support to hypothesis 1. Note that the path coefficient shows significant at a 0.028 level, and the negative sign depicts that the more years of experience inside the organization affects negatively the top managers´ dominant logic. It appears that the more years of experience inside the organization limits the managers´ dominant logic, implying their dimensions of scanning, interpretation, and learning are weaker than those managers with less years of experience. This result may shed further insights into the effects of longer tenures of top management on organizational performance. However, the results provide partial support since the coefficient is significant but lower than 0.2 for strict statistical support. Therefore, additional efforts must be considered in order to capture additional information regarding the professional experiences of top managers. On the other hand, hypotheses 3 and 6 are supported, since the path coefficients are highly significant. The dynamic environment has a significant effect on the top managers´ dominant logic, and correspondingly this last one on organizational performance. These results provide empirical support to the significant relationship between the managers´ dominant logic and organizational performance.

The R^2 values show the predictive quality of the model, values of 0.19, 0.33, and 0.67 are weak, moderated, and substantial (Chin, 1998). The R^2 value of organizational performance is 0.253 with a p value of 0.000. Moreover, the R^2 value of managers´ dominant logic (0.053*) is weak. However, it should be noted that the intention with this endogenous variable was mainly to assess the relevance of two control variables; and no other independent variables were assessed at this time, explaining the corresponding low R^2.

In addition to the R^2 values, the Stone-Geisser test of cross-validated redundancy measure Q^2 is used to assess the predictive validity of the exogenous latent variables and can be computed using the blindfolding procedure in SmartPLS software. In this case, values greater than zero imply that the independent variables have predictive relevance for the dependent variable under consideration (Chin, 1998). Table 32 shows the Q^2

values in the model. The Q^2 values are greater than zero as recommended. These values show a satisfactory predictive power for the proposed model.

Table 32. Results of R^2 and Q^2 values of managers´ dominant logic.

Endogenous latent variable	R^2 Value	p Values	Q^2 Value
Managers´ dominant logic	0.053*	0.038	0.022
Organizational performance	0.253***	0.000	0.132

[t] p<0.10; * p<0.05; ** p<0.01; *** p<0.001 (one tailed tests).

The f^2 effect size is a measure of the impact of a specific predictor construct on an endogenous construct. The f^2 effect size measures the change in the R^2 value when a specified exogenous construct is omitted from the model. The f^2 is very useful when evaluating whether the impact of a specific independent on a dependent variable is important. Values of 0.02, 0.15 and 0.35 depict a small, medium and large effect size respectively (Chin, 1998; Leal-Rodríguez, Roldán, Ariza-Montes, & Leal-Millán, 2014). As shown in Table 33, the f^2 values in the proposed model for managers´ dominant logic on performance was 0.340, and for dynamic environment and professional experience on dominant logic were 0.048, and 0.013 respectively.

Table 33. Summary of results of managers´ dominant logic.

	Managers´ dominant logic		Organizational performance	
	Path Coefficients	f^2 Effect Size	Path Coefficients	f^2 Effect Size
Managers´ dominant logic			0.503***	0.340***
Dynamic Environment	0.213***	0.048[t]		
Professional Experience	-0.109*	0.013		

[t] p<0.10; * p<0.05; ** p<0.01; *** p<0.001 (one tailed tests).

Therefore, the effect size of dominant logic on performance is close to large, whereas dynamic environment had a small effect size on dominant logic and professional experience was not significant. These results provide additional support for hypothesis 3 and 6, whereas non-significant support for hypothesis 1. Figure 14 shows the final path analysis model and R^2 results.

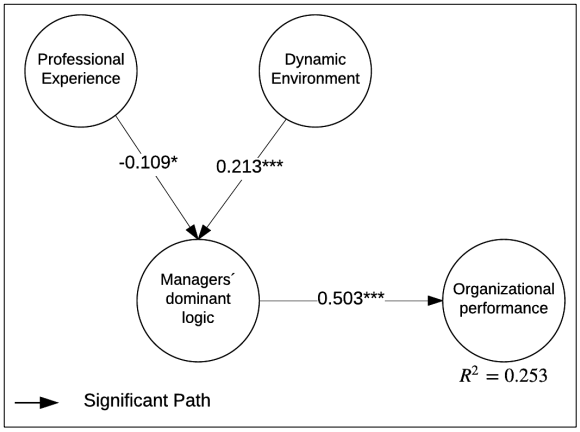


Figure 14. Results of the path analysis for the managers´ dominant logic model.

3.5 Firm´s dominant logic

In the second model of this dissertation, the firm´s dominant logic is the key endogenous variable and is operationalized as a multidimensional construct type II, formative second-order construct determined by six reflective first-order constructs. The dimensions incorporated in this formative construct are those discussed as action elements in Chapter 2. The explicit features, such as organizational routine, decentralized structure, and group orientation, as well as implicit features immersed in the organizational culture, such as external orientation, and short-term versus long-term orientation, determine the firm´s dominant logic (hypothesis 4). The firm´s dominant logic has a direct effect on the organizational performance (hypothesis 5). In addition, the dynamic environment is also included in this model, which affects the dominant logic (hypothesis 7). Please refer to Figure 15 for the firm´s dominant logic conceptual model. Hypotheses 4 and 7 correspond to the operationalization of the firm´s dominant logic, and hypothesis 5 correspond to the assessment of its relationship with performance, in accordance to the second and third research objectives in this dissertation.

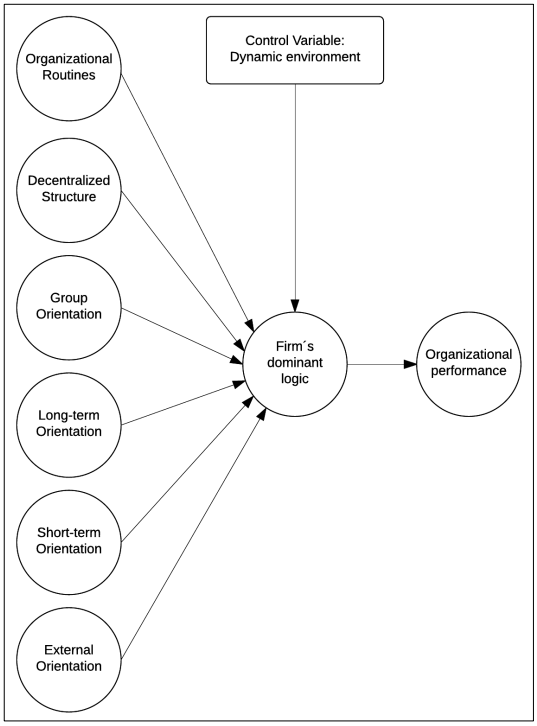


Figure 15. Firm´s dominant logic conceptual model.

Organizational routines

Organizational routines (Routines) were measured as a reflective first-order construct determined by six indicators. Organizations develop routines guiding allocation of resources, coordinating execution of business strategy, and setting and monitoring performance targets. Thus, organizational routines indicate an important dimension in strategy implementation. The section of the questionnaire to assess this variable is based on T. Obloj et al. (2010). The questionnaire examined the independent variable through a five-point Likert-type scale with values from 1=totally false to 5=completely true. Table 34 shows the questions used in this section as well as the descriptive statistics in Table 35.

Table 34. Organizational routines scale items.

Organizational routines (Routines)	
C8_1	Our monitoring system relies on formal and regular analysis of industry and competitive actions
C8_2	We develop efficient procedures in the early stage of our firm´s operation
C8_3	Main processes in the firm are well defined, and responsibilities are clearly allocated
C8_4*	We have a single and flat organizational structure
C8_5	Our motivational system was developed in a way to force people to act according to instructions

Organizational routines (Routines)	
C8_6	Important pieces of information mainly pass through formal channels in our firm

Source: Prepared by the authors based on T. Obloj et al. (2010).
* Reverse scored

Table 35. Descriptive statistics of Organizational routines.

Organizational routines (Routines)					
Item	Min	Max	Mean	Std. Deviation	Variance
C8_1	1	5	3.60	0.888	0.789
C8_2	1	5	3.86	0.795	0.632
C8_3	1	5	3.89	0.799	0.639
C8_4	1	5	4.00	0.776	0.601
C8_5	1	5	3.54	0.940	0.883
C8_6	1	5	3.68	0.871	0.759

Source: Prepared by the authors.

Decentralized structure

Decentralized structure (Structure) was assessed as a reflective first-order construct determined by four indicators to measure the characteristics of organizational culture. We used the scale proposed by Zahra et al. (2004), which considered assumptions about the decentralization of control following previous research (e.g. Miller, 1983). The questionnaire examined the independent variable through a five-point Likert-type scale with values from 1=totally false to 5=completely true. Table 36 shows the questions used in this section as well as the descriptive statistics in Table 37.

Table 36. Decentralized structure scale items.

Decentralized structure (Structure)	
C7_1	Is open to change
C7_2	Encourages employees to challenge the status quo
C7_3	Is decentralized in its decision making
C7_4	Maintains open communications channels in its operations

Source: Prepared by the authors based on Zahra et al. (2004).

Table 37. Descriptive statistics of Decentralized structure.

Decentralized structure (Structure)					
Items	Min	Max	Mean	Std. Deviation	Variance
C7_1	2	5	4.20	0.698	0.487
C7_2	1	5	3.78	0.950	0.903

Decentralized structure (Structure)					
Items	Min	Max	Mean	Std. Deviation	Variance
C7_3	1	5	3.24	1.084	1.175
C7_4	1	5	3.88	0.839	0.704

Source: Prepared by the authors.

Group orientation

Group orientation (Group) was assessed as a reflective first-order construct determined by three indicators. The scale proposed by Zahra et al. (2004) was used, which considered items for individual orientation based on previous research (e.g. Morris, Davis, and Allen 1994). The questionnaire examined the independent variable through a five-point Likert-type scale with values from 1=totally false to 5=completely true. Table 38 shows the questions used in this section as well as the descriptive statistics in Table 39.

Table 38. Group orientation scale items.

Group orientation (Group)	
C5_1	Being a team player
C5_2	Consensus in making key decisions
C5_3	Tying pay to group performance

Source: Prepared by the authors based on Zahra et al. (2004).

Table 39. Descriptive statistics of Group orientation.

Group orientation (Group)					
Items	Min	Max	Mean	Std. Deviation	Variance
C5_1	1	5	4.30	0.736	0.542
C5_2	1	5	3.87	0.942	0.887
C5_3	1	5	3.89	0.881	0.777

Source: Prepared by the authors.

Organizational culture

Organizational culture is an important strategic resource that firms use to gain competitive advantage. Organizational culture refers to coherent patterns of beliefs and values that represent acceptable solutions to major organizational problems, thus affecting organizational development and performance. As proposed in previous Chapters, organizational culture is defined as one key dimension in the firm´s dominant logic. Each of the dimensions of culture is discussed below.

External cultural orientation

External orientation was measured as a reflective first-order construct determined by four indicators to measure characteristics of organizational culture. Items for the external orientation were based on prior research (Morris, 1998). The scale was adapted from previous scales used by T. Obloj et al (2010) and Zahra et al. (2004). The questionnaire examined the independent variable through a five-point Likert-type scale with values from 1=totally false to 5=completely true. Table 40 shows the questions used in this section as well as the descriptive statistics in Table 41.

Table 40. External cultural orientation scale items.

External Orientation (External Orientation)	
C6_1	Tracks changes in its markets on a regular basis.
C6_2	Values working with key customers and learning from them.
C6_3	Values working with key suppliers and learning from them
C6_4	Values learning from the actions of its competitors

Source: Prepared by the authors based on Zahra et al. (2004) and T. Obloj et al. (2010).

Table 41. Descriptive statistics of External cultural orientation.

External Orientation (External Orientation)					
Item	Min	Max	Mean	Std. Deviation	Variance
C6_1	1	5	3.73	0.897	0.804
C6_2	1	5	4.02	0.837	0.700
C6_3	1	5	4.05	0.796	0.634
C6_4	1	5	4.00	0.713	0.509

Source: Prepared by the authors.

Short-term cultural orientation

Short-term orientation (Finance) was measured as a reflective first-order construct determined by three indicators to measure the characteristics of organizational culture. The scale proposed by Zahra et al. (2004) was employed, which has also been used in prior research (Zahra, Neubaum, & Huse, 2000). The respondents were asked to determine to what extent were the items in the scale used in managing and evaluating the company´s performance during the past three years. The questionnaire examined the independent variable through a five-point Likert-type scale where 1=not used at all,

5=widely used. Table 42 shows the items used in this section as well as the descriptive statistics in Table 43.

Table 42. Short-term cultural orientation scale items.

Short-term orientation (Finance)	
C11_1	Cash flow
C11_2	Return on investment
C11_3	Objective criteria, such as return on assets

Source: Prepared by the authors based on Zahra et al. (2004).

Table 43. Descriptive statistics of Short-term cultural orientation.

Short-term orientation (Finance)					
Items	Min	Max	Mean	Std. Deviation	Variance
C11_1	1	5	4.05	0.975	0.915
C11_2	1	5	3.71	1.056	1.115
C11_3	1	5	3.62	0.982	0.964

Source: Prepared by the authors.

Long-term cultural orientation

Long-term orientation (Formal) was measured as a reflective first-order construct determined by three indicators to measure the characteristics of organizational culture. The scale proposed by Zahra et al. (2004) was used, which at the same time were developed from prior research (Zahra et al., 2000). The respondents were asked to determine to what extent were the items in the scale used in managing and evaluating the company´s performance during the past three years. The questionnaire examined the independent variable through a five-point Likert-type scale where 1=not used at all, 5=widely used. Table 44 shows the items used in this section as well as the descriptive statistics in Table 45.

Table 44. Long-term cultural orientation scale items.

Long-term orientation (Formal)	
C12_1	Formal face-to-face meetings among managers to discuss company performance
C12_2	Informal face-to-face meetings among managers to evaluate company goal achievements
C12_3	Evaluating company performance against subjective criteria such as customer satisfaction

Source: Prepared by the authors based on Zahra et al. (2004).

Table 45. Descriptive statistics of Long-term cultural orientation.

Long-term orientation (Formal)					
Items	Min	Max	Mean	Std. Deviation	Variance
C12_1	1	5	3.96	0.978	0.956
C12_2	1	5	3.85	0.937	0.878
C12_3	1	5	3.78	0.957	0.915

Source: Prepared by the authors.

Organizational performance

Organizational Performance was measured as a reflective first-order construct determined by eight indicators. Organizational performance was the dependent variable, as reported by the respondents. The descriptive statistics and items of this scale were assessed in Section 3.4. See Tables 25 and 26 for the scale items and descriptive statistics respectively.

Dynamic environment

Dynamic environment was assessed as a reflective first-order construct determined by four indicators. The descriptive statistics and items of this scale were assessed in Section 3.4. See Tables 23 and 24 for the scale items and descriptive statistics respectively.

3.5.1 First-order reflective evaluation of measurement models

As in the previous model, a systematic evaluation of PLS-SEM results was conducted by following Hair et al. (2014). First, an evaluation of the reflective measurement models was needed before proceeding to the evaluation of the structural model. The reflective first-order constructs were then evaluated considering the following elements:

- Internal consistency reliability
- Indicator reliability
- Convergent validity
- Discriminant validity

3.5.1.1 Internal consistency reliability

Cronbach´s alphas for all latent variables but one (dynamic environment) are well above the threshold of 0.7. Figure 16 shows Cronbach´s alpha values. Cronbach´s alpha assumes

that all the indicators have equal outer loadings, which in PLS-SEM is not the case. For this reason, the *composite reliability* measure is more suitable, which considers the individual loadings of the indicators.

