UNIVERSIDAD DE GRANADA

Facultad de Ciencias Económicas y Empresariales

Departamento de Organización de Empresas

TESIS DOCTORAL

RELACIONES ENTRE LA ESTRATEGIA MEDIOAMBIENTAL Y LOS PLANTEAMIENTOS INTERNACIONALES DE LAS EMPRESAS

MENCIÓN DE DOCTORADO EUROPEO

Tesis doctoral presentada por:

Javier Aguilera Caracuel

Codirigida por los profesores doctores:

Juan Alberto Aragón Correa

Nuria Esther Hurtado Torres

GRANADA, 2010

Editor: Editorial de la Universidad de Granada
Autor: Javier Aguilera Caracuel
D.L.: GR 363-2011
ISBN: 978-84-693-6010-1

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PROGRAMA DE DOCTORADO:

FUNDAMENTOS DE ECONOMÍA Y ORGANIZACIÓN DE EMPRESAS APLICADOS A LA COMPETITIVIDAD EMPRESARIAL (MENCIÓN DE CALIDAD DEL MINISTERIO DE CIENCIA E INNOVACIÓN 2005-2010)

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"Investigar es ver lo que todo el mundo ha visto, y pensar lo que nadie más ha pensado"

Albert Szent-Györgi

"Nada de lo que da la civilización es el fruto natural de un árbol endémico. Todo es resultado de un esfuerzo. Sólo se aguanta una civilización si muchos aportan su colaboración al esfuerzo. Si todos prefieren gozar el fruto, la civilización se hunde"

José Ortega y Gasset

Agradecimientos

Las primeras líneas de esta tesis doctoral deben ir dirigidas a todas aquellas personas e instituciones que han contribuido al desarrollo de la misma.

En primer lugar, quisiera hacer mención muy especial a mis dos directores de tesis, el Profesor Juan Alberto Aragón Correa y la Profesora Nuria Esther Hurtado Torres. Sin ellos no hubiese sido posible la realización de este trabajo. A lo largo de este camino no sólo me han guiado de manera inmejorable, sino que también han sabido darme muy buenos consejos, animarme y ayudarme siempre que lo he necesitado. Ambos han confiado en mí desde un principio y me han ofrecido todas las facilidades posibles para desarrollar mi carrera investigadora. Muchas gracias por todo vuestro apoyo, dedicación y esfuerzo.

En segundo lugar, me gustaría dar las gracias al profesor Alan Rugman por su gran implicación y predisposición a la hora del desarrollo de este trabajo, así como por permitirme realizar una estancia de investigación muy provechosa en la Universidad de Reading (Reino Unido).

También es necesario destacar el apoyo financiero recibido para desarrollar esta investigación. Parte de los gastos han sido financiados por la beca de Formación de Profesorado Universitario (Ministerio de Ciencia e Innovación), el Proyecto Nacional "Gestión sostenible en empresas del sector energético europeo: requerimiento y consecuencias en el ámbito de la innovación de los recursos humanos" (SEC2007-67833), el Proyecto de Excelencia de la Junta de Andalucía "Recursos y capacidades de las organizaciones que actúan proactivamente en sectores emergentes" (SEJ 2356), el Grupo de Investigación ISDE (SEJ 481), el Departamento de Organización de Empresas y la

Facultad de Ciencias Económicas y Empresariales de la Universidad de Granada, y Henley Business School (Universidad de Reading).

A los profesores del Departamento de Organización de Empresas, debo agradecer el esfuerzo que están realizando por intentar que los jóvenes investigadores podamos desarrollar nuestra carrera universitaria en estos tiempos difíciles. No puedo escribir estas líneas sin mencionar a todos los colegas de los despachos D06 y D09 y a las "niñas de contabilidad", que son la alegría de la facultad. Todos compartimos preocupaciones muy parecidas y nos ayudamos día a día. Quisiera referirme también a los miembros del Grupo de Investigación ISDE, por su cercanía y disposición a la hora de colaborar en diferentes proyectos. No me puedo olvidar de mi amiga Mari Paz y de mi gente más cercana de la facultad. Han sabido animarme y me han ayudado a ver las cosas con optimismo y con "buena filosofía". Eva, Jose, Vera, muchas gracias por haber estado ahí.

Esta tesis no hubiese llegado a este punto sin el apoyo recibido por toda mi familia. En especial, tengo que nombrar a mis tíos Goyo y Charo, a mi hermano Jose, Ana, Aurora, y por supuesto a mis padres. Muchas gracias por haberme dado todo vuestro cariño y comprensión, y por levantarme en los malos momentos. Sobran las palabras.

Por último, no me puedo olvidar de una persona muy importante en mi vida. María, muchas gracias por tu paciencia. No sólo está tu sello presente en gran parte de este trabajo, sino que también has sabido quererme y darme todo el cariño que he necesitado.

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CAPÍTULO 1

INTRODUCCIÓN

1.1 Introducción al tema objeto de estudio

1.1.1 Introducción

La concienciación por reducir los impactos nocivos al medio ambiente y por la preservación del estado de conservación del planeta ha adquirido una notable importancia durante las últimas décadas. La población en general, los grupos y asociaciones ecologistas, los gobiernos, los investigadores, y también las empresas están prestando una mayor atención a la problemática medioambiental. Las empresas, independientemente de su tamaño, perciben de forma clara fuertes presiones por parte de los distintos agentes para desarrollar estrategias que protejan el medio ambiente.

Por otro lado, el entorno actual en el que las empresas desarrollan su actividades se caracteriza por la creciente globalización y, por tanto, la eliminación de fronteras entre países (Dowell, Hart, & Yeung, 2000). Como consecuencia de ello, las estrategias de internacionalización se convierten en estrategias claves que les permiten a las empresas generar oportunidades de negocio en nuevos mercados, adquirir nuevos conocimientos, así como reforzar su posición de ventaja competitiva frente a la competencia (Hitt, Hoskisson; & Kim, 1997; Rugman, 1981; Sapienza, Autio, George, & Zahra, 2006).

Todo ello conduce a que el análisis conjunto de la internacionalización de las empresas y su gestión medioambiental sea uno de los campos que más interés está despertando en los últimos años.

Aquellas organizaciones que desarrollan sus actividades en mercados internacionales deben tener en cuenta la gestión medioambiental que llevan a cabo en las distintas localizaciones donde operan. Básicamente, las empresas pueden optar por adaptar sus prácticas medioambientales a las exigencias mínimas marcadas por cada entorno (ej. Leonard, 1988; Vernon, 1992) o, por el contrario, crear prácticas medioambientales novedosas y avanzadas en las distintas localizaciones donde actúan (Christmann, 2004; Christmann & Taylor, 2001, 2006; Darnall, 2006; Darnall, Henriques, & Sadorsky, 2008). En este último caso, pueden obtener beneficios muy positivos ligados a una mejora de su legitimidad internacional (Bansal, 2005; Kostova, Roth, & Dacin, 2008), transparencia, reputación (Christmann, 2004) y una mejora de su eficiencia interna (Christmann, 2000; Sharma & Vredenburg, 1998; Shrivastava, 1995).

Por tanto, el estudio del diseño e implantación de estrategias que permitan a las empresas hacer frente tanto a los retos de la internacionalización como a los de índole medioambiental constituye un tema de investigación de gran relevancia. Dentro de esta línea de investigación analizaremos la gestión medioambiental llevada a cabo por empresas internacionales. Al hablar de empresas internacionales estudiaremos aquellas organizaciones que tienen instalada capacidad permanente en los mercados internacionales - empresas multinacionales - así como aquellas organizaciones que realizan actividades de exportación. En relación a las empresas multinacionales, nos planteamos los siguientes interrogantes:

- *¿Qué estrategias medioambientales pueden adoptar las empresas multinacionales? ¿Qué criterios distintivos permiten llevar a cabo una opción estratégica u otra?*

- *¿Las empresas multinacionales estandarizan sus estrategias medioambientales o las adaptan en función de las peculiaridades de cada entorno en el que se ubican sus unidades organizativas?*

- *¿Cómo influyen determinadas capacidades internas de las empresas multinacionales en la adaptación-estandarización de prácticas medioambientales a lo largo de su entramado organizativo?*

- *¿Existen diferencias significativas en relación a las distintas dimensiones que integran el perfil institucional de los países donde operan las empresas matrices y las subsidiarias a la hora de llevar a cabo una transferencia estandarizada de sus prácticas de gestión medioambiental?*

No obstante, no todas las empresas internacionales son multinacionales, sino que hay también empresas que adoptan estrategias de exportación, sin necesidad de tener instalada capacidad permanente en los mercados internacionales. En relación a este tipo de empresas nos preguntamos:

- *¿Hasta qué punto su proceso de internacionalización les permite desarrollar estrategias medioambientales más proactivas?*

- *¿Cómo influyen determinadas capacidades internas de dichas organizaciones en la integración del conocimiento medioambiental adquirido como consecuencia de la actuación en mercados internacionales?*

Teniendo en cuenta todas las preguntas planteadas, en la presente tesis doctoral pretendemos dar respuesta a las mismas valiéndonos para ello de tres artículos de investigación.

1.1.2 Delimitación del tema objeto de estudio

Tal y como hemos comentado, a lo largo de todo este trabajo pretendemos analizar la gestión medioambiental de organizaciones que operan en mercados internacionales. Para proceder con este cometido debemos delimitar previamente una serie de conceptos básicos.

En primer lugar, es necesario reconocer que el objetivo principal de la gestión medioambiental de las empresas consiste en la integración de la protección del medio ambiente en la estrategia general de las mismas (Hart, 1995), con el fin de alcanzar en sus actividades un óptimo entre el desarrollo económico y medioambiental (North, 1992; Russo & Fouts, 1997). Cuando hablamos de medio ambiente nos referimos a la suma de recursos físicos que sustentan la vida y son la base para satisfacer las necesidades humanas (North, 1992).

En cuanto a las organizaciones que desarrollan estrategias de internacionalización analizamos las empresas multinacionales así como las empresas que desarrollan

actividades de exportación y que no tienen instalada capacidad permanente en los mercados internacionales. Las empresas multinacionales son organizaciones que tienen distintas unidades organizativas (matrices y subsidiarias) ubicadas en distintos países (Kostova, 1999). La razón primordial que justifica su existencia es su habilidad para transferir y explotar su conocimiento y sus prácticas de gestión a lo largo de su red interna, siendo mucho más interesante que la transferencia de conocimiento en la que intervienen agentes externos e independientes a la organización (Bartlett & Ghoshal, 1989; Gupta & Govindarajan, 2000). En esta investigación nos centraremos en la transferencia de prácticas de gestión medioambiental llevada a cabo por dichas empresas, y más concretamente en la adaptación versus estandarización de su estrategia medioambiental. La estrategia de estandarización medioambiental en la empresa multinacional implica la transferencia de prácticas y políticas medioambientales de manera uniforme a lo largo de su red interna organizativa (Christmann, 2004; Christmann & Taylor, 2001, 2006) mediante la creación de iniciativas medioambientales voluntarias (Christmann & Taylor, 2002).

Por su parte, las empresas exportadoras interactúan con distintos agentes y mercados por medio de la venta de sus productos y servicios a mercados extranjeros, sin necesidad de tener instalaciones propias fuera de sus fronteras (Zahra, Neubaum, & Huse, 1997). Atendiendo a dichas circunstancias, nos centraremos en analizar hasta qué punto su internacionalización favorece el desarrollo de capacidades medioambientales que permiten a su vez la adopción de una estrategia medioambiental proactiva. Esta estrategia implica la puesta en marcha de prácticas medioambientales novedosas y avanzadas (Hart, 1995) que otorgan a la empresa poder para anticiparse a los futuros

cambios (Aragón-Correa, 1998), y no limitarse únicamente al cumplimiento de las exigencias legales (Aragón-Correa & Rubio-López, 2007; Klassen & McLaughlin, 1996). Por tanto, por medio de dicha estrategia las organizaciones podrán generar una serie de prácticas medioambientales innovadoras, avanzadas y de carácter preventivo.

Además de todo ello, tendremos muy en cuenta el perfil institucional medioambiental de los distintos países y regiones donde las empresas internacionales actúan. El perfil institucional analizado va más allá del análisis de las distintas legislaciones medioambientales de los mismos, teniendo también en cuenta otros factores tales como las percepciones que tienen los distintos agentes acerca de la problemática medioambiental, el grado de importancia medioambiental que otorga la sociedad en su conjunto, la participación en acuerdos internacionales en materia medioambiental, medidas de represalia, o medidas de incentivación a los agentes por la puesta en práctica de una gestión medioambiental responsable.

En resumen, en esta tesis doctoral analizamos hasta qué punto la adopción de prácticas medioambientales proactivas por parte de las organizaciones objeto de estudio (empresas multinacionales y empresas exportadoras) puede venir motivada por su presencia en mercados internacionales, puesta de manifiesto a través de la interacción con distintos agentes ubicados en diferentes países y regiones con un entramado institucional propio.

1.1.3 Evolución de la consideración social del tema medioambiental

Las actividades que ejercen las organizaciones tienen un impacto directo sobre el entorno y, por tanto, sobre el medio ambiente. Por ello, se ha analizado cómo las organizaciones integran los aspectos medioambientales en su estrategia organizativa (ej. Aragón & Sharma, 2003; Hart, 1995). Por medio de una gestión medioambiental adecuada una organización va a poder actuar de manera responsable mediante la creación de pautas que minimicen su repercusión negativa sobre el entorno.

La preocupación por la protección del medio ambiente está latente, especialmente en las últimas décadas. En el año 1992 se celebró la Conferencia de Naciones Unidas sobre medio ambiente y desarrollo sostenible en Río de Janeiro. Dicha cumbre dio lugar a la elaboración del documento "Agenda 21" que supuso el punto de partida para crear una mayor concienciación para la protección medioambiental por parte de gobiernos, empresas, organizaciones no gubernamentales y la población en general. En los siguientes años se han celebrado numerosas cumbres, convenciones, tratados, protocolos y acuerdos entre países para la protección y conservación del medio ambiente. Por ejemplo, en diciembre de 2009 se ha celebrado la XV Cumbre Mundial sobre Cambio Climático en Copenhagen (Dinamarca), lográndose establecer compromisos voluntarios entre los distintos países (comprometiendo a las dos potencias mundiales: Estados Unidos y China) para reducir las emisiones y el impacto medioambiental de los distintos agentes. En todos los encuentros realizados siempre se han abordado asuntos de gran interés y repercusión tales como el calentamiento global, la instauración del concepto de desarrollo sostenible (definido como la manera de

satisfacer las necesidades de las generaciones presentes sin comprometer las posibilidades de las generaciones del futuro (WCED, 1987)), la conservación de la biodiversidad, o la creación de medidas para prevenir el agotamiento de recursos naturales.