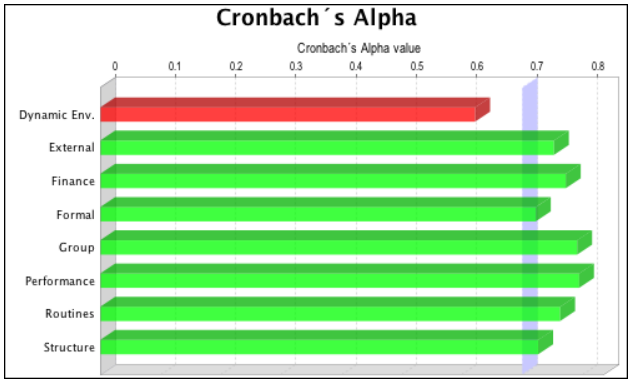


Figure 16. Cronbach´s alpha of the reflective measurement models of firm´s dominant logic.

Table 47 shows the internal consistency reliability measures. In this mode, composite reliability values range from 0.841 to 0.915. Composite reliability values between 0.70 and 0.90 are satisfactory (Nunnally & Bernstein, 1994). Thus, high levels of internal consistency reliability are demonstrated among all latent variables in this model (please refer to Figure 17).

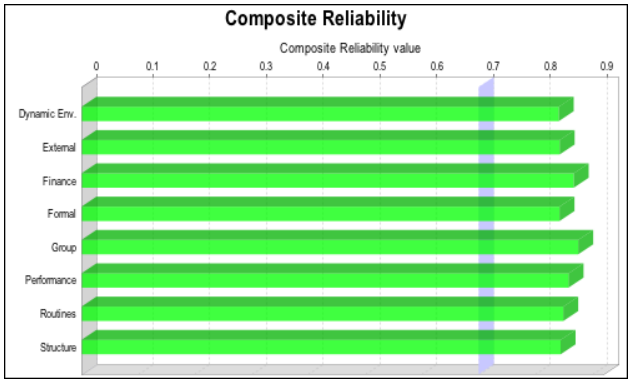


Figure 17. Composite reliability of the reflective measurement models of firm´s dominant logic.

3.5.1.2 Indicator reliability

In reflective measurement models, indicators can be used interchangeably and even to a certain extent be discarded (Henseler & Fassott, 2010). Loading is the absolute contribution of an indicator to the construct. The cut-off value for the loadings is 0.708. According to Hair et al. (2014) there are two main considerations for reflective indicators

removal. First, when the outer loadings are between 0.4 and 0.7, the indicators should be considered for removal only when deleting the indicator leads to an increase in composite reliability or in the average variance extracted (AVE) above the suggested threshold value. Second, weaker loadings are sometimes retained on the basis of their contribution to content validity, but indicators with outer loadings below 0.40 should always be eliminated (Hair et al., 2011). Table 47 shows all the individual indicators outer loadings, some of which were dropped by following the previous discussion. Moreover, all remaining indicator´ loading are above the threshold of 0.70.

3.5.1.3 Convergent validity

A common measure to establish convergent validity is through the *average variance extracted (AVE).* As previously discussed, a value of 0.50 or higher indicates that on average the construct explains more than 50 percent of the variance of its indicators (Chin, 1998; Hair et al., 2014). Figure 18 shows that all AVE values are greater than the acceptable threshold of 0.5, so convergent validity is confirmed (Bagozzi & Yi, 1988; Chin, 2010). Overall, this analysis suggests good properties for the measures (Chin, 2010).

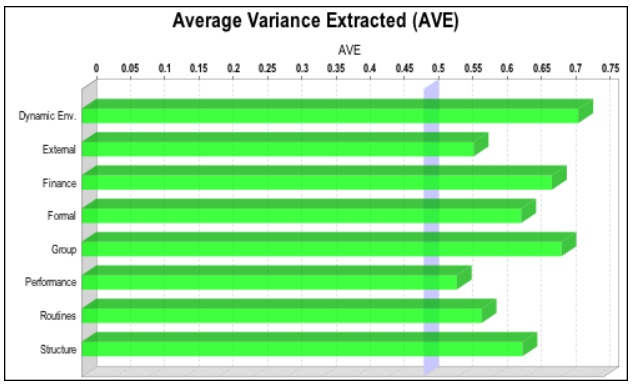


Figure 18. Average variance extracted of the reflective measurement models of firm´s dominant logic.

3.5.1.4 Discriminant validity

Discriminant validity means that the constructs are unique and do not capture the same phenomena than any other construct within the model. For assessing discriminant validity the *Fornell-Larcker criterion* was used since it is only applicable to reflective constructs. This particular approach compares the square root of the AVE values with the other

constructs´ correlations within the model. Therefore, the square root of each construct´s AVE must be larger than its correlations with other constructs. Table 46 shows the correlation table to establish the discriminant validity according to this approach.

Table 46. Discriminant validity and inter-construct correlations of firm´s dominant logic.

Latent Variables	1	2	3	4	5	6	7	8
1. Dynamic Env.	**0.851**							
2. External	0.148**	**0.757**						
3. Finance	0.043	0.302***	**0.829**					
4. Formal	0.056	0.265***	0.466***	**0.801**				
5. Group	0.159**	0.417***	0.251***	0.300***	**0.837**			
6. Performance	0.125*	0.490***	0.306***	0.215***	0.343***	**0.740**		
7. Routines	0.135**	0.488***	0.427***	0.362***	0.361***	0.420***	**0.764**	
8. Structure	0.125***	0.558***	0.220***	0.299***	0.521***	0.425***	0.500***	**0.802**

N=295. Boldface values are the square root of the average variance extracted. It shows the variance shared between a construct and its measures. t p<0.10; * p<0.05; ** p<0.01; *** p<0.001 (one tailed tests).

Table 47 summaries the results of the reflective measurement model assessment. As can be seen, all model evaluation criteria were met, providing support for the measures´ reliability and validity.

Table 47. Result summary for reflective measurement models of firm´s dominant logic.

Latent Variable	Indicators	VIF	Weights	Loadings	Cronbach´s Alfa	Composite Reliability	AVE	Discriminant Validity?
Group	C5_1	1.760	0.415***	0.857***	0.791	0.875	0.701	Yes
	C5_2	1.630	0.295***	0.783***				
	C5_3	1.629	0.476***	0.869***				
	C5_4		Dropped					
Structure	C7_1	1.455	0.419***	0.804***	0.726	0.844	0.644	Yes
	C7_2	1.508	0.353***	0.787***				
	C7_3		Dropped					
	C7_4	1.358	0.473***	0.816***				
Formal	C12_1	1.611	0.525***	0.871***	0.722	0.842	0.642	Yes
	C12_2	1.691	0.356***	0.822***				
	C12_3	1.248	0.357**	0.701***				
Finance	C11_1	1.500	0.300***	0.732***	0.772	0.867	0.687	Yes
	C11_2	2.149	0.470***	0.911***				
	C11_3	1.673	0.422***	0.834***				
Routines	C8_1	1.392	0.322***	0.738***	0.763	0.849	0.584	Yes
	C8_2	1.583	0.366***	0.807***				
	C8_3	1.617	0.297***	0.783***				
	C8_4		Dropped					
	C8_5		Dropped					
	C8_6	1.368	0.322***	0.727***				
External orientation	C6_1	1.341	0.389***	0.757***	0.752	0.843	0.573	Yes
	C6_2	1.799	0.300***	0.790***				
	C6_3	1.708	0.310***	0.767***				

Latent Variable	Indicators	VIF	Weights	Loadings	Cronbach´s Alfa	Composite Reliability	AVE	Discriminant Validity?
	C6_4	1.307	0.325***	0.711***				
Performance	C4_4	2.355	0.276***	0.769***	0.794	0.858	0.548	Yes
	C4_5	2.264	0.283***	0.744***				
	C4_6	1.691	0.253***	0.761***				
	C4_7	1.556	0.298***	0.722***				
	C4_8	1.576	0.241***	0.705***				
Dynamic Environment	G1_2	1.255	0.582**	0.849***	0.622	0.841	0.725	Yes
	G1_5	1.255	0.592**	0.855***				

[t] p<0.10; * p<0.05; ** p<0.01; *** p<0.001 (one tailed tests).

3.5.2 Second-order formative evaluation of measurement models

Due to the nature of this study as a multidimensional construct, the evaluation of the formative measurement models was conducted before assessing the structural model. Thus, an evaluation of the formative second-order constructs was performed considering the following elements (Hair et al., 2014):

- Collinearity among indicators
- Significance and relevance of outer weights

3.5.2.1 Collinearity among indicators

Excessive collinearity among indicators makes it difficult to separate the distinct influence of the individual indicators on the latent variable or construct. Therefore, collinearity in formative indicators can lead to problems, such as the estimation of outer weights and their statistical significance (Hair et al., 2014).

An assessment of the levels of collinearity was considered by calculating the tolerance statistic, and its inverse, the variance inflation factor (VIF). *Tolerance* represents the amount of variance of one formative indicator not explained by the rest of the indicators in the same block (Hair et al., 2014). The *tolerance* of formative indicators is assessed by performing linear regressions to calculate the R^2 of each indicator on all remaining indicators in the same construct. IBM SPSS v.21 software was used for these analyses. After acquiring the corresponding R^2 values, the tolerance was then assessed by manually using 1-R^2 (Cenfetelli & Bassellier, 2009). In PLS-SEM, a tolerance value lower than 0.20 indicate a potential collinearity problem (Hair et al., 2011, 2013). Table 48

shows the *tolerance* values for the multidimensional construct, all indicators are above the 0.20 cut-off value.

Most of the times, the collinearity is assessed through the *variance inflation factor* (VIF). For some authors VIF values should be less than 5 (Hair et al., 2011), although different standards of acceptable values for VIF exist, from 3.3 to 10 (Cenfetelli & Bassellier, 2009). In addition, Table 48 shows the corresponding assessment of collinearity for the formative second-order constructs. The values range from 1.474 to 1.866, suggesting that collinearity is not a problem in the data.

Table 48. Tolerance and Variance inflation factor results of firm´s dominant logic.

Latent Variable	R^2	Tolerance ($1-R^2$)	VIF (1 / Tolerance)
Group	0.346	0.654	1.529
Structure	0.464	0.536	1.866
Formal	0.284	0.716	1.396
Finance	0.322	0.678	1.474
Routines	0.449	0.551	1.816
External orientation	0.398	0.602	1.660

Source: Prepared by the authors

3.5.2.2 Significance and relevance of outer weights

As previously discussed, the importance of a formative indicator is shown in its weight. In formative measures authors recommend to keep non-significant and negative weights according to certain criteria in order to preserve content validity (Chin, 2010; Petter et al., 2007). The significance of the weights and loadings was then assessed by conducting a *bootstrapping routine* in SmartPLS (Benitez-Amado & Walczuch, 2012; Chin, 1998; Hair et al., 2014). A 5,000 value for subsamples was used for final results preparation to the original number of 295 observations. In addition to allowing for individual sign changes (Hair et al., 2011; Hair, Sarstedt, Ringle, et al., 2012).

In the case of formative indicators, authors suggest that a formative dimension/indicator should be retained when its outer weight is significant or when its outer weight is non-significant but its outer loading is significant (Cenfetelli & Bassellier, 2009). If the outer weight is not significant, then the outer loadings need to be higher

than 0.50 regardless if they are significant or not in order to be retained (Hair et al., 2014). If both outer weights and loadings are non-significant, the formative indicator/dimension can be retained only at discretion of the authors to preserve the construct's content validity (Cenfetelli & Bassellier, 2009), although others authors highly recommend its removal in this case (Hair et al., 2014). Table 49 shows the second-order indicators; in one case (Formal), the outer weights were not significant. So, before considering its removal, the outer loadings were assessed. The outer loadings were below 0.50 although significant, so the indicator/dimension was deleted (Hair et al., 2014).

Table 49. Outer weights significance-testing results of firm´s dominant logic.

Latent Variable	Outer Weights	p Value	T Statistics	Outer Loadings	p Value	T Statistics
Group	0.147*	0.073	1.456	0.612***	0.000	5.588
Structure	0.244*	0.027	1.922	0.758***	0.000	10.107
Formal	-0.064	0.198	0.850	0.383***	0.000	3.565
Finance	0.224*	0.021	2.034	0.545***	0.000	5.930
Routines	0.257*	0.015	2.169	0.748***	0.000	10.600
External orientation	0.499***	0.000	4.575	0.872***	0.000	17.602

t p<0.10; * p<0.05; ** p<0.01; *** p<0.001 (all tests are one tailed).

When reassessing the outer weights significance for the second order without the deleted indicator, the results found were the following (please refer to Table 50):

Table 50. Outer weights significance-testing results of firm´s dominant logic without deleted indicator.

Latent Variable	Outer Weights	p Value	T Statistics	Outer Loadings	p Value	T Statistics
Group	0.184*	0.042	1.726	0.640***	0.000	6.103
Structure	0.212*	0.039	1.764	0.756***	0.000	9.737
Finance	0.159*	0.041	1.735	0.518***	0.000	5.636
Routines	0.272*	0.011	2.288	0.755***	0.000	10.786
External orientation	0.497***	0.000	4.677	0.873***	0.000	18.007

t p<0.10; * p<0.05; ** p<0.01; *** p<0.001 (all tests are one tailed).

These results provide support to hypothesis 4 where implicit and explicit features of the action dimension of dominant logic are significant and fundamental to the formulation of the firm´s dominant logic. As addressed before, one of the proposed components or dimensions in this construct (Formal) was removed from the final

operationalization. However, due to the nature of the scales assessing the cultural orientation in the organizations according to Zahra et al (2004), it was expected that at least one of two dimensions, more specifically short-term (Finance) versus long-term (Formal) orientation, to remain in the construct. These two dimensions measure complementary orientations in the firm. Financial depicts a short-term cultural orientation, whereas Formal depicts to a long-term cultural orientation. Therefore, the removal of one of these two dimensions not only made sense, but provide support that the organizations in our sample follow a dominant orientation. In addition, these results provide empirical support to the operationalization of the firm´s dominant logic, which corresponds to the second objective in this dissertation.

3.5.3 Evaluation of the structural model

The key criteria for assessing the structural model in PLS-SEM are to evaluate the significance of the path coefficients or the relationships among the constructs, the level of the R^2 values, the effect size f^2, and the predictive relevance (Q^2), which are the measures of how well a model is performing (Chin, 1998). A bootstrap analysis with 5,000 subsamples was performed to estimate the significance of the path coefficients (Chin, 1998). The path coefficients for the structural model are shown in Figure 19.

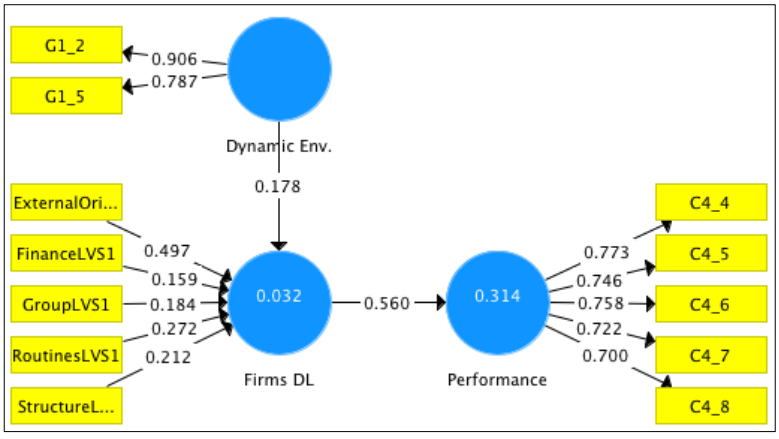


Figure 19. Firms´ dominant logic path modeling estimation without non-significant (deleted) indicator (Two-step approach).

From the previous discussion on significance and relevance of outer weights, the weights for the "Formal" dimension/indicator were not significant, and the loadings,

although significant, were below 0.50. Therefore, by following Hair et al.´s (2014) decision-making process for keeping or deleting formative indicators, the removal of this indicator was decided. Furthermore, the two-step approach was re-assessed for this multidimensional construct without the deleted indicator.

Figure 19 and Table 51 show the path coefficients of the key constructs in the model. These results provide partial support to hypothesis 7, where the path coefficient of dynamic environment to firm´s dominant logic is highly significant to a 0.001 level, although is below the 0.20 cut-off level to be statistically significant. In addition, the path coefficient of firm´s dominant logic to organizational performance is highly significant to a 0.001 level providing support to hypothesis 5.

Table 51. Significance testing results of the structural model path coefficients of firm´s dominant logic.

Path	Path Coefficients	t Values	p Values
Firm´s dominant logic ➔ Organizational performance	0.560***	13.648	0.000
Dynamic Environment ➔ Firm´s dominant logic	0.178***	3.076	0.001

[t] p<0.10; * p<0.05; ** p<0.01; *** p<0.001 (one tailed tests).

The R^2 values show the predictive quality of the model, values of 0.19, 0.33, and 0.67 are weak, moderated, and substantial (Chin, 1998). The R^2 value of organizational performance is 0.314 with a p-value of 0.000, which shows a moderated predictive quality. The effect of dynamic environment on firm´s dominant logic is significant to a 0.001 level (please refer to Table 52).

Table 52. Results of R^2 and Q^2 values of firm´s dominant logic.

Endogenous latent variable	R^2 Value	P Values	Q^2 Value
Organizational performance	0.314***	0.000	0.161
Firm´s dominant logic	0.032[t]	0.082	0.014

[t] p<0.10; * p<0.05; ** p<0.01; *** p<0.001 (one tailed tests).

In addition to the R^2 values, the Stone-Geisser test of cross-validated redundancy measure Q^2 is used to assess the predictive validity of the exogenous latent variables and can be computed using the blindfolding procedure in SmartPLS software. In this case, values greater than zero imply that the independent variables have predictive relevance

for the dependent variable under consideration (Chin, 1998). Table 52 shows the Q^2 value in the model. The Q^2 values are greater than zero as recommended. These values show a satisfactory predictive power for the proposed model.

The f^2 effect size is a measure of the impact of a specific predictor construct on an endogenous construct, thus evaluating the importance of a specific independent on a dependent variable. As shown in Table 53 the f^2 value in the proposed model for firm´s dominant logic on performance was 0.457. Thus, the effect size of dominant logic on performance is large since it is above the 0.35 limit (Chin, 1998; Leal-Rodríguez et al., 2014), whereas dynamic environment effect size on dominant logic was not significant.

Table 53. Summary of results of firm´s dominant logic.

Latent Variables	Firm´s dominant logic		Organizational performance	
	Path Coefficients	f^2 Effect Size	Path Coefficients	f^2 Effect Size
Firm´s dominant logic			0.560***	0.457***
Dynamic Environment	0.178***	0.033[t]		

[t] p<0.10; * p<0.05; ** p<0.01; *** p<0.001 (one tailed tests).

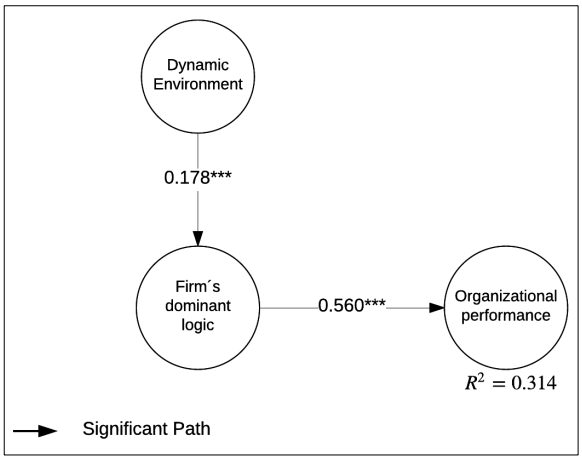


Figure 20. Firms´ dominant logic path modeling estimation without non-significant indicator (step 2 in the two-step approach).

These results provide additional support for hypothesis 5, where the effect of the firm´s dominant logic on organizational performance is large and significant. On the other hand, the results provided partial support for hypothesis 7, since the effect of the

dynamic environment on the firm´s dominant logic is significant but close to zero. Figure 20 shows the final path analysis and R^2 results of this model.

3.6 Dominant logic: an integrative model

In this final model, the integration of both previous models in this dissertation was considered, the managers´ dominant logic and the firm´s dominant logic. Both multidimensional constructs are type II reflective first-order and formative second-order (Jarvis et al., 2003). From the integrative framework in this dissertation in Figure 5, and considering the previous assessment of the first and second models in this study, the managers´ dominant logic has a direct effect on the firm´s dominant logic (hypothesis 8). In addition, in order to test the significance of this relationship, the mediation effect of the firm´s dominant logic between the managers´ dominant logic and organizational performance is assessed (hypothesis 9). Please refer to Figure 21 for the visual presentation of the integrative model.

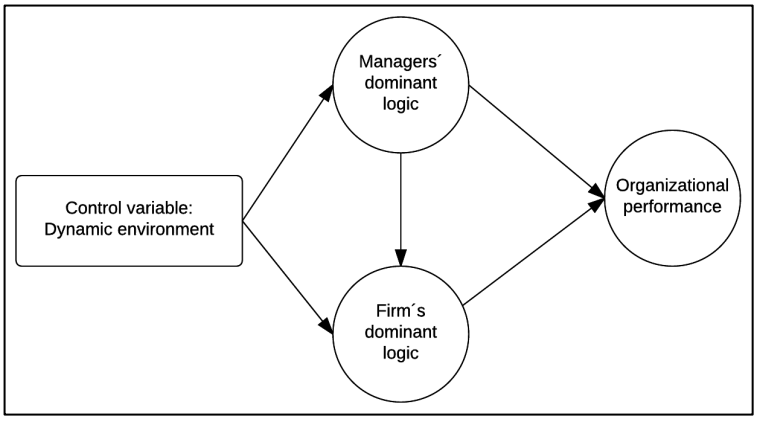


Figure 21. Dominant logic: an integrative model.

3.6.1 First-order reflective evaluation of measurement models

For an assessment of the measurement models, Hair et al.´s (2014) systematic evaluation of PLS-SEM results was performed. Although both multidimensional constructs have been assessed before individually in this research study, for this integrative model, a reassessment is recommended including all corresponding indicators to evaluate the structural model. The two step approach was used to calculate the latent variable scores to measure the constructs´ validity and reliability (Chin, 2010). Therefore, first, an

evaluation of the reflective first-order constructs was conducted according to the following elements:

- Internal consistency reliability
- Indicator reliability
- Convergent validity
- Discriminant validity

3.6.1.1 Internal consistency reliability

Cronbach´s alpha and composite reliability are the two methods to assess internal consistency reliability. As previously stated, Cronbach´s alpha is a more conservative measure assuming that all indicators´ outer loadings in a construct are equal. By the contrary, composite reliability considers each indicator´s outer loadings, thus being a more precise and adequate measure for PLS-SEM. Internal consistency for each construct has been previously assessed, please refer to section 3.4.2.1 and 3.5.1.1 in this Chapter.

Figure 22 shows the integrated measures of composite reliability for both constructs, which were well above the threshold value of 0.70. Table 55 refers to these values range from 0.793 to 0.915. As assessed before, only one construct surpassed the 0.90 cut-off value, but considering the quality of the scale used (please refer to Section 3.5), this dimension was retained. Thus, high levels of internal consistency reliability were demonstrated among all latent variables in this model.

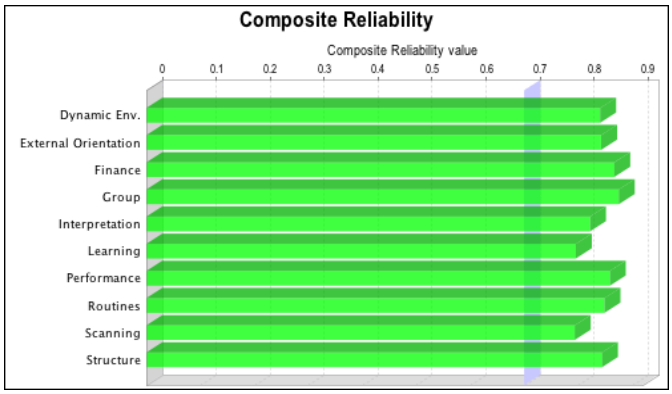


Figure 22. Composite reliability of the reflective measurements of the integrative model.

3.6.1.2 Indicator reliability

In the evaluation of reflective measurements, indicators in a construct can be used interchangeably and even to a certain extent be discarded (Henseler & Fassott, 2010). Therefore, we evaluate the loadings of the indicators, which refer to the absolute contribution of an indicator to the construct. The cut-off value for the loadings is 0.708. Hair et al. (2014) states two main considerations for reflective indicators removal. First, when the outer loadings are between 0.4 and 0.7, the indicators should be considered for removal only when deleting the indicator leads to an increase in composite reliability or in the average variance extracted (AVE) above the suggested threshold value. Second, weaker loadings are sometimes retained on the basis of their contribution to content validity, but indicators with outer loadings below 0.40 must be eliminated (Hair et al., 2011). Table 55 shows all the individual indicators outer loadings, some of which were removed by following the above considerations, and were previously assessed individually in Sections 3.4.2.2 and 3.5.1.2. All remaining indicator´ loadings are above the threshold of 0.70.

3.6.1.3 Convergent validity

The *average variance extracted (AVE)* is a common measure to assess the convergent validity. A value of 0.50 or higher indicates that on average the construct explains more than 50 percent of the variance of its indicators (Chin, 1998; Hair et al., 2014). As both multidimensional constructs were assessed before in Section 3.4.2.3 and 3.5.1.3.

Figure 23 shows that all AVE values are greater than the acceptable threshold of 0.5, verifying the convergent validity of the latent variables, and demonstrating good properties for the measures in this model (Bagozzi & Yi, 1988; Chin, 2010).

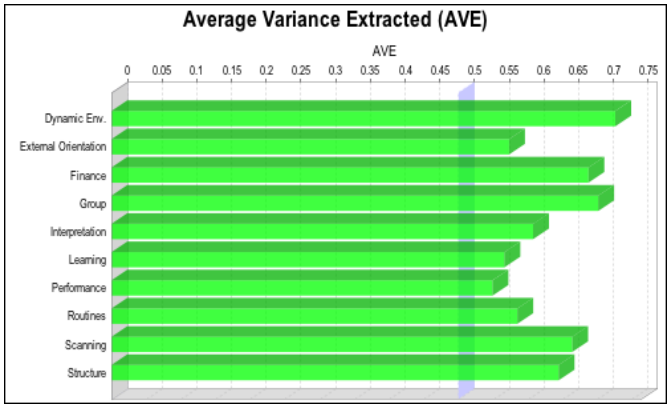


Figure 23. Average variance extracted of the reflective measurement models of integrative model.

3.6.1.4 Discriminant validity

To probe that the constructs used in this model are unique and do not capture the same phenomena than any other construct within the model, the discriminant validity was assessed. Therefore, the *Fornell-Larcker criterion* was used. Table 54 shows the correlation table to establish the discriminant validity according to this approach.

Table 54. Discriminant validity and inter-construct correlations of the integrative model.

Latent Variables	1	2	3	4	5	6	7	8	9	10
1. Performance	**0.741**									
2. Scanning	.273***	**0.814**								
3. Interpretation	.350***	.617***	**0.779**							
4. Learning	.475***	.289***	.475***	**0.752**						
5. External Orientation	.488***	.392***	.393***	.508***	**0.757**					
6. Finance	.307***	.261***	.279***	.238***	.302***	**0.829**				
7. Group	.340***	.283***	.322***	.342***	.417***	.251***	**0.837**			
8. Routines	.418***	.303***	.299***	.421***	.488***	.427***	.361***	**0.764**		
9. Structure	.424***	.346***	.481***	.558***	.558***	.220***	.521***	.500***	**0.802**	
10. Dynamic Env.	.122*	.133*	.148**	.188***	.148**	0.043	.159**	.135**	.125*	**0.852**

N=295. Boldface values are the square root of the average variance extracted. It shows the variance shared between a construct and its measures. Boldface diagonal elements should be larger than off-diagonal elements in order to satisfy discriminant validity requirements. ^{t} p<0.10; * p<0.05; ** p<0.01; *** p<0.001 (one tailed tests).

Table 55 summaries the results of the reflective measurement model assessment. As can be seen, all model evaluation criteria have been met, providing support for the measures´ reliability and validity.

Table 55. Result summary for reflective measurement models of the integrative model.

Latent Variable	Indicators	VIF	Weights	Loadings	Cronbach´s Alfa	Composite Reliability	AVE	Discriminant validity?
Group	C5_1	1.760	0.415***	0.857***	0.791	0.875	0.701	Yes
	C5_2	1.630	0.296***	0.784***				
	C5_3	1.629	0.475***	0.868***				
Finance	C11_1	1.500	0.298***	0.730***	0.772	0.867	0.687	Yes
	C11_2	2.149	0.470***	0.911***				
	C11_3	1.673	0.423***	0.835***				
Structure	C7_1	1.455	0.419***	0.804***	0.726	0.844	0.644	Yes
	C7_2	1.508	0.353***	0.787***				
	C7_4	1.358	0.473***	0.816***				
Routines	C8_1	1.392	0.322***	0.739***	0.763	0.849	0.584	Yes
	C8_2	1.583	0.367***	0.807***				
	C8_3	1.617	0.297***	0.782***				
	C8_6	1.368	0.322***	0.727***				
External orientation	C6_1	1.341	0.390***	0.758***	0.752	0.843	0.573	Yes
	C6_2	1.799	0.299***	0.790***				
	C6_3	1.708	0.310***	0.767***				
	C6_4	1.307	0.325***	0.711***				
Scanning	D1_1	1.151	0.788***	0.930***	0.532	0.793	0.663	Yes
	D1_3	1.151	0.393***	0.680***				
Interpretation	D1_2	1.372	0.492***	0.827***	0.683	0.822	0.607	Yes
	D1_5	1.319	0.306***	0.705***				
	D1_7	1.300	0.472***	0.800***				
Learning	C9_1	1.147	0.438***	0.699***	0.617	0.796	0.566	Yes
	C9_3	1.348	0.398***	0.770***				
	C9_4	1.276	0.494***	0.786***				
Performance	C4_4	2.355	0.273***	0.765***	0.794	0.859	0.549	Yes
	C4_5	2.264	0.275***	0.739***				
	C4_6	1.691	0.268***	0.769***				
	C4_7	1.556	0.288***	0.719***				
	C4_8	1.576	0.246***	0.710***				
Dynamic Environment	G1_2	1.255	0.581**	0.848***	0.622	0.841	0.725	Yes
	G1_5	1.255	0.593**	0.855***				

Source: Prepared by the authors

3.6.2 Second-order formative evaluation of measurement models

After assessing the content validity and reliability of the reflective measures, the evaluation of the formative measurement models was then assessed prior to the evaluation of the structural model. Thus, the formative second-order constructs were assessed by considering the following elements according to Hair et al. (2014):

- Collinearity among indicators
- Significance and relevance of outer weights

3.6.2.1 Collinearity among indicators

The levels of collinearity are determined by calculating the tolerance statistic and its inverse the variance inflation factor (VIF). Following the procedures in the previous models in this Chapter, the corresponding R^2 were obtained in order to assess the tolerance by manually using 1-R^2 (Cenfetelli & Bassellier, 2009). Table 56 shows the tolerance values for the multidimensional constructs, all indicators are above the 0.20 cut-off value. In addition it shows the corresponding assessment of collinearity for the formative second-order constructs. The values range from 1.550 to 2.163, suggesting that collinearity is not a problem in the data.