La investigación académica sobre la gestión medioambiental de las empresas es aún relativamente reciente. Después de primeros acercamientos exploratorios en la década de los 80, fue en la década de los 90 cuando diversos grupos (gobiernos, directivos, consumidores o asociaciones ecologistas, entre otros) promovieron un acercamiento más amplio a los problemas ecológicos relacionados con la gestión empresarial. De esta forma, surgen los primeros trabajos detallados que analizan la problemática medioambiental, centrándose en la implicación de los intereses de los "*stakeholders*" empresariales en los planes medioambientales de las organizaciones (Henriques & Sadorsky, 1995), los procesos medioambientales internos y los recursos (Lawrence & Morrell, 1995), y los programas medioambientales de las organizaciones (ej. Greening, 1995; Swinth & Raymonf, 1995).

No obstante, no fue hasta la publicación del número monográfico de la revista *Academy of Management Review* en el año 1995 sobre "Ecologically sustainable organizations"[1] cuando se consolida la investigación sobre el tema. En referencia a ello fueron piezas teóricas clave los artículos de Hart (1995) y Jennings y Zandbergen (1995). Por un lado, Hart (1995) enmarca su investigación bajo la perspectiva natural

[1] Special topic forum on "Ecologically sustainable organizations", Academy of Management Review, 1995, vol. 20, nº 4.

de la teoría de recursos y capacidades. Por otro lado, Jennings y Zandbergen (1995) aplican planteamientos institucionales a la sostenibilidad de las organizaciones.

Usando las bases teóricas planteadas por los trabajos previos, se produce un avance considerable de los trabajos de investigación medioambiental en el área de organización de empresas. De este modo, se producen grandes desarrollos en la teoría institucional (Westely & Vredenburg, 1997; Hoffmann, 1999), en estrategia medioambiental bajo el prisma de la teoría de recursos y capacidades (Aragón-Correa, 1998a; Sharma & Vredenburg, 1998; Shrivastava, 1995), en la influencia de la repercusión de la gestión medioambiental en el desempeño financiero de la empresa (ej. Judge & Douglas, 1998; Klassen & McLaughiln, 1996; Russo & Fouts, 1997) y en la teoría de los agentes del entorno (*stakeholders*) en relación con el medio ambiente (ej. Henriques & Sadorsky, 1999). Es también en este periodo cuando, tomando como referencia los trabajos previos con respecto a la gestión medioambiental y los planteamientos internacionales de la empresa (Dean & Brown, 1995; Porter & van der Linde, 1995), comienzan a plantearse los trabajos que relacionan estrategias medioambientales de la empresa y desarrollos internacionales de las organizaciones. Por ejemplo, destacamos aquellos trabajos que estudian la influencia de las legislaciones medioambientales nacionales e internacionales en la estrategia medioambiental de las organizaciones (ej. Porter & van der Linde, 1995; Rugman & Verbeke, 1998a, 1998b).

En el verano de 2000 aparece un segundo número monográfico de la revista *Academy of Management Journal* titulado "Management of organizations in the natural

environment"[2]. En dicho volumen encontramos temáticas que relacionan liderazgo con el medio ambiente (Andersson & Bateman, 2000; Egri & Herman, 2000), planteamientos institucionales (Bansal & Roth, 2000; King & Lenox, 2000), desarrollo de mejores prácticas en dirección medioambiental (Christmann, 2000) y la influencia que ejerce el papel de los directivos en la problemática medioambiental (Cordano & Frieze, 2000; Flannery & May, 2000; Ramus & Steger, 2000; Sharma, 2000).

Posteriormente, continúan las aportaciones a la literatura de gestión medioambiental. La temática tratada es variada e incluye aspectos tales como: la importancia de los valores organizacionales y personales en la respuesta medioambiental (Bansal, 2003), el papel de los directivos en la gestión medioambiental (Banerjee, 2001), influencia de las legislaciones (Majumdar & Marcus, 2001) y de los *stakeholders* (ej. Kassinis & Vafeas, 2002; Buysse & Verbeke, 2003; Sharma & Henriques, 2005) en la estrategia medioambiental de la organización, y la influencia del entorno de la empresa en la estrategia empresarial (Aragón-Correa & Sharma, 2003). Junto a todo ello, destacamos estudios recientes que se centran en la estrategia de estandarización medioambiental en empresas multinacionales (ej. Christmann, 2004; Christmann & Taylor, 2001, 2002, 2006; Dowell et al., 2000) así como en los determinantes organizacionales del desarrollo sostenible (Bansal, 2005). Destacamos igualmente aquellos trabajos que versan sobre la gestión medioambiental que llevan a cabo las pequeñas y medianas empresas así como la repercusión de dicha gestión sobre su desempeño financiero (ej. Aragón-Correa, Hurtado-Torres, Sharma, & García-

[2] Special Research Forum in the "Management of organizations in the natural environment", *Academy of Management Journal*, 2000, vol. 43, nº4.

Morales, 2006; Molina-Azorín, Claver-Cortés, López-Gamero, & Tarí, 2009; Miles, Munilla, & McClurg, 1999; Williamson, Lynch-Wood, & Ramsay, 2006).

Por último, y teniendo en cuenta el estudio combinado de gestión medioambiental e internacionalización de las organizaciones, mención especial merecen aquellos trabajos de investigación recientes que versan sobre cómo la adopción de estrategias medioambientales proactivas por parte de pequeñas y medianas empresas exportadoras puede favorecer el éxito en su internacionalización (ej. Martín-Tapia, Aragón-Correa, & Rueda-Manzanares, 2010; Martín-Tapia, Aragón-Correa, & Senise-Barrio, 2008).

Nuestro trabajo de investigación, partiendo de todos estos avances en el ámbito de la gestión medioambiental de las organizaciones, trata de aportar nuevos enfoques y resultados empíricos a la literatura existente que relaciona la gestión medioambiental e internacionalización de las empresas. De esta manera, pretendemos que continúe el proceso de desarrollo, mejora y consolidación de la investigación sobre gestión medioambiental.

1.1.4 Interés de la investigación

El presente trabajo presenta una compilación de tres artículos de investigación que versan sobre cómo las empresas internacionales adoptan prácticas de gestión medioambiental responsables, avanzadas y, a su vez, hasta qué punto dicha internacionalización constituye una fuente de ventaja competitiva.