Table 56. Tolerance and variance inflation factor results of the integrative model.

Latent Variable	R^2	Tolerance (1-R^2)	VIF (1 / Tolerance)
Managers´ dominant logic			
Scanning	0.424	0.576	1.737
Interpretation	0.511	0.489	2.046
Learning	0.429	0.571	1.750
Firm´s dominant logic			
Group	0.355	0.645	1.550
Structure	0.538	0.462	2.163
Routines	0.466	0.534	1.871
External Orientation	0.448	0.552	1.812
Finance	0.250	0.750	1.334

Source: Prepared by the authors

3.6.2.2 Significance and relevance of outer weights

The significance of the weights and loading was previously assessed for each of the two constructs in section 3.4.3.2 and 3.5.2.2 by conducting a *bootstrapping routine* in SmartPLS (Benitez-Amado & Walczuch, 2012; Chin, 1998; Hair et al., 2014). As discussed before, the formative dimensions/indicators were retained when the outer weight were significant or when the outer weight were non-significant but the outer loading were significant (Cenfetelli & Bassellier, 2009). Table 57 confirms the relevance of the elements in the constructs, and shows a summary of the second-order indicators; in all cases, the outer weights were significant, and the outer loadings were above 0.50 and highly significant, so all indicators/dimensions were retained (Hair et al., 2014).

Table 57. Outer weights significance-testing results of the integrative model.

Latent Variable	Outer Weights	P Values	T Statistics	Outer Loadings	P Value	T Statistics
Managers´ dominant logic						
Scanning	0.275***	0.000	3.429	0.619***	0.000	8.784
Interpretation	0.213*	0.019	2.066	0.732***	0.000	12.318
Learning	0.735***	0.000	10.456	0.916***	0.000	25.655
Firm´s dominant logic						
Group	0.088t	0.095	1.313	0.601***	0.000	6.824
Structure	0.428***	0.000	4.627	0.845***	0.000	22.953
Finance	0.169**	0.007	2.437	0.493***	0.000	6.930
Routines	0.175*	0.034	1.832	0.709***	0.000	10.097
External orientation	0.443***	0.000	5.625	0.855***	0.000	20.057

t p<0.10; * p<0.05; ** p<0.01; *** p<0.001 (all tests are one tailed).

3.6.3 Evaluation of the structural model

In order to evaluate the structural model in PLS-SEM an assessment of the significance of the path coefficients was conducted, in addition to the level of the R^2, the effect size f^2, and the predictive relevance (Q^2), which are the measures that depict of how well a model is performing (Chin, 1998).

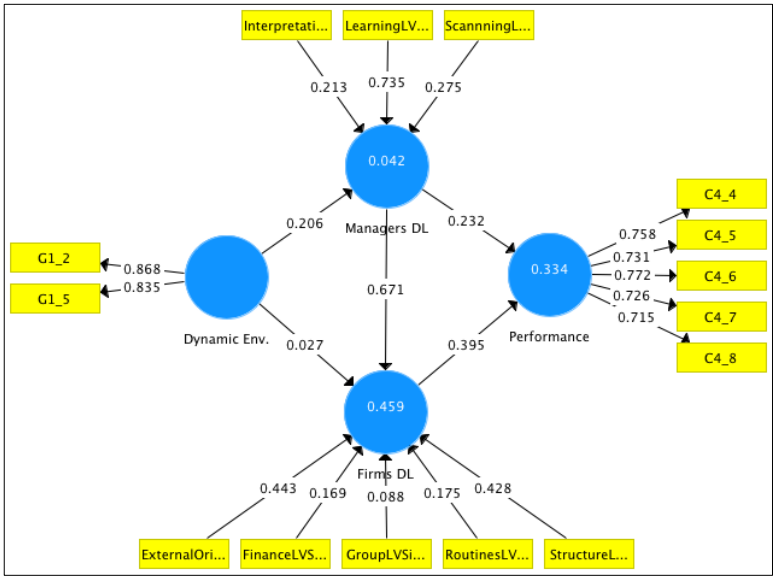


Figure 24. Dominant logic integrative path modeling estimation with control variable (Two-step approach).

A bootstrap analysis with 5,000 subsamples was assessed to estimate the significance of the path coefficients (Chin, 1998). The path coefficients for the structural model are shown in Figure 24. As previously discussed, the two-step approach was used to assess the measurement of the interaction among the constructs.

Table 58 shows the path coefficients of the key constructs in the integrative model. These results provide support to hypothesis 5, where the path coefficient of the firm´s dominant logic to organizational performance is highly significant to a 0.000 level. In addition, there was support for hypothesis 8, where the path coefficient of managers´ dominant logic to firm´s dominant logic is highly significant to a 0.001.

Table 58. Significance testing results of the structural model path coefficients of the integrative model.

Path	Path Coefficients	T Statistic	p Values
Managers´ dominant logic ➔ Organizational performance	0.232***	3.396	0.000
Firm´s dominant logic ➔ Organizational performance	0.395***	5.986	0.000
Managers´ dominant logic ➔ Firm´s dominant logic	0.671***	17.979	0.000
Dynamic Environment ➔ Managers´ dominant logic	0.206***	3.193	0.000
Dynamic Environment ➔ Firm´s dominant logic	0.027	0.803	0.211

[t] p<0.10; * p<0.05; ** p<0.01; *** p<0.001 (one tailed tests).

The R^2 values show the predictive quality of the model, values of 0.19, 0.33, and 0.67 are weak, moderated, and substantial (Chin, 1998). The R^2 value of organizational performance is 0.334 with a p-value of 0.000, which shows a moderated predictive quality and the R^2 of firm´s dominant logic is 0.459 with a p-value of 0.000 (please refer to Table 59).

Table 59. Results of R^2 and Q^2 Values of the integrative model.

Endogenous latent variable	R^2 Value	T Statistic	p Value	Q^2 Value
Organizational performance	0.334***	7.179	0.000	0.176
Firm´s dominant logic	0.459***	9.412	0.000	0.221
Managers´ dominant logic	0.042[t]	1.528	0.063	0.021

[t] p<0.10; * p<0.05; ** p<0.01; *** p<0.001 (one tailed tests).

In addition to the R^2 values, the Stone-Geisser test of cross-validated redundancy measure Q^2 is used to assess the predictive validity of the exogenous latent variables and can be computed using the blindfolding procedure in SmartPLS software. In this case,

values greater than zero imply that the independent variables have predictive relevance for the dependent variable under consideration (Chin, 1998). Table 60 shows the Q^2 value in the model. The Q^2 values are greater than zero as recommended. These values show a satisfactory predictive power for the proposed model.

The f^2 effect size is a measure of the impact of a specific predictor construct on an endogenous construct, thus evaluating the importance of a specific independent on a dependent variable.

Table 60. Summary of results of the integrative model.

Latent Variables	Managers´ dominant logic		Firm´s dominant logic		Organizational performance	
	Path Coefficients	f^2 Effect Size	Path Coefficients	f^2 Effect Size	Path Coefficients	f^2 Effect Size
Firm´s dominant logic					0.395***	0.127**
Managers´ dominant logic			0.671***	0.797***	0.232***	0.044^t
Dynamic Environment	0.206***	0.044^t	0.027	0.001		

^{t} p<0.10; * p<0.05; ** p<0.01; *** p<0.001 (one tailed tests).

As shown in Table 60, the f^2 value in the proposed model for firm´s dominant logic on performance was 0.127. Thus, the effect size of the firm´s dominant logic on performance is about medium since is close to the 0.15 limit (Chin, 1998; Leal-Rodríguez et al., 2014), whereas the effect size of the dynamic environment on the managers´ dominant logic is significant but small with a 0.044, above the 0.02 level as indicated by Chin (1998). In addition, the effect size of the mangers´ dominant logic on the firm´s dominant logic is highly significant and large, well above the 0.35 level.

These results provide additional support for hypothesis 8 where the managers´ dominant logic has a significant and large effect on the firm´s dominant logic. In addition, hypothesis 5 is supported, as the firm´s dominant logic size effect on organizational performance is significant but small. These results provide empirical support to the significant relationship between the managers´ dominant logic and organizational performance. More importantly, the highly significant and large effect between the managers´ dominant logic on the firm´s dominant logic provides support to the analysis of strategic cognition in assessing the relevance of the managers´ cognitive processes into the action dimension or the strategy implementation in the organization. Top

management is determinant in signaling the strategic resources and capabilities in the organization.

3.6.4 Mediation analysis

One important consideration in this study is to assess the mediation effects of the firm´s dominant logic on the relationship between managers´ dominant logic and organizational performance. For this, two different methods were used, one from Baron and Kenny´s (1986) four steps for evaluating mediation, and the other from Preacher and Hayes´s (2008) indirect effects and assessing bootstrapping significance.

In the first method, the first step refers to assess the direct effect, which should be significant if the mediator is not included in the model (step a in Table 61). Such significance was assessed while individually evaluating the managers´ dominant logic model in section 3.4.4. The second and third steps refer to include the mediator variable in the model and assess the significance of the indirect effects. In other words, the path coefficients from managers´ dominant logic to firm´s dominant logic, and from firm´s dominant logic to organizational performance must be significant. This significance requirement was also met while evaluating the dominant logic integrative model in section 3.6.3. And the fourth step refers to including a direct link between the initial and the outcome variable, where this path should be non-significant. According to Baron and Kenny, if all conditions are met then there is a full mediation effect, but if the first three steps are met but not the fourth, then a partial mediation is indicated.

Table 61. Analysis for testing mediation proposed by Baron and Kenney (1986).

Paths	Coefficient
Step (a)	
(a.1) Managers´ dominant logic ➔ Organizational performance	0.503***
(a.2) R^2 Managers´ dominant logic ➔ Organizational performance	0.253***
Step (b)	
(b.1) Managers´ dominant logic ➔ Firm´s dominant logic	0.677***
(b.2) R^2 Managers´ dominant logic ➔ Firm´s dominant logic	0.464***
Step (c)	
(c.1) Managers´ dominant logic ➔ Firm´s dominant logic	0.671***
(c.2) R^2 Managers´ dominant logic ➔ Firm´s dominant logic	0.459***
(c.3) Firm´s dominant logic ➔ Organizational performance	0.554***

Paths	Coefficient
(c.4) R^2 Firm´s dominant logic ➔ Organizational performance	0.307***
Step (d)	
(d.1) Managers´ dominant logic ➔ Organizational performance	0.232***
(d.2) Managers´ dominant logic ➔ Firm´s dominant logic	0.671***
(d.3) R^2 Managers´ dominant logic ➔ Firm´s dominant logic	0.459***
(d.4) Firm´s dominant logic ➔ Organizational performance	0.395***
(d.5) R^2 Firm´s dominant logic ➔ Organizational performance	0.334***
f^2 = (R^2 partial mediation – R^2 full mediation)/(1 – R^2 partial mediation)	0.027/0.666 = 0.040
F (3, 295)	10.570
p value for the pseudo F statistic (3, 295)	0.000

[t] p<0.10; * p<0.05; ** p<0.01; *** p<0.001 (one tailed tests).

According to the results in Table 61, the first three steps are fulfilled, since all paths are significant. However, in the forth step a significant path is also present indicating a partial mediation effect. In addition, the full mediation model was compared to the partial mediation model (Benitez-Amado & Walczuch, 2012; Rai, Patnayakuni, & Seth, 2006). The results of the path analysis for the full mediation model is shown in Figure 25, and the results for the mediated model is shown in Figure 26. The R^2 for organizational performance in the partially mediated model was 0.334, while 0.307 in the fully mediated model. The f^2 statistic is based on the difference in R^2 between the two models, and then used to obtain the pseudo F statistic (Rai et al., 2006). The results show the f^2 was 0.040 and the pseudo F (3, 295) statistic was 10.570, which was significant with a p-value of 0.000. These results show that the additional variance explained from the path managers´ dominant logic to performance does significantly add to the variance explained in the dependent variable. These results provides support to hypothesis 9, where the firm´s dominant logic partially mediates the link between the managers´ dominant logic and organizational performance. Both the managers´ and the firm´s dominant logic affect organizational performance.

The second method to measure and corroborate the partial mediation effect is the one defined by Preacher and Hayes (2008) and calculating the indirect effect of the mediator, and its level of significance. From Table 60, the effect of managers´ dominant logic on firm´s dominant logic is known (d.2), as well as the firm´s dominant logic on

organizational performance (d.4); therefore, the indirect effect is the product of these two path coefficients 0.671 * 0.395 = 0.265.

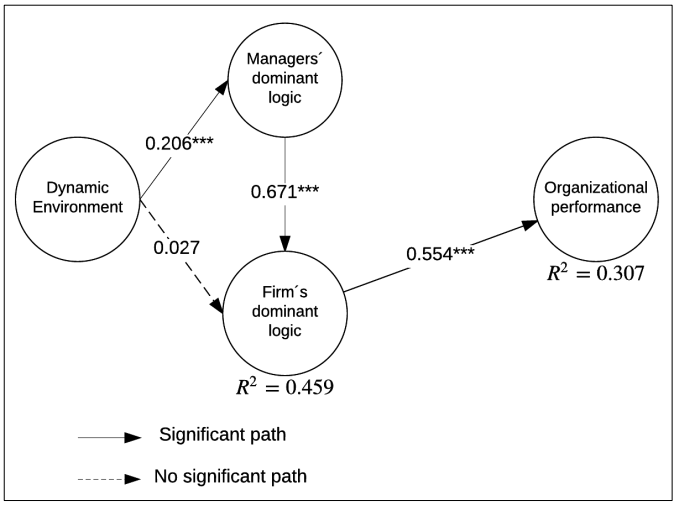


Figure 25. Results of the path analysis for the full mediation research model.

In order to assess the strength of the mediation effect of firm´s dominant logic on the relationship of managers´ dominant logic and organizational performance, the *Variance Accounted For (VAF)* was assessed. The VAF determines the extent to which the variance of the dependent variable is directly explained by the independent variable and how much of the target construct´s variance is explained by the indirect relationship via the mediator variable (Hair et al., 2014).

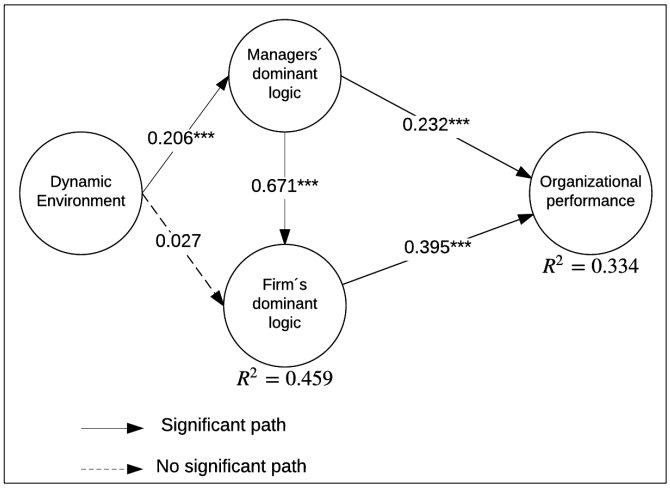


Figure 26. Results of the path analysis for the partial mediation research model.

Table 61 shows the direct effect of manager´s dominant logic on organizational performance is 0.232 (d.1). While, the indirect effect via firm´s dominant logic is 0.265. Thus, the total effect had a value of 0.232 + 0.265 = 0.497. The VAF equaled the indirect effect divided by the total effect 0.265 / 0.497 = 0.533. As a result, it can be concluded that 53.3 percent of the managers´ dominant logic on performance is explained via the mediator firm´s dominant logic. Since the VAF is larger than 20 percent but smaller than 80 percent, this situation is characterized as a partial mediation, which confirms the results of the first method using Baron and Kenney´s approach. Hence, providing support to hypothesis 9. Table 62 shows the results of the hypotheses in this research study.

Table 62. Results of the hypotheses.

Hypothesis	Relationship	Results
H1	The top managers´ professional experience has a significant effect on the managers´ dominant logic.	Partially supported
H2	The cognitive elements of information processing and sense-making, scanning, interpreting, and learning have a significant effect for the formulation on the top managers´ dominant logic.	Supported
H3	The top managers´ dominant logic has a significant effect on organizational performance.	Supported
H4	The action explicit elements of organizational routines, decentralized structure, and group orientation, as well as the action implicit elements of external cultural orientation, and short-term versus long-term cultural orientation have a significant effect on the formulation of the firm´s dominant logic.	Supported
H5	The firm´s dominant logic has a significant effect on organizational performance.	Supported
H6	The dynamic environment has a significant effect on the top managers´ dominant logic.	Supported
H7	The dynamic environment has a significant effect on the firm´s dominant logic.	Partially supported
H8	The top managers´ dominant logic has a significant effect on the firm´s dominant logic.	Supported
H9	The firm´s dominant logic mediates the link between managers´ dominant logic and organizational performance.	Supported

Source: Prepared by the authors.

CONCLUSIONS

CONCLUSIONS

This final chapter highlights the main conclusions arising from this Doctoral Dissertation. First, the results of all three objectives are indicated. Secondly, an analysis of the results and support of the hypotheses in this study are presented along with a discussion concerning the positive relationship with organizational performance. The chapter also writes about the scope of this dissertation for entrepreneurship and strategic management, as well as possible implications for managers are discussed. Finally, limitations and future research resulting from this work are presented.

Results of Objectives

This dissertation shows a wide area of opportunity for developing the concept of dominant logic in the field of strategic management, with important implications for senior management and the strategy of organizations. In this sense, this research has developed three main objectives:

Objective 1: Provide an extended conceptualization about the concept of dominant logic by proposing an integrated framework to analyze this concept, derived from the review and analysis of the literature.

This dissertation contributes to the strategic management field by reviewing the literature on dominant logic, and the plasticity of the concept by studying changes in the definitions and assumptions. The cognitive and action elements contained in the definitions have been identified and classified in order to provide a clarification of the concept in explaining its multidimensionality. Cognitive structures and cognitive processes integrate the cognitive dimension of dominant logic, which are further linked to the strategy formulation; whereas organizational structure, organizational processes, and culture combine the action dimension embracing both implicit and explicit features linked to the strategy implementation. Although these processes of strategy are closely interrelated, for the purpose of this study have been analyzed them separately in order to provide further insights into the analysis and implications of the cognitive and action dimensions of dominant logic.

This study represents a first attempt in the literature to provide an integrative framework on the concept of dominant logic. This framework might be used as a reference theme in the analysis of the two broad dimensions of dominant logic and to further advance its operationalization. This dissertation stresses the strategic importance of top managers´ cognitive structures and processes and their linkage with further management processes (Lumpkin et al., 2011), which over time depict the dominant logic of the organization.

In light of the theoretical arguments presented throughout this dissertation, dominant logic can be viewed as both a fundamental aspect of managerial intelligence and organizational processes. Hence, connecting key elements within both strategy formulation and implementation. On the one hand, cognitive process elements encompass organizational adaptation to the environment; the key elements identified and supported by a data-driven approach to information processing theory are broadly viewed as scanning, interpretation, and learning. These cognitive processes are carried out by top managers in the organization and are dependent upon their cognitive structures, past professional experiences and mental representations of their worlds, which are further supported by a theory-driven approach to information processing theory or schema theory. Furthermore, these structures support the cognitive processes and guide subsequent action. Such cognitive elements are clearly representations of strategy formulation.

In regards to the action dimension, conceptual studies emphasize that over time, dominant logic develops into both explicit and implicit organizational elements supported by theory on strategy, and broadly classified as organizational processes and relationships, organizational structure and behaviors, which at the same time represent and might be addressed by analyzing the culture of the organization. These action features are representations of strategy implementation.

As mentioned before, one of the central contributions of dominant logic is that it shapes the strategy of an organization. Therefore, the strategic cognition approach, which is at the hearth of strategic management, is justifiable to study dominant logic.

Furthermore, this dissertation has deepened into the analysis of the relationship of managerial cognition in shaping subsequent strategic actions and behaviors. What drives strategic action represents not only an interesting but a wanted area of study in the strategic management (Nadkarni & Barr, 2008).

Due to the discussion above and in close relationship to the development of integrative framework, the second objective has been:

Objective 2: Propose an operationalization for assessing the dominant logic in organizations as two aggregate second-order constructs.

The limited empirical studies on dominant logic are the result of an underdeveloped theoretical framework and operationalization. The literature review shows clear evidence of different attempts towards this operationalization, many times combining cognitive and action elements, but lacking order and often justification. Thus, the integrative framework presented in this study as well as the elements identified within each of the dimensions paves the path for a clearer conceptualization and further operationalization of dominant logic.

Authors have stressed that the operationalization of dominant logic should integrate cognitive and action elements that are both the product and component of the formation of knowledge and action (K. Obloj et al., 2013; T. Obloj et al., 2010). Others argue that the relevance to dominant logic depends upon the levels of dynamism in the external environment (Garg et al., 2003; von Krogh et al., 2000). As a result, the integrative framework fulfills the previous calls and suggestions, and may provide further research with ideas or alternatives to interpret and operationalize dominant logic, as well as to develop relevant research addressing the multidimensionality of this concept.

Based on the theoretical and empirical support, an operationalization of both the managers´ dominant logic and the firm´s dominant logic is proposed as second-order constructs type II reflective-formative, which represents a first attempt in the literature to explain an assessment of dominant logic using higher-order or hierarchical component models with PLS-SEM methodology.

Authors have suggested that in the assessment of dominant logics, non-traditional methodologies are highly recommended (Bettis & Prahalad, 1995; von Krogh et al., 2000). So, in order to evaluate the measurement and structural models proposed in this study, partial least squares structural equation modeling has been used. PLS-SEM is appropriate for this study because its used has been recommended when theoretical knowledge about a topic is scarce (Barroso et al., 2010; Petter et al., 2007). In addition, the study proposes unique multidimensional constructs, not examined before in the literature, and the assessment of these models is limited by using traditional statistical models, hence PLS-SEM estimation is justifiable and relevant. Finally, the constructs are identified as reflective at first-order level and formative at second-order level, and PLS-SEM is more appropriate for estimating this type of model than for covariance-based SEM techniques, since the use of the latter has been shown to lead to identification problems (Chin, 1998).

Second order constructs allow refinement of theoretical postulations in order to advance the development of theoretical models. Therefore, the results shown in this study provide support to the formulation of the constructs proposed in this dissertation and represent a first attempt in the literature to provide a parsimonious model easy to grasp, in order to assess both the managers´ dominant logic and the firm´s dominant logic. In order to represent the managers´ dominant logic, a classification of the key cognitive elements based on the definitions and assumptions used in the literature were identified, and mainly refer to elements of scanning, interpretation, and learning. According to the findings, these key cognitive elements of information processing and sense making proved to be significant to the formulation and study of this unique formative second-order construct.

On the other hand, the firm´s dominant logic was operationalized as a second order construct considering explicit elements of the organizational routines, decentralized structure, and group orientation, and implicit elements of cultural orientation in terms of external orientation, and short-term (financial) orientation; elements that proved foundational to the formulation of this construct. Furthermore, this operationalization

represents a first attempt in the literature to assess both the cognitive and actions dimensions of dominant logic, which are in fact two different dominant logics within the organizations with different implications for strategy formulation and implementation.

This dissertation provides conceptual and empirical support for the formulation of both multidimensional formative constructs, and might have important implications for further studies assessing the dominant logic within organizations.

Finally, the third objective in this dissertation has been:

Objective 3: To present an empirical study of the proposed models of dominant logic and how they relate to organizational performance.

The empirical study in this dissertation provides validity of these formative second-order constructs in depicting the managers´ and the firm´s dominant logic. More importantly, this study advances the theoretical alignment of dominant logics inside an organization to correspond to the strategic processes of formulation and implementation. The empirical study explores which aspects of the dominant logic constructs have a significant relationship with the organizational performance. The results could shed further insight regarding the operationalization of dominant logic by linking the cognitive and action critical features of the managers´ and firms´ dominant logics by signaling those elements affecting their performance.

The validation and application of these higher-order constructs was conducted by using a sample of 295 firms in Mexico, providing significant support to the several hypotheses proposed, including the relevance to organizational performance. In addition, the results provide a discussion of implications in this study.

As discussed in Chapter 3, the sample of firms and corporations used in this study is not representative of the general enterprises in Mexico. The characteristics of the sample showed mostly large and mature leader firms in the industrial and manufacturing sectors with national and international orientation. Therefore, it is important to consider the specific characteristics of the sample when analyzing the results of this study.

Accordingly, this study analyzes the corresponding dominant logics of leader companies in Mexico with a strong external orientation.

Hypothesis 1 shows partial support due to the coefficient of the relationship between the professional experience and the managers´ dominant logic is less than 0.2 although highly significant ($p<0.001$). This results shows that theoretically there is partial support for this hypothesis that the professional experience is significant in the cognitive structures and processes of the top managers. Further research needs to consider different scales to assess the professional experience. Some important implications regarding this result are discussed at the end of this Chapter.

Hypothesis 2 was supported, which considered the elements of scanning, interpretation, and learning to be foundational to the formulation of a top managers´ dominant logic. Top managers´ scanning signifies the constant search for information in the external environment from different sources. In line with Garg et al. (2003), the results imply that a simultaneous scanning emphases on those internal capabilities and on those external environment sectors appropriate to the level of dynamism in the external environment produced higher performance. The interpretation is closely related to scanning implying to be alert to opportunities and threats in the environment. Top managers, as any other individual, encode the information from the environment and based on their cognitive structures -resulting form their past experiences- filtering the data and recognizing opportunities. This is in line with T. Obloj et al. (2010) where they found a strong positive relationship between the opportunity-seeking orientation and performance indicated by a positive coefficient, significant at 0.05 level.

Furthermore, the learning element in this construct provides support to the information top managers receive from this knowledge application and signifies their abilities to learn from successful or erroneous experiences in the organizations, as a result of their decision making and cognitive interpretation of events. Thus, learning provides feedback to the cognitive processes and structures, strengthening the managers´ dominant logic. As a result, hypothesis 6 was supported, so that the dynamic environment is relevant to the managers´ dominant logic. However, hypothesis 7 is

partially accepted due to the relationship between the dynamic environment and the firm´s dominant logic is highly significant ($p<0.001$), but its path coefficient is below 0.2 to be statistically significant. Therefore, for future studies it would be interesting to include diverse measurements of the dynamic levels of the environment and its corresponding effect on different samples of firms.

The managers´ ability to learn from their successes and failures and to translate that information into better decision making will in turn generate organizational routines, thus implying an exploitation of its business model, and over time the consequent formulation of the firm´s dominant logic. It is recognized that the learning element is a natural driver of organizational routines (T. Obloj et al., 2010). This learning capability to learn and translate the knowledge to action is determinant for the organizational performance, and this has been empirically supported in emerging economies (e.g. Lyles & Salk, 2007; Uhlenbruck, Meyer, & Hitt, 2003). The results show that learning is a fundamental element in the managers´ dominant logic, as well as the elements other two cognitive processes discussed above, providing support to the hypothesis 3 in this study. This in turn has implications for the firm´s dominant logic as discussed below.

The results of this dissertation positively relate organizational routines with the dominant logic of the organization, and also with the performance of the organization. In line with other studies, it was concluded that organizational performance is linked to higher levels of organizational routines (Peng et al., 2008), thus stimulating a more formal structure and standardization of operations (Obloj T. et al., 2010). In addition, there are studies that confirm that learning and adaptation involve the development of routines and standard operating procedures (Ven & Poole, 1995). This information makes sense to note that organizational routines in organizations represent the capabilities to exploit its resources - as discussed in Chapter 2 - and that they affect organizational performance.

The conceptual evidence from Chapters 1 and the discussion in Chapter 2 suggests that routines represent the most evident example of organizational processes within organizations (e.g. Grant, 1988; T. Obloj et al., 2010). The development of capabilities and resources to respond to an environment through strategic and structural

adaptation signifies organizational routines. More importantly empirical evidence suggests that higher levels of routines signify a competitive advantage through an exploitative behavior and efficient use of resources.

Therefore, the action dimension of dominant logic is depicted by organizational routines. Moreover, over time, the organizational processes and structures are well embedded into the culture and values, which are usually difficult to change. One of the recommendations in the assessment of strategy implementation, and thus, another way to capture the firm´s dominant logic is by assessing its cultural orientation. The different cultural elements signify the values and beliefs of the organizations that are important and transcend over time.

The literature review allows us to built upon their dominant logic construct and incorporate the analysis of key organizational structure and cultural elements. Over time, the dominant logic of the organization is condensed in organizational processes, structures and culture (Tripsas & Gavetti, 2000; von Krogh & Roos, 1996); which, in general, are difficult to change (Bettis et al., 2011).

Within the study of the dominant logic, researchers have used different approaches to examine the organizational structure. For example, Lane and Lubatkin (1998) measured levels of formalization of management practices and the extent to which these decisions were centralized. Also, Cote et al. (1999) identified two fundamental elements in the organizational structures and their relationship to organizational performance, to differentiate those that gave more importance to individual autonomy against those with more centralized and monopolistic practices. It also highlighted those organizations with an emphasis on group collaboration, which facilitated fluid and flexible structures.

The decentralized approach deals with the structure and relationships within the organization, the characteristics of flexibility and communication channels are important to assess this dimension. The orientation towards teamwork measured compensation practices and collaborative effort to achieve the goals and work towards results. There is empirical evidence linking decentralization in the formation of teams, which are usually

the main sources of innovation, entrepreneurial actions, and therefore lead to higher levels of organizational performance (Kuratko et al., 2001).

Once the processes and organizational structures have been established in the organization and are explicitly represented, implicit elements of culture also become part of the dominant logic of the organization. On the one hand, the cultural orientation of entrepreneurial companies with higher organizational performance have an external orientation towards market, competitors, customers, suppliers and events in the environment that provide opportunities (Delmar & Shane, 2003; T. Obloj et al., 2010). Thus, an external cultural orientation is related to market intelligence and the need to coordinate functional actions to achieve competitive advantage (Day, 1994).

On the other hand, a short-term or financial orientation concerns the cultural orientation of the company based on an approach to economic performance, due to the dynamic conditions in the environment, and the imperative to remain competitive; thus, the evaluation of results in terms of profitability and value creation seems essential. This cultural orientation is a representative characteristic of the companies focused on the exploitation of their resources where decisions and behaviors are standardized and formalized (Ireland & Webb, 2007). It also represents a characteristic of organizations that emphasize their organizational performance measurement using financial reports and formal budgets.

Therefore, the results of this dissertation provide support to the hypothesis 4 to recognize the explicit elements of organizational routines, decentralized structure and group orientation, and implicit elements of external cultural orientation and short-term orientation, which are central to the formulation of the dominant logic of the organization. Moreover, the constructs in this study were found to be significant for evaluating the high performance organizations in the sample; therefore, the hypothesis 5 was also supported.

Subsequently, and after confirming the two models of dominant logics in organizations, an integrated model including the relevance of the relationship between the managers´ dominant logic and the firm´s dominant logic, determining the further

relationship with organizational performance. Hypothesis 8 was supported providing that the managers´ dominant logic relationship largely impacts the firm´s dominant logic. These results provide important implications for managers in regards to the assessment of their cognitive processes as determinant to strategy implementation. Finally, the hypothesis 9 is accepted in this study, which confirms the influence of the two dominant logics in organizational performance resulting from a partial mediation.