La literatura que relaciona la gestión medioambiental e internacionalización presta especial atención al estudio del comportamiento medioambiental de las empresas multinacionales. Numerosos trabajos se centran principalmente en analizar el efecto de las legislaciones medioambientales de los distintos países en la estrategia medioambiental de dichas organizaciones (ej. King & Shaver, 2001; Porter & van der Linde, 1995; Rugman & Verbeke, 1998a, 1998b). De esta forma, estudian si las empresas multinacionales adaptan sus prácticas medioambientales en función de las exigencias legales de cada país (ej. Rappaport & Flaherty, 1992; Vernon, 1992) o si, por el contrario, autorregulan su conducta medioambiental a través de la creación de estándares medioambientales internos (ej. Christmann, 2004; Christmann & Taylor, 2001, 2006). Partiendo de esta base, nos vamos a centrar en analizar la influencia de la distancia institucional medioambiental global entre el país de la matriz y el de las subsidiarias en el comportamiento medioambiental de dichas organizaciones.

Junto a ello, tenemos también en cuenta como factor interno la capacidad de la empresa multinacional para generar exceso de recursos (*slack resources*). La literatura argumenta que dicha capacidad va a permitir a la empresa invertir en mayor medida en prácticas medioambientales avanzadas y novedosas (Bansal, 2005; Henriques & Sadorsky, 1996). Veremos hasta qué punto la existencia de una alta capacidad para generar recursos por parte de dichas empresas puede contribuir a que se produzca una transferencia de estándares medioambientales a lo largo de su red interna organizativa, reduciéndose así el posible efecto negativo que ejerce una elevada distancia institucional entre el país de la matriz y el de la subsidiaria en la estrategia de estandarización medioambiental.

Para acabar con el estudio de la gestión medioambiental de las empresas multinacionales, en el segundo trabajo de investigación nos planteamos desagregar el estudio de la distancia institucional medioambiental entre el país de la matriz y el de las subsidiarias en una serie de dimensiones o pilares que integran el perfil institucional de los países. De esta manera, podemos analizar hasta qué punto las diferentes dimensiones del perfil institucional pueden ejercer influencias distintas en la decisión de adaptación versus estandarización medioambiental de las multinacionales. La razón primordial que justifica el por qué tenemos en cuenta distintas dimensiones institucionales viene respaldada por el hecho de que el mero estudio de las legislaciones medioambientales de los países resulta insuficiente. De hecho, países que cuenten con legislaciones medioambientales similares pueden tener distinto grado de concienciación acerca de la preservación del medio ambiente así como distintos programas, medidas e incentivos para proteger la biodiversidad y controlar el impacto nocivo sobre el medio ambiente (Dasgupta, Hettige, & Wheeler, 2000). Por ello, podemos afirmar que el perfil institucional de los países integra otros aspectos adicionales de gran relevancia (ej, DiMaggio & Powell, 1983; Scott, 1995; Zucker, 1977). Este análisis nos permitirá profundizar en la importancia así como en las presiones que ejerce el entorno institucional en el diseño de la estrategia medioambiental de las organizaciones.

A continuación, una vez abordada la casuística de las empresas multinacionales, el último artículo se centra en la gestión medioambiental de las empresas exportadoras. A diferencia de las empresas multinacionales, caracterizadas por tener instalaciones permanentes en distintos países a través de su red de subsidiarias, las empresas

exportadoras que no tienen capacidad permanente en el exterior suelen gozar de un entramado organizativo mucho más simple. En cuanto a sus procesos de internacionalización, la evidencia empírica pone de manifiesto que pueden llevar a cabo unas pautas de expansión internacional muy diferentes. Por un lado, unas siguen un proceso de crecimiento internacional gradual y acumulativo basado en su grado de experiencia internacional. (ej. Eriksson, Johanson, Majkgard, & Sharma, 1997, 2000; Johanson & Vahlne, 1977). Por el contrario, otras emprenden un proceso de internacionalización muy acelerado, de ahí que numerosos autores las denominen "empresas nacidas globales" (*born global firms*) (ej. Andersson & Wictor, 2003; Oviatt & McDougall, 1994, 1999, 2005; Zahra, 2005; Zahra, Ireland, & Hitt, 2000). Se trata en este segundo caso de empresas que cuentan con una serie de recursos y capacidades valiosos (tales como la experiencia internacional previa de los directivos y del consejo de administración) que les permiten adquirir conocimiento de los mercados extranjeros muy rápidamente, así como aprovecharse de una serie de ventajas distintivas frente a empresas que llevan operando en mercados internacionales un mayor tiempo (Autio, Sapienza, & Almeida, 2000). Teniendo en cuenta el distinto comportamiento internacional que pueden tener estas organizaciones, nos centraremos en analizar los beneficios que puede aportar la internacionalización de las mismas en la adopción de estrategias medioambientales proactivas. De manera más concreta, estudiaremos hasta qué punto la experiencia internacional de las empresas exportadoras, derivada del tiempo que llevan exportando así como de la presencia de las mismas en diversas regiones con un perfil institucional medioambiental distinto (diversificación internacional medioambiental), influye en la adopción de una estrategia

medioambiental proactiva. Junto a ello, veremos el efecto moderador que puede ejercer la capacidad de aprendizaje organizativo de dichas empresas en la relación existente entre las distintas modalidades de experiencia internacional y la adopción de estrategias medioambientales proactivas. De hecho, dicha capacidad puede favorecer la adquisición y asimilación de conocimiento medioambiental proveniente de los mercados internacionales, así como permitir que exista una compatibilidad con el conocimiento medioambiental existente en la organización.

A nivel ***teórico***, nuestro trabajo utiliza distintos marcos conceptuales, siendo algunos de ellos ampliamente reconocidos por los teóricos de la internacionalización de las organizaciones. De esta manera, pretendemos explicar de una manera integral la gestión medioambiental de las empresas internacionales.

1. En el primer trabajo usamos como enfoque para abordar la gestión medioambiental de las empresas multinacionales el modelo conceptual propuesto por Rugman y Verbeke en el que se combinan las ventajas a nivel de país (*country-specific advantages*) y las ventajas internas de la empresa (*firm-specific advantages*), determinadas por su propia dotación de recursos y capacidades (Rugman, 1981; Rugman & Verbeke, 1992, 1998a, 1998b). De manera concreta, tenemos en cuenta la influencia conjunta de factores internos a la empresa (*slack resources*) y de la influencia institucional del entorno donde actúan (*distancia institucional entre el país de la matriz y el de la subsidiaria*) a la hora de analizar las diferentes estrategias medioambientales que pueden adoptar las empresas multinacionales y, de manera más concreta, la estrategia de estandarización

medioambiental. Por medio de dicho modelo conseguimos integrar de forma conjunta la teoría de recursos y capacidades (Barney, 1991) y la teoría institucional (DiMaggio & Powell, 1983; Oliver, 1997; Scott, 1995)

2. En el segundo artículo partimos de una readaptación del modelo teórico propuesto por Rugman (1981) y Rugman y Verbeke (1998a, 1998b) en el que delimitamos una serie de dimensiones que integran el perfil institucional de los países (regulatoria, cognitiva y normativa). Dichas dimensiones están ampliamente respaldadas por las aportaciones realizadas por la teoría institucional (ej. Scott, 1995; Kostova & Roth, 2002). De esta forma, la influencia de la distancia institucional medioambiental entre el país de la matriz y el de las subsidiarias es considerada para cada una de las dimensiones con la finalidad de determinar el distinto impacto que puede ejercer dicha distancia en la transferencia de estándares medioambientales a lo largo de la red interna organizativa de la empresa multinacional (*non-location bound green FSAs*) o en la generación de prácticas medioambientales avanzadas únicamente en determinados contextos (*location bound green FSAs*).