In conclusion, the results in this study provide justification to the theoretical approach of the integrative framework. The results also provide different implications, on the one hand for the study of entrepreneurship and strategic management, and the other for senior management regarding the evaluation of their cognitive processes as a determining factor in implementing strategies.

Implications for strategic management and entrepreneurship

This dissertation model provides important implications for strategic management and entrepreneurship depicting the ambidexterity in organizations. The explorative nature is determined by the managers´ dominant logic; meanwhile the exploitative behavior can be assessed by the firm´s dominant logic. Consequently, the decisions that are made within this dominant logic affect the processes of exploration and exploitation and enterprise-level actions. Therefore, general managers must be able to review the dominant logic in their administration.

Evidence in this study suggests that managers´ dominant logic contributes to the organizational performance through embracing key cognitive processes of information processing and sense making in the environment, affecting the firm´s dominant logic, the firm´s capabilities and resources. The way top managers in the organization manage critical information and deploys important firm-specific resources will have a significant impact on future resource acquisition and subsequent organizational performance (DeNoble, Ehrlich, & Singh, 2007). This study has further assessed that the top managers´ dominant logic leads to the configuration of strategic and organizational resources, both implicit and explicit that could generates a competitive advantage affecting the firm´s performance.

Since strategic goals and directions set by the top management provide the input to all other management processes in an organization, it is vital that managers perceive the business environment and the forces driving the organization (Brannback & Wiklund, 2001). As a result, the cognitive structures of top managers provide support to the cognitive processes guiding the scanning, interpretation, and learning from the environment. For this reason, the strategy of an organization is believed to be a reflection of the top managers understanding their environment and the future of the organization, which is aligned to the data-driven approach to information processing theory. Hence, the assessment of managers´ dominant logic provides a valid effort to understand how this managers´ logic affects the strategy in the organization. The inability of managers to identify changes in the structural characteristics of business and to accept the need for a shift in this logic, provide at least a partial explanation of the difficulties facing traditional businesses in a competitive environment, with structural changes in their industries and technologies, and higher regulations that frame the competitive and globalized landscape nowadays (Levie & Lichtenstein, 2010; Prahalad & Bettis, 1986).

The results show that the managers´ dominant logic affects significantly the firm´s dominant logic. These results show the importance of top management in the further development of strategy in the organization. Consequently, the firm´s dominant logic has a significant effect on organizational performance. The firm´s dominant logic partially mediates the relationship between the managers´ dominant logic and organizational performance. These results show the importance in assessing both dominant logics in the organization in maintaining the strength and viability of established firms at several points in time.

This research could shed further insights regarding the dominant logics inside organizations, serving as an assessment tool for established firms signaling those dimensions that prevail over time fostering important economic outcomes. More importantly, an entrepreneurial top management dominant logic and an entrepreneurial firm´s dominant logic could be an important strategic resource to generate distinct competitive advantages.

Implications for managers

The implications for top managers are of great importance, considering their background and professional experiences in approaching the task of strategy formulation. Thus, the managerial team composition, and the social and human capital they bring all together to the organization is a relevant aspect to consider for the mangers´ dominant logic. Top managers need to encourage emergent strategies, search for new opportunities, and envision multiple scenarios. Top managers´ dominant logic is determinant for the firm´s logic in guiding the strategy and further organizational performance. A dormant dominant logic will stagnate the organization into bureaucratic processes, by being indifferent to the opportunities or threats in the environment. Thus, not assimilating determinant changes needed to formulate and implement the strategy. For this reason, the managers´ dominant logic must be constantly challenged even though no important changes are occurring in the environment. Top managers must be proactive and alert retrieving feedback from these management processes in order to constantly assess internal information toward perfecting the strategy process. For this reason, the cognitive elements of scanning, interpretation and learning are determinant in supporting the managers´ dominant logic.

Other implications for managers relate to their entrepreneurial and successful experiences, which may represent a competitive advantage for firms, since an entrepreneurial managers´ dominant logic will place greater emphasis in environmental scanning in order to interpret entrepreneurial opportunities and threats. This provides the foundation for the firm´s aiming at pursuing opportunities and advantage-seeking behaviors. The strategic management of resources involves a comprehensive set of actions needed to recognize opportunities and to develop competitive advantages to successfully exploit them. Moreover, an entrepreneurial dominant logic can be considered an intangible resource that serves as a way for companies to better recognize and manage resources. Hence, an entrepreneurial dominant logic works in close proximity to the exhibition of entrepreneurial behavior, hence an entrepreneurial firm´s dominant logic.

Limitations

This research study presents some limitations. The first limitation is that information for the latent variables are based on subjective perceptions of single respondents to assess both the managers´ and the firm´s dominant logics, which may incorporate some bias into the results. Although, subjective measures have proven to be a valid assessment when objective data is not available, the attainment of complementary objective data is encouraged to be comparable with subjective measures and further validate the findings. Further studies need to consider additional primary and secondary sources. For example, additional points of view might be gathered through questionnaires or interviews to the top management coalition, which should be considered a plus while assessing the managers´ dominant logic. Other empirical studies have assessed information from annual reports and third party sources to approximate both cognitive and action features. These techniques could be a valuable alternative as long as a case study is being considered, or the application of mixed qualitative and quantitative methodologies, such as cognitive-cause mapping techniques.

A second limitation refers to the use of cross-sectional data from a number of dimensions that have a dynamic nature. This limitation highlights the importance of gathering longitudinal data to gain a better understanding of the cognitive processes and the intrinsic and extrinsic organizational processes in the application of strategy. For example, since the firm´s dominant logic is hard to be changed, the assessment of both top management and firm´s dominant logics when a new team or CEO at the top management is established, and years after such implementation should be documented.

Directions for further research

In this research study we have established the validity of using two formative constructs to assess the dominant logic inside organizations and their linkage to organizational performance. Organizations as complex adaptive systems present a wide array of variables affecting their operations, it should be interesting to assess not only those associated with economic outcomes, but explore those generating a competitive advantage, and evaluate their corresponding relationships with managers´ dominant logic

and the firm´s dominant logic. Authors suggest that the concept of dominant logic can also be extended to study other types of critical strategic moves, for example firm embarking on global strategies or the frequency and pattern of new product introductions (Lampel & Shamsie, 2000).

As mentioned before, this study has a particular sample from firms in an emerging economy such as Mexico. Although the sample proved to be representative in terms of size, other samples and types of firms must be assessed. In this line, multi-group analyses are called for. In this study key control variables have been considered such as the managers´ professional experience and the dynamic environment, many other control variables should be assessed related to the top management and firms´ characteristics. For example, the ownership structure of the firms, including the familial character demand further exploration. In addition, the following lines of research can be considered in future studies:

1. Continue to redefine the multidimensional constructs proposed in this study and documenting different types of both top managers and firms, in both developed and developing economies.

2. Exploring different dominant logics inside the organization, e.g. business units, main departments, board of directors, and assess their relationships with organizational outcomes and those elements that may represent a competitive advantage in the company.

3. Study different strategic typologies of firms (e.g. those proposed by Miles and Snow (1978)) and the different implications for dominant logics in assessing organizational outcomes.

4. Deepening the study of managers´ dominant logic by evaluating diverse characteristics in terms of human and social capital, diversity in the top team´s composition, familial relationship with the firm or participation in ownership.

5. Addressing in a more detail the professional and not professional experiences to determine their impact on the cognitive processes, which will finally determine the

dominant logic of the managers; for example, successful or disappointing entrepreneurial experiences.

6. Addressing in greater detail the different environmental approaches since, as expected, there is not a unique dominant logic, but a contingent that depend on the conditions of the environment. This calls for an identification of the different types of dominant logic and a study of the conditions that make some logics more effective than others.

In short, the work provides the basis on which to develop future research in the field of the dominant logic and strategic management.

CONCLUSIONES

CONCLUSIONES

Este último capítulo pone de relieve las principales conclusiones que se derivan de esta Tesis Doctoral. En primer lugar, se indican los resultados obtenidos en los tres objetivos planteados. En segundo lugar, se hace un análisis de acerca de las hipótesis desarrolladas junto con una discusión referente a su comprobación y relación positiva con el rendimiento de la organización. En el capítulo también se escribe acerca de los alcances que esta Tesis Doctoral tiene para el emprendimiento y la dirección estratégica, y se comentan las posibles implicaciones para los administradores. Por último, se exponen las limitaciones y futuras líneas de investigación derivadas de este trabajo.

Resultados de los Objetivos

Esta tesis doctoral exhibe una amplia área de oportunidad para desarrollar el concepto de la lógica dominante en el campo de la dirección estratégica, con importantes implicaciones para la alta dirección y la estrategia de las organizaciones. En este sentido, esta investigación ha desarrollado tres objetivos principales:

Objetivo 1: Presentar una conceptualización ampliada acerca de la lógica dominante al proponer un marco teórico de referencia en el análisis de este concepto, derivado de la revisión y análisis de la literatura.

Derivado de la revisión de la literatura en este campo, se han identificado los principales trabajos sobre la lógica dominante; y como resultado, se ha concebido un análisis que incorpora cambios en las definiciones y suposiciones. Este estudio representa además un esfuerzo, desde el iniciado por von Krogh y Ross en 1996, por facilitar una revisión acerca de la plasticidad del concepto de la lógica dominante. Con un soporte teórico y empírico sólido se han identificado y clasificado los diversos elementos de naturaleza cognitiva y de acción contenidos en dichas definiciones. Así, esta investigación representa un primer intento en la literatura para proporcionar un marco integrador sobre el concepto de la lógica dominante (ya que anteriormente no existía uno que integrase los diferentes elementos que componen las dos dimensiones principales), el cual podría ser utilizado como una referencia en el análisis de su multi-dimensionalidad y avanzar aún más en la operativización del mismo.

A la luz de los argumentos teóricos presentados a lo largo de esta tesis, la lógica dominante puede ser vista tanto como un aspecto fundamental en la inteligencia de la alta dirección, así como de los procesos y estructuras organizacionales. Esto es, la lógica dominante se refiere a dos grandes dimensiones: una cognitiva y otra de acción. Por lo tanto, existiendo una conexión clave entre la formulación y la implementación de la estrategia.

Las estructuras cognitivas y procesos cognitivos integran la dimensión cognitiva de la lógica dominante, que está vinculada a su vez con la formulación de la estrategia; mientras que los procesos y la estructura organizativa, y la orientación cultural se refieren a la dimensión de acción que contiene características tanto explícitas como implícitas vinculadas a la implementación de la estrategia. Aunque estos procesos de estrategia están estrechamente relacionados entre sí, con el propósito de esta tesis doctoral, han sido analizados por separado con el fin de ofrecer nuevas perspectivas sobre el análisis y las implicaciones de las dimensiones cognitivas y de acción de la lógica dominante.

La parte cognitiva se refiere a los procesos cerebrales realizados por los altos directivos en la organización, los cuales dependen a su vez de las propias estructuras cognitivas y representaciones mentales derivadas de sus experiencias profesionales. La exploración de la parte cognitiva está basada en la Teoría de los Esquemas y en la Teoría de Procesamiento de la Información, además de en una amplia revisión sobre lógica dominante. Como estas estructuras cognitivas dan soporte a los procesos mentales que determinan la acción, tales elementos cognitivos son claramente representaciones de la formulación estratégica. El resultado de los elementos del proceso cognitivo comprenden la adaptación de la organización al entorno y los elementos clave identificados como son la exploración de información (escaneo), interpretación y el aprendizaje.

En lo que respecta a la dimensión de la acción, hay estudios conceptuales que enfatizan que durante el transcurso del tiempo la lógica dominante se manifiesta en elementos organizativos tanto explícitos como implícitos. Por un lado, los elementos explícitos están apoyados en la Teoría de la Estrategia Organizacional y se clasifican

ampliamente como procesos organizativos y relaciones, y estructura organizativa y comportamiento. Por otro lado, los elementos implícitos podrían ser abordados mediante el análisis de la cultura de la organización. Estas características de acción son representaciones de la implementación de la estrategia.

Como se ha señalado anteriormente, una de las aportaciones fundamentales de la lógica dominante es que ésta determina la estrategia de la organización. Por lo tanto, el enfoque de estudio de la cognición estratégica es una parte fundamental en el campo de la dirección estratégica, y es claramente justificable para el estudio de la lógica dominante. Lo que determina a la acción estratégica no sólo representa una área interesante de estudio, además se ha convertido en una área altamente solicitada en el campo de la dirección estratégica (Nadkarni & Barr, 2008). De esta manera, esta tesis ha profundizado en el análisis de la relación de la cognición de la alta dirección en la conformación de las acciones y comportamientos estratégicos subsecuentes en la organización.

Derivado de lo anterior y con estrecha relación al desarrollo del marco integrador, el siguiente objetivo es:

Objetivo 2: Proponer y contrastar una operativización para medir la lógica dominante en las organizaciones en forma de constructos multi-dimensionales de segundo orden.

Los limitados estudios empíricos sobre la lógica dominante podrían ser resultado de un marco teórico subdesarrollado y una falta de consenso en los elementos que se deben incluir en su operativización. A pesar de que la revisión de la literatura en lógica dominante tiene evidencia de diferentes intentos por operativizar, en muchas ocasiones se han combinando elementos cognitivos y de acción, y a menudo se ha carecido de orden y de justificación. Es por ello que el marco integrador presentado en este estudio allana el camino hacia una conceptualización más clara y permite plantear un consenso sobre los elementos a incluir en su operacionalización.

Varios autores han destacado que la operativización de la lógica dominante debe integrar elementos cognitivos y de acción que son tanto el producto como elementos en la formación del conocimiento y de acción (K. Obloj et al, 2013; T. Obloj et al., 2010; Ginsberg, 1990). Otros argumentan que la relevancia a la lógica dominante depende de los niveles de dinamismo en el entorno externo (Garg et al, 2003; Von Krogh et al, 2000). Como resultado el marco integrador propuesto en esta tesis cumple con dichas proposiciones; además, plantea fomentar mayor investigación con alternativas tanto para conceptualizar como para operativizar la lógica dominante, y para el desarrollo de exploraciones enfocadas en la multi-dimensionalidad de este concepto.

Con el fin de evaluar la medición de los modelos estructurales propuestos en este estudio, se han utilizado ecuaciones estructurales de mínimos cuadrados parciales (PLS-SEM). La metodología PLS-SEM es apropiada para este estudio porque su uso se ha recomendado cuando el conocimiento sobre un tema es escaso (Barroso et al, 2010; Petter et al, 2007). Asimismo, existen autores que sugieren utilizar metodologías no tradicionales en la evaluación de la lógica dominante (Bettis & Prahalad, 1995; von Krogh et al., 2000). Por ello, este estudio propone constructos de segundo orden o de orden jerárquico no propuestos previamente en la literatura de lógica dominante. Asimismo, la evaluación de estos modelos se limita mediante el uso de modelos estadísticos tradicionales, por lo tanto, el uso de PLS-SEM para su estimación es apropiado. Finalmente, los constructos se identifican como de tipo II de acuerdo a Jarvis et al. (2003), reflectivos de primer orden y formativos de segundo orden. PLS-SEM es más apropiado para la estimación de este tipo de modelos que para otras técnicas de SEM basadas en la covarianza, ya que el uso de estos últimos ha demostrado que conducen a problemas de identificación de dimensiones (Chin, 1998).

Los constructos de segundo orden permiten un refinamiento de postulados teóricos que admiten el avance en el desarrollo de modelos teóricos. En otras palabras, los constructos de este tipo son incluso recomendados a la hora de pretender desarrollar teoría (Chin, 1998; Petter et al., 2007). Esta tesis doctoral tiene un sólido soporte teórico que le permite presentar una operativización tanto de la lógica dominante de la alta

dirección como de la organización, al proponer su medición mediante constructos de segundo orden; constituyendo un primer intento en la literatura por explicar y abordar la lógica dominante utilizando este tipo de modelos con metodología PLS-SEM.