3. Respecto al tercer trabajo de investigación, nos centramos en la teoría del conocimiento. Las empresas exportadoras pueden adquirir conocimiento valioso y fuente de ventaja competitiva a través de su internacionalización (Barkema & Vermeulen, 1998). Dicho conocimiento va a permitirles reforzar el desarrollo de determinadas capacidades organizativas (Nelson & Winter, 1982; Barkema & Vermeulen, 1998; Sapienza et al., 2006), siendo una de ellas la medioambiental

(Aragón-Correa, 1998; Russo & Fouts, 1997). Analizaremos hasta qué punto el desarrollo de capacidades medioambientales va a poder verse fortalecido por la adquisición de conocimiento medioambiental valioso derivado de las distintas experiencias internacionales de las empresas exportadoras.

Finalmente, resulta también de interés destacar la ***metodología*** que ha sido utilizada a la hora de testar las hipótesis de investigación presentadas a lo largo de la presente tesis doctoral por los siguientes motivos:

1. Para la realización de los dos primeros artículos elaboramos una base de datos con información financiera y medioambiental de empresas multinacionales, incluyendo tanto a empresas matrices como a subsidiarias, de los sectores químico, energético o del sector de fabricación de maquinaria industrial, ubicadas en algunos de los siguientes países: Estados Unidos, Canadá, México, España y Francia. La información financiera fue obtenida de la base de datos Standard & Poor's (Capital IQ). La información medioambiental proviene de los registros medioambientales de acceso público que tiene cada uno de los países de nuestra muestra. Estados Unidos cuenta con el *Toxic Release Inventory* (TRI), Canadá con el *National Pollution Release Inventory* (NPRI), México con el *Registro de Emisiones y Transferencia de Contaminantes* (RETC) y, por último, Francia y España disponen del *European Emission Register* (EPER).

2. El tercer artículo se ha realizado a través de un cuestionario enviado a directivos de empresas exportadoras españolas del sector de la alimentación. La información

financiera de dichas empresas se completa con la base de datos financiera *Dun & Bradstreet* (D&B).

3. Para la definición del perfil institucional medioambiental de los distintos países y regiones, concepto utilizado en los tres trabajos de investigación que integran la tesis doctoral, contamos con la existencia de la base de datos "*Environmental Sustainability Index*" (*Yale Center for Environmental Law and Policy and Center for International Earth Science Information Network, 2005*). Dicha base de datos es de carácter público y contiene numerosos indicadores que integran el referido perfil institucional.

4. En relación a la técnica estadística empleada para verificar el cumplimiento de las hipótesis de investigación planteadas, cabe especificar que utilizamos la regresión lineal múltiple con efectos moderadores, usando el software SPSS 15. Además, hemos realizado análisis factoriales confirmatorios a través del programa estadístico LISREL 8.50.

1.2 Objetivos de la investigación

El objetivo central de este trabajo consiste en el estudio de los vínculos existentes entre el fenómeno de la internacionalización y la gestión medioambiental de las organizaciones. Cada uno de los artículos presentados relaciona esta temática, obteniendo finalmente como resultado un conjunto de trabajos de investigación interconectados, pero que también conservan su propia contribución individual. A continuación, enumeramos los objetivos generales a alcanzar con esta tesis:

1º) Revisar y sintetizar la literatura existente que relaciona la gestión medioambiental e internacionalización de las organizaciones. En dicha revisión tenemos en cuenta la literatura que trata los rasgos institucionales de los distintos entornos donde tienen presencia las empresas así como determinados recursos y capacidades de las mismas. Como rasgos institucionales tenemos en cuenta el perfil institucional medioambiental de los países y regiones, integrado por las legislaciones medioambientales de los mismos así como por otros rasgos que engloban aspectos tales como el conjunto de acciones, medidas de protección e incentivación medioambiental por parte de los distintos agentes e instituciones que integran el referido entorno. Como recursos y capacidades internos de la empresa analizamos en el primer trabajo de investigación la capacidad para la generación de recursos por parte de la empresa (*slack resources*), mientras que en el tercer trabajo estudiamos la capacidad de aprendizaje organizativo (*organizational learning capability*).

2º) Profundizar en el conocimiento de las estrategias medioambientales que pueden adoptar las empresas internacionales y analizar hasta qué punto vienen determinadas por su proceso de expansión internacional y por determinados recursos y capacidades que posee la propia empresa. En esta tesis doctoral abordamos diferentes aspectos de las estrategias medioambientales en función de la organización objeto de estudio.

- En cuanto a las empresas multinacionales, prestamos especial atención al análisis de la estrategia de estandarización medioambiental, que conlleva la transferencia estandarizada de prácticas medioambientales novedosas y avanzadas al resto de

unidades organizativas, con independencia de los rasgos institucionales de cada país. Mediante dicha estrategia las empresas multinacionales autorregulan su conducta medioambiental, con independencia de las exigencias de cada entorno (Christmann, 2004; Christmann & Taylor, 2001, 2002, 2006; Rappaport & Flaherty, 1992).

- En relación a las empresas exportadoras, hacemos hincapié en la influencia que puede ejercer su experiencia internacional en la adopción de una estrategia medioambiental más o menos proactiva. Una estrategia medioambiental proactiva implica la identificación de problemas medioambientales antes de que ocurran (Aragón-Correa, 1998) y la integración de prácticas medioambientales avanzadas y novedosas en la estrategia organizativa (Hart, 1995). Por medio de ella, las empresas podrán reducir costes operativos (Sharma, 2000; Shrivastava, 1995), aumentar su transparencia (Christmann, 2004), reputación y legitimidad (Bansal, 2005). Por el contrario, una estrategia medioambiental reactiva se limita a solventar la problemática medioambiental de la empresa una vez surja el conflicto con el entorno, limitándose por tanto la empresa a cumplir la legislación medioambiental para evitar sanciones y multas (North, 1992).

3º) Estudiar la relación existente entre gestión medioambiental e internacionalización de las organizaciones mediante la utilización de diferentes enfoques teóricos y el empleo de una metodología rigurosa y diversa para la verificación de las hipótesis de investigación.

Por todo ello, esta tesis doctoral nos ha permitido el desarrollo de habilidades investigadoras tanto desde un punto de vista empírico como desde un punto de vista cualitativo.

1.3 Estructura del trabajo de investigación

La presente investigación consta, además de este capítulo de introducción, de tres artículos de investigación y de un último capítulo de recapitulación. El hilo conductor que une a los tres artículos reside en el estudio combinado del fenómeno de la internacionalización y la gestión medioambiental de las organizaciones. A continuación realizamos una breve descripción de los contenidos de cada uno de los capítulos.

El capítulo 2 de este trabajo recoge el artículo de investigación titulado "*Firm and country determinants of environmental standardization strategy in multinational companies*". Este primer estudio se centra en su primera parte en definir las posibles estrategias medioambientales que pueden adoptar las empresas multinacionales en los distintos países en los que actúan. Para determinar las estrategias nos basamos en dos condicionantes, uno interno y otro externo. El condicionante interno viene determinado por la capacidad por parte de la empresa matriz para generar exceso de recursos financieros (*slack financial resources*). Dicha capacidad puede favorecer en gran medida el desarrollo de planteamientos medioambientales avanzados por parte de la empresa multinacional. El condicionante externo se basa en el grado de distancia institucional medioambiental entre el país donde se ubica la matriz y el país de la

subsidiaria. De esta forma, nuestro modelo teórico permite definir una serie de estrategias medioambientales de las empresas multinacionales. Dicho modelo viene delimitado a través de una adaptación de la matriz donde se recogen las ventajas a nivel país (*country-specific advantages*), determinadas por el grado de distancia institucional medioambiental entre el país de la matriz y el de la subsidiaria, y las ventajas a nivel interno de la empresa (*firm-specific advantages*), referidas a la capacidad por parte de la empresa matriz para generar exceso de recursos. Teniendo en cuenta todo ello, definimos brevemente las principales estrategias medioambientales que pueden adoptar las organizaciones objeto de estudio:

- *Pollution haven hypothesis*: estas empresas multinacionales se caracterizan por tener ubicadas sus unidades organizativas en países institucionalmente muy diferentes así como por poseer poca capacidad para generar recursos. Las empresas que se encuentran en esta situación tienden a llevar a cabo una gestión medioambiental más oportunista, localizando las actividades más contaminantes en aquellos países con legislación más permisiva (Leonard, 1988; Stewart, 1993).

- *Environmental compliance*: identificamos a aquellas empresas multinacionales cuyas unidades están ubicadas en países entre los que existe una reducida distancia institucional y, además, tienen poca capacidad para generar recursos. La estrategia medioambiental de estas organizaciones se limitaría a cumplir con las exigencias institucionales marcadas por cada país. Por medio de dicha estrategia logran alcanzar una legitimidad en el referido entorno pero no crean por ellas mismas planteamientos medioambientales avanzados y novedosos.

- *Environmental resources*: distinguimos aquellas empresas multinacionales que tienen una gran capacidad para generar recursos y sus unidades organizativas están localizadas en países entre los que existe una elevada distancia institucional. En este caso, estas empresas llevarían a cabo planteamientos medioambientales muy avanzados pero, debido a las elevadas diferencias en cuanto al perfil institucional medioambiental de los países donde se ubican sus distintas unidades, optan por llevarlos a la práctica sólo en determinados países.

- *Environmental standardization*: nos referimos a aquellas empresas multinacionales que tienen elevada capacidad para generar recursos y con unidades organizativas ubicadas en países con perfiles institucionales medioambientales muy similar. Dichas organizaciones tenderían en mayor medida a adoptar una estrategia de estandarización medioambiental en la que no sólo generarían prácticas medioambientales novedosas, sino que también destinarían esfuerzos para transferirlas al resto de unidades, con independencia de las exigencias legales e institucionales de cada país.

La segunda parte del artículo se centra, por su gran relevancia y repercusión actual, en aportar evidencia empírica mediante el estudio de la influencia de los condicionantes internos y externos referidos anteriormente en la estrategia de estandarización medioambiental adoptada por la empresa multinacional. En definitiva, intentamos dar respuesta a los motivos que impulsan a las empresas multinacionales a homogeneizar sus prácticas medioambientales en los distintos países donde tienen

presencia, y no a llevar a cabo una adaptación oportunista de sus prácticas de gestión medioambiental en función de las exigencias de cada entorno.

El capítulo 3 presenta el artículo de investigación titulado "*Environmental standards in multinational enterprises: Testing national institutional dimensions*". Este trabajo parte de la necesidad de desagregar la distancia institucional entre el país de la matriz y subsidiaria en una serie de dimensiones con el fin de determinar el efecto que ejerce una elevada distancia institucional referida a cada una de ellas en la estrategia de estandarización medioambiental de la empresa multinacional. Tradicionalmente la literatura ha prestado especial atención a la influencia que pueden ejercer las legislaciones medioambientales, tanto nacionales como internacionales, en las estrategias medioambientales de las empresas multinacionales (Christmann, 2004; Rugman & Verbeke, 1998a, 1998b). No obstante, es preciso tener en cuenta el hecho de que el perfil institucional de los países es muy complejo (DiMaggio & Powell, 1983; Scott, 1995), no siendo el aspecto regulatorio la única parte integrante del mismo (Dasgupta et al., 2000). Por todo ello, el estudio de la distancia institucional en términos medioambientales entre el país de la matriz y el de la subsidiaria lo llevamos a cabo teniendo en cuenta tres dimensiones ampliamente reconocidas por la teoría institucional: regulatoria, cognitiva y normativa (Scott, 1995, Kostova & Roth, 2002). De esta forma, podemos evaluar cómo los distintos pilares o dimensiones que integran el perfil institucional de los países donde las empresas multinacionales actúan van a influir en la gestión medioambiental de las mismas. Utilizando como base el modelo teórico de Rugman y Verbeke (1992, 1998a, 1998b) (*country-specific advantages* y

firm-specific advantages), llevamos a cabo una readaptación del mismo. En primer lugar, tenemos en cuenta la generación de prácticas medioambientales novedosas que pueden ser susceptibles de ser transferidas al resto de unidades de la organización (*non-location bound green FSAs*) o de generarse únicamente en determinados contextos (*location-bound green FSAs*). En segundo lugar, readaptamos el concepto "*country-specific advantages*" aplicándolo a la distancia medioambiental existente entre el país de la matriz y el de la subsidiaria en relación a las tres dimensiones mencionadas anteriormente.

Una vez diseñado el marco de investigación, desarrollamos un trabajo de carácter empírico. Nuestros resultados contribuirán a dar respuesta al debate referente al grado de estandarización de las prácticas medioambientales que llevan a cabo las empresas multinacionales. Por un lado, una elevada distancia institucional puede conducir a que las empresas multinacionales adapten sus prácticas de gestión medioambiental en función de las peculiaridades y exigencias de cada entorno (King & Shaver, 2001; Rugman & Verbeke, 2005). Por otro lado, dichas organizaciones pueden decidir llevar a cabo una estandarización de sus prácticas y políticas medioambientales, reforzando su perfil institucional interno, coherencia interna (Bartlett & Ghoshal, 1989; Kostova et al., 2008), transparencia, reputación (Christmann, 2004) y, por último, su legitimidad tanto nacional como internacional (Bansal, 2005; Kostova et al., 2008).

El capítulo 4 integra el artículo de investigación titulado "*Does having international experience help firms to be green? A knowledge-based view of*

international experience and organizational learning on proactive environmental strategies". Dicho trabajo se centra en la relación existente entre la internacionalización y la gestión medioambiental llevada a cabo por empresas exportadoras. Analizamos hasta qué punto el grado de experiencia internacional de dichas empresas, derivado del periodo de tiempo que llevan exportando y de la actuación en diversas regiones con perfil institucional medioambiental diferenciado, está relacionado con la adopción de estrategias medioambientales proactivas. Por un lado, la actuación en mercados extranjeros durante un largo periodo de tiempo puede permitir a la empresa adquirir de manera paulatina conocimiento medioambiental valioso. Del mismo modo, la interacción por parte de la empresa con distintos agentes ubicados en regiones con un perfil institucional medioambiental diferenciado (distintas legislaciones medioambientales, distinta concienciación por parte de la sociedad acerca de la problemática medioambiental, etc.) puede favorecer la adquisición de conocimiento medioambiental diverso y complejo de los diferentes contextos y, como consecuencia, el desarrollo de prácticas medioambientales avanzadas que permitan a la organización obtener licencia para exportar a aquellas regiones con más exigencias en materia medioambiental. Por último, consideramos como factor interno relevante de dichas empresas la capacidad de aprendizaje organizativo (Fiol & Lyles, 1985; Hsu & Pereira, 2008; Nonaka, 1994) y el posible efecto moderador que puede ejercer la referida capacidad en las anteriores relaciones. De hecho, nuestros resultados muestran que la capacidad de aprendizaje organizativo de las empresas exportadoras tiene un papel esencial en la asimilación y puesta en práctica del conocimiento medioambiental adquirido en los mercados internacionales.