Para representar la lógica dominante de la alta dirección, se ha propuesto una operativización de los elementos cognitivos fundamentales previamente identificados en el marco integrador, basados en las definiciones y supuestos de la lógica dominante en la literatura. Estos elementos se refieren a la exploración de información (escaneo), interpretación y el aprendizaje. De acuerdo a los resultados, estos elementos cognitivos clave - relacionados al procesamiento de información - han demostrado ser significativos en la formulación de este constructo.

Por otro lado, la lógica dominante de la organización ha sido operativizada también como un constructo de segundo orden, considerando elementos de procesos como son las rutinas organizativas, elementos de estructura como son la estructura descentralizada, y la orientación de trabajo en grupo, y finalmente elementos de cultura como son la orientación externa, y la orientación al corto plazo (financiera) frente a largo plazo. Dichos elementos que han resultado ser fundamentales para la formulación de este constructo.

Esta operativización representa un intento inicial dentro de la literatura de lógica dominante por medir el efecto de las dos dimensiones (cognitiva y de acción) de la lógica dominante dentro de las organizaciones y con diferentes implicaciones para la formulación e implementación de la estrategia; además de proporcionar modelos parsimoniosos, con cierta facilidad para entender, y replantear su estudio subsecuente.

Finalmente, el tercer objetivo de esta tesis ha sido:

Objetivo 3: Propuesta y contrastación de un modelo sobre la relación existente entre la lógica dominante y el rendimiento organizacional.

Este estudio empírico además de aportar validez a los constructos mencionados anteriormente, avanza hacia una alineación teórica de la multi-dimensionalidad de la lógica dominante dentro de una organización que corresponden con los procesos

estratégicos de formulación e implementación. Estos resultados podrían brindar una mayor comprensión de la operativización de la lógica dominante mediante la vinculación de las características fundamentales cognitivas y de acción conjuntadas en las lógicas dominantes de la alta dirección y de la organización, señalando aquellos elementos que afectan al rendimiento organizacional.

La validación y contrastación empírica de estos constructos se realizó con un estudio que involucró una muestra de 295 empresas en México. Los resultados obtenidos proporcionan soporte a las diversas hipótesis propuestas en este estudio, incluyendo la relevancia para el rendimiento organizacional. A continuación se presenta una discusión sobre los resultados e implicaciones en este estudio.

Como fue abordado en el Capítulo 3 de esta tesis, las características de la muestra señalan que se tratan de empresas líderes, en su mayoría grandes empresas y corporativos, maduras, principalmente de los sectores industriales y de manufactura, con una fuerte orientación a mercados externos, tanto nacionales e internacionales. Por lo cual, es importante considerar las características específicas de este tipo de empresas al dimensionar los resultados. Así, podríamos concluir que esta tesis doctoral aborda el análisis de las correspondientes lógicas dominantes de las empresas líderes mexicanas con una fuerte orientación externa.

La hipótesis 1 es parcialmente aceptada con respecto a que las experiencias profesionales son significativas en la lógica dominante de la alta dirección. La aceptación parcial se deriva de que su relación con la lógica dominante es altamente significativa ($p<0.001$) aunque el coeficiente es menor de 0.2 para ser estrictamente estadísticamente significativo. Este resultado indica que existe soporte teórico a la hipótesis, por lo cual se deben incorporar diversas variables u otras aproximaciones para medir la experiencia profesional. Las posibles implicaciones sobre este resultado se presentan al final de este Capítulo en el apartado de futuras líneas de investigación.

La hipótesis 2 es aceptada misma que considera que los elementos de la exploración de información (escaneo), interpretación y aprendizaje son fundamentales para la formulación de la lógica dominante de la alta administración. La exploración o

escaneo de información de la alta gerencia implica una búsqueda constante de información en el entorno externo de diversas fuentes. Estos resultados están en línea con Garg et al. (2003) quienes opinan que el énfasis en el escaneo de información en aquellos sectores del entorno externo de acuerdo a los niveles de dinamismo, producen un mayor rendimiento organizacional. Asimismo, la interpretación está estrechamente relacionada con la exploración que implica determinar oportunidades y amenazas en el entorno. Los gerentes generales como cualquier otro individuo, codifica la información del entorno y en base a sus estructuras cognitivas -producto de sus experiencias pasadas y representaciones mentales- filtran los datos en el entorno para interpretar y reconocer oportunidades. Estos resultados están en línea con T. Obloj et al (2010) ya que estos autores encontraron una relación positiva y significativa entre la orientación de búsqueda de oportunidades y el rendimiento organizacional, significativo a nivel $p<0.05$.

Además, el elemento de aprendizaje en este constructo proporciona soporte a la información que los altos directivos reciben de la aplicación de sus conocimientos dentro de la organización. Por lo cual, y como consecuencia de la interpretación cognitiva y toma de decisiones sobre los eventos en el entorno, se define su capacidad de aprender de las experiencias exitosas o erróneas en las organizaciones. Por lo tanto, el aprendizaje proporciona retroalimentación a los procesos y las estructuras cognitivas, fortaleciendo así a su lógica dominante. Como resultado, la hipótesis 6 es aceptada, de manera que el entorno dinámico es relevante para la lógica dominante de la alta administración. Sin embargo, la hipótesis 7 es parcialmente aceptada derivado de que la relación entre el ambiente dinámico y la lógica dominante de la organización es altamente significativa ($p<0.001$) aunque el coeficiente es cercano pero menor de 0.2 para ser estrictamente estadísticamente significativo. Por lo cual, sería interesante en futuros estudios incluir diversas formas de medir el grado de dinamismo en el entorno y impacto en determinadas empresas.

Por otra parte, la habilidad de la alta dirección para aprender de sus éxitos y fracasos que se traduzca en una mejor toma de decisiones, genera a su vez rutinas organizativas, lo que implícitamente conlleva a una explotación de su modelo de

negocio, y con el tiempo la formulación consecuente de la lógica dominante de la organización. Por lo que es reconocido que el aprendizaje es un conductor natural de la codificación de rutinas (T. Obloj et al., 2010). Esta capacidad de aprender y de traducir el conocimiento a la acción es crucial para el rendimiento organizacional principalmente en economías emergentes (Lyles & Salk, 2007; Uhlenbruck, Meyer, & Hitt, 2003). Los resultados demuestran así que el aprendizaje es un elemento determinante en la lógica dominante de los administradores, y que está relacionado con el rendimiento organizacional, lo cual comprueba la hipótesis 3 en este estudio.

Los resultados de esta tesis doctoral relacionan positivamente a las rutinas organizativas con la lógica dominante de la organización, y a su vez con el rendimiento de la organización. En línea con otros estudios, se concluye que el rendimiento organizacional está ligado a altos niveles de rutinas organizativas (Peng et al., 2008), estimulando así una estructura más formal y la estandarización de sus operaciones (T. Obloj et al., 2010). Además, existen investigaciones que confirman que el aprendizaje y la adaptación implican el desarrollo de rutinas y procedimientos operativos estandarizados (Ven & Poole, 1995). Esta información tiene sentido al advertir que las rutinas organizativas representan capacidades en las organizaciones para explotar sus recursos - como fue discutido en el Capítulo 2 – y que las mismas afectan el rendimiento organizacional.

La evidencia conceptual de los Capítulos 1 y la discusión en el Capítulo 2 sugieren que las rutinas representan el ejemplo más evidente de los procesos organizativos dentro de las empresas (e.g. Grant, 1988; T. Obloj et al., 2010). El desarrollo de las capacidades y los recursos para responder a un entorno a través de la adaptación estratégica y estructural se traduce en rutinas organizativas. La evidencia empírica sugiere que los niveles más altos de rutinas significan una ventaja competitiva a través de un comportamiento explotador y de uso eficiente de los recursos.

Dentro del estudio de la lógica dominante, los investigadores han usado diferentes aproximaciones para examinar la estructura organizacional. Por ejemplo, Lane y Lubatkin (1998) midieron los niveles de formalización de las prácticas de gestión y el

grado en que estas decisiones estaban centralizadas. Asimismo, Cote et al. (1999) identificaron dos elementos fundamentales en la estructuras organizativas y su relación con el rendimiento organizacional al diferenciar aquellas que daban mayor importancia a una autonomía individual frente a aquellas con prácticas más centralizadas y monopolistas. Igualmente, los autores resaltaban aquellas organizaciones con un énfasis en orientación grupal que facilitaban estructuras fluidas y flexibles. Frente a esta evidencia, este estudio ha medido el grado de descentralización y la orientación grupal como parte de las estructuras organizativas y relaciones.

El grado de descentralización se ocupa de la estructura y relaciones dentro de la organización, las características de flexibilidad y canales de comunicación son importantes para evaluar esta dimensión. La orientación grupal a su vez mide las prácticas de compensación y el esfuerzo de colaboración para conseguir los objetivos y el trabajo hacia resultados. Existe evidencia empírica que enlaza la descentralización en la formación de equipos de trabajo, mismos que son las principales fuentes de innovaciones, acciones emprendedoras y por ello hacia altos niveles de rendimiento organizacional (Kuratko et al., 2001).

Una vez que los procesos y las estructuras organizativas se han establecido en la organización y están explícitamente representadas, los elementos implícitos de la cultura empiezan también a formar parte de la lógica dominante de la organización. Por un lado, la orientación cultural de las empresas emprendedoras y con alto rendimiento organizacional presentan una orientación externa hacia el mercado, los competidores, los clientes, los proveedores y los eventos en el ambiente que aportan oportunidades (Delmar & Shane, 2003; T. Obloj et al., 2010). Así, una orientación externa se relaciona con la inteligencia de mercado y la necesidad por coordinar acciones funcionales dirigidas a obtener ventajas competitivas (Day, 1994). Por otro lado, una orientación a corto plazo o financiera concierne a la orientación cultural de la empresa basada en un enfoque hacia resultados económicos, debido a las condiciones dinámicas en el entorno, y la constante para mantenerse competitivos; así, la evaluación de sus resultados en términos de rentabilidad y creación de valor parece imprescindible. Esta última

orientación cultural es una característica representativa de las empresas enfocadas en la explotación de sus recursos en donde las decisiones y los comportamientos están estandarizados y formalizados (Ireland & Webb, 2007). Asimismo, representa una característica de las organizaciones que enfatizan la medición de su rendimiento organizacional utilizando reportes financieros y presupuestos formales.

Por lo tanto, los resultados de este tesis brindan soporte a la hipótesis 4 al reconocer que los elementos explícitos de rutinas organizativas, grado de descentralización y orientación grupal, así como los elementos implícitos de la cultura, como orientación externa y orientación a corto plazo son fundamentales para la formulación de la lógica dominante de la organización. Por otra parte, las constructos en este estudio resultaron ser significativos para evaluar el alto rendimiento en las organizaciones de la muestra; por lo cual, la hipótesis 5 fue aceptada.

Posteriormente y después de confirmar los dos modelos de las lógicas dominantes, se ha presentado un modelo integrador que determina la importancia de la relación entre la lógica dominante de la alta dirección y la lógica dominante de la organización, misma que influye en el rendimiento organizacional. La hipótesis 8 fue aceptada, determinando una relación causal altamente significativa. Finalmente, la hipótesis 9 es aceptada en este estudio, al confirmar la influencia de ambas lógicas dominantes en el rendimiento organizacional derivado de una mediación parcial.

En conclusión, los resultados obtenidos justifican ampliamente el planteamiento teórico del marco integrador. Por un lado, las estructuras y procesos cognitivos de escaneo de información, interpretación, y aprendizaje determinan la lógica dominante de la alta dirección. Por otro lado, los elementos explícitos determinados por los procesos y las estructuras organizativas, y los elementos implícitos de la cultura determinan la lógica dominante de la organización. Ambas lógicas dominantes a su vez influyen en el rendimiento organizacional. Los resultados proporcionan diversas implicaciones, por un lado para el estudio de la dirección estratégica y el emprendimiento, y por el otro para la alta dirección en cuanto a la evaluación de sus procesos cognitivos como factor determinante para la implementación de estrategias.

Implicaciones para la dirección estratégica y el emprendimiento

Esta tesis doctoral ofrece implicaciones importantes en el emprendimiento y la dirección estratégica debido a que las decisiones que se toman dentro de estas lógicas dominantes afectan a los procesos de exploración y explotación. La naturaleza de exploración puede ser determinada por la lógica dominante de la alta dirección, mientras que la explotación de recursos se aproxima a la evaluación de la lógica dominante de la organización. Por lo tanto, la alta dirección debe ser capaz de revisar la lógica dominante en su administración.

La evidencia producida en este estudio sugiere que la lógica dominante de la alta dirección contribuye al rendimiento de la organización; esto se debe a que los procesos cognitivos fundamentales de procesamiento de información del entorno influyen en la lógica dominante de la organización, sus capacidades y recursos. La forma en que los altos directivos de la organización gestionan información crítica y despliegan importantes recursos específicos de la empresa tendrá un impacto significativo en la futura adquisición de recursos, y en el subsecuente rendimiento de la organización (DeNoble, Ehrlich, & Singh, 2007). En este estudio se ha evaluado además, que la lógica dominante de la alta dirección conduce a la configuración de los recursos estratégicos y organizativos tanto implícitos como explícitos; y que éstos podrían generar una ventaja competitiva al afectar el rendimiento de la empresa.

Debido a que los objetivos estratégicos establecidos por la alta dirección proporcionan la entrada a todos los demás procesos de gestión en la organización, es vital que los directivos perciban el entorno empresarial y las fuerzas que puedan influir en la organización (Brannback & Wiklund, 2001). Como resultado, las estructuras cognitivas de los altos directivos proporcionan soporte a los procesos cognitivos que guían los procesos de exploración, interpretación, y aprendizaje del entorno. Por esta razón, se cree que la estrategia de una organización es reflejo del entendimiento que los altos directivos tienen acerca del entorno y del futuro de la organización; lo cual está alineado con la Teoría de Procesamiento de la Información bajo el enfoque basado en datos. Por lo tanto, la evaluación de su lógica dominante proporciona un esfuerzo válido para

entender cómo esta lógica afecta a la estrategia de la organización, sus recursos y capacidades, y las decisiones importantes. La incapacidad de los directivos por identificar cambios en las características estructurales de las empresas y para aceptar la necesidad de un cambio en esta lógica proporciona al menos una explicación parcial de las dificultades que enfrentan las empresas tradicionales en un entorno competitivo, con cambios estructurales en sus industrias y tecnologías, y altas regulaciones que enmarcan el entorno competitivo y globalizado en nuestra época (Levie & Lichtenstein, 2010; Prahalad & Bettis, 1986).

Esta investigación podría arrojar nuevas perspectivas con respecto a las lógicas dominantes dentro de las organizaciones, sirviendo como una herramienta de evaluación para las empresas establecidas determinando aquellas dimensiones que a través del tiempo fomentan importantes resultados y no solamente económicos. Más importante aún, las lógicas dominantes de empresas líderes, como es el caso de la muestra analizada en esta tesis, demuestra los elementos dominantes tanto de la alta dirección como de la organización que implican recursos estratégicos que genera ventajas competitivas distintivas y que repercuten directamente en el rendimiento organizacional.