Finalmente, en el capítulo 5 recogemos una recapitulación de las principales conclusiones derivadas de la tesis doctoral y de cada uno de los artículos. Hacemos también referencia a las implicaciones académicas, de gestión y para los reguladores públicos. Por último, destacamos las limitaciones encontradas a lo largo del desarrollo del trabajo y mencionamos algunas futuras líneas de investigación que consideramos de interés.

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CAPÍTULO 2

FIRM AND COUNTRY DETERMINANTS OF ENVIRONMENTAL STANDARDIZATION STRATEGY IN MULTINATIONAL COMPANIES

FIRM AND COUNTRY DETERMINANTS OF ENVIRONMENTAL STANDARDIZATION STRATEGY IN MULTINATIONAL COMPANIES

Abstract

This study updates the traditional country-specific advantages–firm-specific advantages configuration through the application of the concepts of environmental institutional distance between countries and headquarters' availability of slack resources. We analyze two important determinants that lead multinational companies (MNCs) to standardize their environmental practices. We find that a low environmental institutional distance between headquarters' and subsidiaries' countries contributes to creating environmental standards within the company. Additionally, headquarters with high availability of slack resources are more willing to standardize their environmental practices. However, MNCs that have headquarters with high slack resources but that have units based in countries a long distance away are not active in creating environmental standards. The paper discusses implications for managers and policy makers.

Keywords: natural environment, environmental standardization strategy, country-specific advantages, firm-specific advantages, environmental institutional distance between countries, slack resources

2.1 Introduction

Globalization and information technology are contributing to reinforcing the expansion of multinational companies (MNCs) in the world (Dowell, Hart, & Yeung, 2000). This development uses a complex internal structure of units (headquarters and subsidiaries) based in countries with different institutional profiles (Kostova & Roth, 2002). These differences generate managerial doubts about how MNCs deal with business issues. The MNCs' approach to the natural environment is one of the most controversial. On the one hand, it has been argued that MNCs locate their most polluting activities in those countries with lax environmental regulations (e.g. Stewart, 1993; Vernon, 1992). On the other hand, other works argue that MNCs tend to use an environmental standardization strategy in the different countries where they operate (e.g. Christmann & Taylor, 2001, 2006).

MNCs can adopt different international environmental strategies depending on country-specific advantages (CSAs) and firm-specific advantages (FSAs) (Rugman & Verbeke, 1998, 1998a). In this paper we advance the traditional CSA concept by introducing the notion of environmental institutional distance between the home and the host country. This better explains the MNC's level of legitimacy and the decision about transferring environmental standards within its network. Besides we analyze the role of headquarters availability of slack internal resources as an antecedent to generate green FSAs within the MNC's internal network. Green FSAs refer to the generation of valuable and innovative green resources and capabilities by the MNC (Rugman & Verbeke, 1998a). These green FSAs can be generated only in specific countries

(location bound) or can be easily transferred at a low cost within the MNC's internal network (non-location bound) (Rugman & Verbeke, 2001).

An environmental standardization strategy implies that firms can self-regulate their environmental conduct by unifying their environmental practices. Stakeholders' pressures have shown a positive effect on the environmental standardization strategy implemented by MNCs (e.g. Christmann, 2004). Other works analyze international environmental certifiable standards and their effect on the adoption of a substantive or symbolic environmental standardization strategy (e.g. Christmann & Taylor, 2006; Darnall, 2006). However, little attention has been paid to the joint influence that MNCs' internal factors (slack resources) and external factors (institutional distance between countries) have on this strategy.

We use different sources to obtain environmental and financial data of a sample integrating 210 units of analysis comparing headquarters and subsidiaries from three industries based in USA, Canada, Mexico, France and Spain. Using a multiple regression analysis we answer three research questions. First, we analyze whether the environmental institutional distance between the headquarters and subsidiaries' countries influences the environmental approaches within the MNC. Second, we study whether headquarters' slack financial resources positively contribute to adopting stringent environmental standards within the MNC. Third, we see whether this slack may contribute to converting location-bound into non-location-bound green FSAs and then reducing the institutional distance effect between headquarters and subsidiaries' countries.

Meanwhile previous literature has used external (institutional) and internal (resource) arguments to analyze the firms' sustainable development at a country level (Bansal, 2005) or the environmental regulations' influence (Rugman & Verbeke, 1998). We use a new CSA–FSA configuration to explain the MNCs' environmental standardization strategy. This approach answers calls from literature for empirical works using an integrated approach of both arguments (Aragón-Correa & Sharma, 2003). Our findings also contribute to helping managers and policy makers to understand the great impact that MNCs' activities have on the natural environment, and encourage these firms to develop a socially responsible attitude.

This paper proceeds with the second section covering a theoretical review. The third section explains the different international environmental strategies that can be adopted by MNCs. In the fourth section we focus on explaining the MNCs' environmental standardization strategy and hypothesis development. The fifth section includes the methodology. The sixth section describes the empirical results and the final section refers to the discussion, limitations and future research.

2.2 Institutional and resource–based views

MNCs are based in different countries with their own institutional profiles and need to gain legitimacy in all the contexts in which they operate (Kostova & Zaheer, 1999). Furthermore, these companies can generate a set of resources and capabilities that can be transferred within their internal network (Bartlett & Ghoshal, 1989).

Therefore, both the institutional and resource-based views contribute to explaining the MNCs' existence.

Institutional theorists are especially interested in how organizational structures and processes become institutionalized over time (Oliver, 1997). The basic premise of this theory is that firms' tendencies toward conformity with predominant norms and traditions in each social context lead to homogeneity among firms in their structures and activities, and that successful firms are those that gain support and legitimacy by conforming to social pressures (Meyer & Rowan, 1977; Oliver, 1997). MNCs need to develop their activities considering not only their own policies, but also the countries' institutional profile (Kostova, 1999). Since it is vital for the MNC to achieve legitimacy in all its environments, it will experience the pressure to adapt local practices to the local institutional context (Kostova & Roth, 2002). Nevertheless, due to the globalization process, MNCs also need to pursue an international institutional legitimacy, increase their transparency, and unify their conduct (Kostova, Roth, & Dacin, 2008; Kostova & Zaheer, 1999).

The resource-based view requires analysis of the firm's internal resources and capabilities as sources of competitive advantage. It is the rational identification and use of resources that are valuable, difficult to copy, and non-substitutable that lead to enduring firm variation and supernormal profits (Barney, 1991), independent of the specific institutional context (Oliver, 1997). Thus, MNCs can be cost-effective in exploiting their resources and capabilities, and transferring them within their internal network (Bartlett & Ghoshal, 1989).