Implicaciones para los directivos

Las implicaciones para los altos directivos son de gran importancia, teniendo en cuenta sus antecedentes y experiencias profesionales al determinar la formulación de la estrategia. Por lo tanto, la composición del equipo de gestión, y el capital social y humano que aportan toda la coalición a la organización es un aspecto relevante a considerar para la lógica dominante. Los altos directivos deben fomentar estrategias emergentes, la búsqueda de nuevas oportunidades, y prever múltiples escenarios. Esta lógica dominante es determinante en la lógica de la organización, en la orientación de la estrategia, y aún más en el rendimiento de la organización. Una lógica dominante adormecida estancará a la organización en procesos burocráticos, por ser indiferente a las oportunidades y amenazas del entorno. Por lo tanto, no sería capaz de asimilar cambios determinantes necesarios para formular y poner en práctica una estrategia alineada a las condiciones del entorno. Por esta razón, la lógica dominante de la alta

dirección debe desafiarse constantemente aún y cuando no haya cambios importantes en el entorno. Los altos directivos deben ser proactivos y estar siempre alerta, recibiendo retroalimentación de los procesos organizativos a fin de evaluar constantemente la información interna hacia el perfeccionamiento del proceso de la estrategia. Así, los elementos cognitivos de la exploración (escaneo), interpretación y el aprendizaje que determinan esta lógica dominante son determinantes.

Otras implicaciones para los gerentes se relacionan con sus experiencias emprendedoras exitosas, que puedan representar una ventaja competitiva para las empresas, ya que una lógica dominante pondrá mayor énfasis en el análisis del entorno con el fin de interpretar las oportunidades y amenazas emprendedoras. Esto subsecuentemente proporciona la base para que la empresas persigan oportunidades y comportamientos hacia la búsqueda de ventajas competitivas. La dirección estratégica de los recursos implica un amplio conjunto de acciones necesarias para reconocer oportunidades y desarrollar ventajas competitivas para explotarlas posteriormente con éxito. Por otra parte, una lógica dominante emprendedora puede considerarse un recurso intangible que sirve como una manera para que las empresas reconozcan y gestionen mejor sus recursos y capacidades. Es así que una lógica dominante emprendedora trabaja en estrecha proximidad a la exposición de una conducta o acción emprendedora, determinando así una lógica dominante emprendedora en toda la organización.

Limitaciones

Los resultados en este estudio deben matizarse teniendo en cuenta las siguientes consideraciones. La primera limitación es que la información de las variables latentes se basa en percepciones subjetivas de los encuestados individuales para evaluar tanto la lógica dominante de la alta dirección como la de la organización, lo que podría representar un sesgo en los resultados. Aunque las medidas subjetivas han demostrado ser una evaluación válida cuando los datos objetivos no está disponibles, se recomienda conseguir datos objetivos complementarios y contrastarse con las medidas subjetivas para comprobar los resultados. Así, los nuevos estudios deben tener en cuenta fuentes

primarias y secundarias adicionales. Por ejemplo, los puntos de vista adicionales pueden ser recogidos a través de cuestionarios o entrevistas al equipo de la alta dirección, que debe ser considerado como un punto a favor al evaluar la lógica dominante de la alta dirección. Otros estudios empíricos han considerado información de los informes anuales de las empresas y fuentes de terceros para aproximar la evaluación de los elementos tanto cognitivos como de acción; estas técnicas pueden además ser una valiosa alternativa al considerar estudios de casos a profundidad, o la aplicación de metodologías mixtas cualitativas y cuantitativas mixtos, tales como técnicas de mapeo cognitivo.

Una segunda limitación se refiere a la utilización de datos transversales de un número de dimensiones que tienen una naturaleza dinámica. Esta limitación destaca la importancia de la recopilación de datos longitudinales para obtener una mejor comprensión de los procesos cognitivos y los procesos organizativos implícitos y explícitos en la formulación y implementación de la estrategia. Por ejemplo, debido a que la lógica dominante de la empresa es muy difícil de cambiar, la evaluación de ambas lógicas dominantes cuando se establece un nuevo equipo directivo o cambio de dirección general se deben documentar, incluso años después de dichas decisiones.

Direcciones para futuras investigaciones

En este estudio se ha establecido la validez de la utilización de dos constructos de orden jerárquico para evaluar la lógica dominante dentro de las organizaciones y su vinculación con el rendimiento organizacional. Las organizaciones, como sistemas complejos, presentan una amplia gama de variables que afectan a sus operaciones, por lo que debe ser interesante evaluar no sólo aquellos elementos relacionados con resultados económicos, sino explorar los que puedan generar una ventaja competitiva, y evaluar sus correspondientes relaciones con las lógica dominantes de los administradores y de la empresa. Se sugiere que este estudio de lógica dominante también se pueda extender a estudiar otros tipos de movimientos estratégicos críticos en las organizaciones; por ejemplo, las empresas al embarcarse en estrategias globales, o la frecuencia y el patrón

de introducción de nuevos productos, o la incursión a nuevas iniciativas emprendedoras corporativas.

Como se ha discutido antes, este estudio se realizó con una muestra importante de empresas líderes en una economía emergente como es México; por lo cual, se cree necesario la evaluación de muestras diferentes y de otros tipos de empresas. También sería interesante replicar este estudio con compañías punteras en otras economías y determinar si los efectos de las lógicas dominantes son similares a los encontrados en este estudio. En esta línea, los análisis multi-grupo son necesarios para profundizar en una posible tipología de lógica dominante. Este estudio ha considerado variables clave de control como la experiencia profesional de los administradores y del entorno dinámico, pero otras variables deben ser evaluadas en relación al impacto en las estructuras cognitivas de la alta dirección y otras características de las empresas. Por ejemplo, la estructura de propiedad de las empresas, incluyendo las características familiares en la alta administración exige una mayor exploración.

Otras consideraciones que pueden ser de interés para investigaciones futuras son:

1. Contrastar los constructos formativos que se proponen en este estudio con otras muestras de empresas en otros contextos.

2. Explorar diferentes lógicas dominantes dentro de la organización, por ejemplo, las unidades de negocios, principales departamentos, consejo de administración, y evaluar su relación con los resultados de la organización y aquellos elementos que pueden representar una ventaja competitiva en la empresa.

3. Estudiar la relación de la lógica dominante considerando las diferentes tipologías estratégicas de las empresas propuestas por Miles y Snow (1978) y las diferentes implicaciones para las lógicas dominantes en la evaluación de resultados de la organización.

4. Profundizar en el estudio de la lógica dominante de los administradores evaluando diversas características en términos de capital humano y social, la diversidad

en la composición de los principales equipos de alta administración, la relación familiar con la empresa, o su implicación en la propiedad.

5. Abordar en una manera más completa el cúmulo de experiencias profesionales o no profesionales, para determinar el impacto en los procesos cognitivos que finalmente determinan la lógica dominante de los administradores, por ejemplo experiencias emprendedoras de éxito o fracaso.

6. Abordar de una manera más detallada las diferentes aproximaciones al entorno, ya que como cabe esperar, no existe una única lógica dominante sino que es contingente respecto de las condiciones del entorno por lo cual existe un campo de estudio muy amplio, lo que siguiere no solo determinar diversos niveles de dinamismo en el entorno, sino además identificar diversos tipos de lógica dominante y estudiar bajo qué condiciones son más efectivas unas lógicas que otras.

En definitiva, el trabajo ofrece las bases sobre las que desarrollar futuras investigaciones en el complejo campo de las lógicas dominantes de la alta gerencia y de las organizaciones.

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Appendix A

Cover Letter

Appendix A. Cover letter

TECNOLÓGICO DE MONTERREY®

UC UNIVERSIDAD DE CANTABRIA

Chihuahua, Chihuahua a 15 de abril de 2013.

ESTIMADO EMPRESARIO
PRESENTE.-

El Tecnológico de Monterrey (TEC) en colaboración con la Universidad de Cantabria (UC) en España han desarrollado un proyecto de investigación doctoral relacionado a temas de emprendimiento corporativo implicando procesos estratégicos hacia la detección y explotación de oportunidades. Los profesores del Tecnológico de Monterrey: Arturo Torres (Vicerrectoría de Emprendimiento), Dante Castro (Campus Querétaro), Rafael Tristán (Campus San Luis Potosí) y Manuel Palma (Campus Chihuahua) bajo la dirección de las Doctoras Concepción López Fernández y Ana Serrano Bedia de la UC conforman este grupo de investigación.

Para efectos de este estudio se solicita la participación de directores, gerentes generales o su equivalente por medio de un cuestionario en donde aportan sus experiencias y actitudes sobre los temas en cuestión; por tanto su participación es de gran importancia para la generación de nuevos conocimientos que podrían impulsan el mejoramiento empresarial y académico de nuestro país.

Nuestro intención es realizar un seguimiento y establecer un contacto telefónico y/o vía correo electrónico con usted para agradecer su valiosa participación además de verificar si tiene completa claridad sobre las preguntas. Le sugerimos pueda disponer de 20 minutos de su tiempo aproximadamente para rellenar el cuestionario que aquí adjuntamos. Por supuesto, toda la información que nos facilite será tratada de manera absolutamente confidencial y en ningún caso se realizarán consideraciones particulares. Si está interesado/a en disponer de los resultados que se obtengan, con mucho gusto se los remitiremos expresamente una vez finalizado el estudio.

Agradeciéndole de antemano su inestimable colaboración, quedamos a su disposición para cualquier comentario o aclaración. Reciba un cordial y afectuoso saludo.

Lic. Manuel Palma Ruiz
Prof. Asociado
ITESM Campus Chihuahua

Appendix B

Questionnaire

Appendix B. Questionnaire

SECCIÓN A: DATOS GENERALES

(A1) Edad:	☐menor de 30 años	☐30 a 49 años	☐50 a 69 años	☐mayor de 70 años	
(A2) Género:	☐femenino	☐masculino			
(A3) Estado Civil:	☐soltero(a)	☐casado(a)	☐divorciado(a)	☐otro: _____	
(A4) Nivel de Estudios:	☐educación básica	☐preparatoria	☐carrera técnica	☐carrera profesional	☐postgrado

(A5) Indique si su puesto actual en esta empresa es el de presidente(a), director(a) general o equivalente *(CEO en el resto de la encuesta)*:
☐SI
☐NO ➔ indique su puesto: _____

(A6) Indique su antigüedad <u>total</u> en esta empresa: ☐menos de 10 años ☐11 a 25 años ☐más de 26 años

SECCIÓN B: DATOS DE LA EMPRESA

(B1) Año de fundación de la empresa: ☐☐☐☐

(B2) Sector <u>principal</u> de la empresa:	☐servicios	☐comercial	☐industrial	☐agrícola/ganadera
(B3) Numero total de empleados de tiempo completo incluyendo gerencia:	☐menos de 10	☐10 a 50	☐51 a 250	☐más de 250
(B4) Mercados geográficos en los que vende su empresa productos, bienes o servicios:	☐local/regional	☐nacional	☐internacional	

SECCIÓN C: ESTRATEGIA DE LA EMPRESA

Señale su grado de acuerdo con las siguientes afirmaciones. (1 = totalmente falso y 5 = totalmente cierto)					
(C4) Esta empresa valora…					
…ser un miembro de equipo.	1	2	3	4	5
…el consenso en la toma de decisiones clave.	1	2	3	4	5
…la vinculación de remuneración con el desempeño del grupo.	1	2	3	4	5
…recompensar los resultados sobre la base de los logros individuales.	1	2	3	4	5

(C5) Durante el período 2010-2012, indicar la evolución que ha tenido la empresa con <u>respecto a sus principales competidores</u>: (1 = Muy inferior y 5 = Muy superior)					
Calidad de los productos/servicios.	1	2	3	4	5
Productividad de la mano de obra.	1	2	3	4	5
Satisfacción de los clientes con los productos/servicios.	1	2	3	4	5
Capacidad de respuesta a las demandas de los clientes.	1	2	3	4	5
Rapidez de respuesta a las demandas de los clientes.	1	2	3	4	5
Incremento en la participación de mercado.	1	2	3	4	5
Acceso a nuevos mercados.	1	2	3	4	5
Nivel de ingresos.	1	2	3	4	5

Señale su grado de acuerdo con las siguientes afirmaciones. (1 = totalmente falso y 5 = totalmente cierto)					
(C6-C7) Esta empresa…					
…rastrea los cambios en sus mercados con regularidad.	1	2	3	4	5
…valora trabajar con clientes clave y aprender de ellos.	1	2	3	4	5
…valora trabajar con proveedores clave y aprender de ellos.	1	2	3	4	5
…valora aprender de las acciones de sus competidores.	1	2	3	4	5
…se resiste a las ideas que fueron desarrolladas por otras empresas o grupos.	1	2	3	4	5
…está abierta al cambio.	1	2	3	4	5
…anima a los empleados a cuestionar el status quo.	1	2	3	4	5
…está descentralizada en la toma de decisiones.	1	2	3	4	5
…mantiene canales que facilitan la comunicación fluida dentro de la empresa.	1	2	3	4	5

(C8-C9) En esta empresa…					
…nuestro sistema de monitoreo se basa en el análisis regular y formal de la industria y las acciones competitivas.	1	2	3	4	5
…desarrollamos procedimientos eficientes en el funcionamiento de nuestra empresa.	1	2	3	4	5
…los principales procesos en la empresa están bien definidos y las responsabilidades se asignan con claridad.	1	2	3	4	5
…contamos con una estructura organizativa sencilla y plana.	1	2	3	4	5
…nuestro sistema de motivación fue desarrollado de tal manera que se obliga a la gente a actuar de acuerdo con las instrucciones.	1	2	3	4	5
…se utilizan los canales formales para transmitir la información relevante de la empresa.	1	2	3	4	5
…nuestros fracasos han sido una fuente importante de información y experiencia para la mejora de la empresa.	1	2	3	4	5
…la comunicación en nuestra empresa siempre ha sido rápida, frecuente, pero a veces caótica.	1	2	3	4	5
…nosotros siempre salimos rápidamente de malas decisiones estratégicas.	1	2	3	4	5
…desde el principio desarrollamos y mejoramos nuestro modelo de negocio de forma incremental.	1	2	3	4	5

Señale el número que mejor describe la situación de su empresa. (1 = no usada en absoluto y 5 = ampliamente usada)					
(C11-C12) Durante el período 2010-2012, ¿en qué medida han sido usados los siguientes controles en la gestión y evaluación del desempeño de su empresa?					
Flujos de efectivo.	1	2	3	4	5
Retorno de la inversión.	1	2	3	4	5
Criterios objetivos, tales como la rentabilidad sobre los activos.	1	2	3	4	5
Reuniones formales cara a cara entre los gerentes para discutir resultados de la empresa.	1	2	3	4	5
Reuniones informales entre los gerentes para evaluar los logros objetivo de la compañía.	1	2	3	4	5
Evaluación del desempeño de la empresa de acuerdo a criterios subjetivos como satisfacción del cliente.	1	2	3	4	5

SECCIÓN D: INFORMACIÓN Y OPORTUNIDADES

(D1) Señale su grado de acuerdo con las siguientes afirmaciones. (1 = totalmente falso y 5 = totalmente cierto)					
Tengo interacciones frecuentes con otras personas para adquirir nueva información.	1	2	3	4	5
Cuando busco información tengo siempre la mirada puesta hacia nuevas ideas de negocio.	1	2	3	4	5
Leo periódicos, revistas, o publicaciones comerciales con regularidad para adquirir nueva información.	1	2	3	4	5
Exploro a diario el internet.	1	2	3	4	5
Observo vínculos entre piezas de información aparentemente sin relación entre ellas.	1	2	3	4	5
Tengo corazonadas hacia oportunidades potenciales.	1	2	3	4	5
Cuando se me presentan múltiples oportunidades, soy capaz de seleccionar las mejores.	1	2	3	4	5

SECCIÓN G: ENTORNO

(G1) Señale su grado de acuerdo con las siguientes afirmaciones. (1 = totalmente falso y 5 = totalmente cierto)					
La obsolescencia de productos y servicios es muy rápida en el sector.	1	2	3	4	5
Es difícil predecir las acciones de nuestros competidores.	1	2	3	4	5
Es difícil predecir las demandas y gustos de nuestros consumidores.	1	2	3	4	5
Los cambios tecnológicos de producción/servicio ocurren rápidamente y de forma significativa.	1	2	3	4	5

Gracias por su colaboración.