We combine both views to understand the MNCs' functioning. Therefore, we use the traditional CSA–FSA framework (Rugman, 1981). On the one hand, CSAs refer to location advantages specific to the country in which the unit of the MNC is located. On the other hand, FSAs refer to advantages specific to a firm regardless of location (Rugman & Verbeke, 1992). They can be defined as ''*knowledge bundles that can take the form of intangible assets, learning capabilities and even privileged relationships with outside actors*'' (Rugman & Verbeke, 2003: 127). We distinguish between location and non-location FSAs. Location-bound FSAs are resources and capabilities that can only affect business performance in specific countries. In contrast, non-location-bound FSAs are resources and capabilities that can be easily transferable across borders as an intermediate product (Rugman and Verbeke, 2001). Thus, the existence of market imperfections associated with international transactions explains the existence of MNC activity and the need for internalization, which in turn may yield non-location-bound FSAs. However, pressures for national responsiveness exerted by stakeholders or governments may also stimulate MNCs to develop location-bound FSAs in specific countries (Rugman & Verbeke, 1992, 2001). Kolk and Pinkse (2008) also apply this framework to MNCs' climate change activities.

2.3 MNCs and international environmental strategies

In order to determine the MNCs' international environmental strategies, we need to assess the importance that FSAs and CSAs have for these companies (Rugman & Verbeke, 1998a).

In relation to the CSAs, literature has already analyzed the influence of home and host countries' environmental regulations on the adoption of an MNC's environmental strategies. Furthermore, the role of international environmental regulations has also been incorporated (Rugman & Verbeke, 1998, 1998a). However, institutional profile of each country is very complex and incorporates additional dimensions beyond the regulatory one (Kostova, 1999). Therefore, instead of using the traditional CSA concept, we analyze the environmental institutional distance between countries and its effect on the adoption of international environmental strategies by MNCs. Institutional distance between the home and host countries shows the degree of institutional difference between countries (Kostova & Zaheer, 1999). This distance may have a direct and powerful impact on the MNC's level of legitimacy and the transfer of environmental standards within the MNC.

In the case of green FSAs, we focus our attention on the role of the headquarters' availability of slack resources as a factor influencing the generation of green FSAs and the MNCs' decision to standardize their environmental practices within their internal network. MNCs' managers must decide whether specific green FSAs can be developed and used within individual countries (location bound) or whether these resources and capabilities can be used globally (non-location bound) (Rugman & Verbeke, 2001). The implementation of environmental practices and policies requires a substantial investment by these companies (Christmann & Taylor, 2001). Consequently, headquarters' availability of slack resources has considerable importance in the generation and transfer of environmental practices and policies within the MNC. Slack

refers to the stock of excess resources available to an organization during a given planning cycle (Nohria & Gulati, 1996).

We can see in Figure 2-1 a matrix in which we explain the different MNCs' international environmental strategies. On the horizontal axis we observe the influence of MNCs' slack resources on the MNCs' environmental strategies and the linked generation of green FSAs. These resources range from low to high. On the vertical axis we see the influence of level of environmental institutional distance between countries. Hence, we delimitate four different MNCs' environmental strategies with different implications for the potential to generate environmental capabilities.

Figure 2-1 The combined effect of institutional distance and slack on the MNCs' international environmental strategies

		SLACK RESOURCES	
		LOW	HIGH
ENVIRONMENTAL INSTITUTIONAL DISTANCE BETWEEN COUNTRIES	HIGH	1 POLLUTION HAVEN HYPOTHESIS	3 ENVIRONMENTAL RESOURCES (Location-bound green FSAs)
	LOW	2 ENVIRONMENTAL COMPLIANCE	4 ENVIRONMENTAL STANDARDIZATION (Non-location-bound green FSAs)

Quadrant 1: Pollution haven hypothesis

We group those MNCs with units based in high-distance countries and that have a low level of slack resources. These MNCs do not generate green FSAs. Indeed, they take advantage of the resulting cross-country differences in environmental regulations

by moving production capacity to the country most willing to operate lax environmental standards (e.g. Stewart, 1993; Vernon, 1992). The low level of slack resources makes it difficult to transfer a pattern of advanced environmental strategies across all the internal units. Although this hypothesis has only considered the countries' environmental regulatory dimension, it can also be applied to the rest of the dimensions since a high institutional distance between countries deters the legitimacy process in a host country (Kostova & Zaheer, 1999). Thus, this lack of legitimacy is exploited by these companies to undertake opportunistic environmental behavior in certain locations. However, empirical support for this strategy is not strong enough (e.g. Christmann & Taylor, 2001; Rugman & Verbeke, 1998).

Quadrant 2: Environmental compliance

We distinguish here MNCs with units based in low-distance countries and that have a low level of slack resources. These companies do not generate green FSAs. It is shown that it will be easier for an MNC to understand and adjust to the legitimacy requirements of a country that is institutionally similar to its home country than of one that is institutionally distant (Kostova & Zaheer, 1999). Thus, MNCs from this quadrant comply with each country's environmental institutional requirements in order to gain national legitimacy (Kostova & Roth, 2002). Consequently, MNCs that interact in that country tend to adopt structures and processes that are approved by the relevant institutional context, becoming isomorphic with the other local firms (DiMaggio & Powell, 1983; Zucker, 1977). The low level of slack resources does not provide

potential to voluntarily exceed environmental regulations, however for the low-distance countries a standardized strategy can be used without extra effort.

Quadrant 3: Environmental resources

We refer to those MNCs with units based in high-distance countries and that have a high level of slack resources. These resources allow these companies to generate advanced environmental approaches focused on the creation of green resources and capabilities even when the high distance does not easily allow transfer of the generated capabilities within the MNC. Consequently, these green FSAs are generated and implemented in specific countries (location-bound green FSAs). Although these MNCs are not environmentally opportunistic, they are not willing to transfer their environmental practices within countries that are institutionally very different since these regions may deter the internalization and assimilation of the new practices (Kostova & Roth, 2002).

Quadrant 4: Environmental standardization

These MNCs have their different units based in low-distance countries and have a high level of slack resources which lead these companies to generate non-location-bound green FSAs. Therefore they can easily transfer green resources and capabilities, independent of the headquarters' or subsidiary's country. This is a cost-reducing strategy which implies that, once the management practices are created, they can be transferred to all of the units at a very low cost (Bartlett & Ghoshal, 1989). Next, we

focus on the analysis of the environmental standardization strategy due to its increasing importance and the repercussions nowadays.

2.4 Environmental standardization strategy within MNCs: Hypotheses

Standardization can be associated with the generic term 'unification', allowing a reduction of organizational complexity (Köhl, Traub, & Päivinen, 2000). The decision whether to standardize operations in international business is very relevant because it influences the firm's fundamental approach to business and how it competes (Ang & Massingham, 2007). Corporate environmental practices each have their own set of peculiarities. In fact, these policies and practices have a strong influence on the international reputation (Dowell et al., 2000) and legitimacy (Bansal, 2005) of the company, are highly regulated (Rugman & Verbeke, 1998), and are not necessarily visible to consumers (Christmann, 2004). Environmental standardization strategy implies that the MNCs self-regulate their environmental conduct, which means that there is a firm's commitment to control its own conduct beyond what is required by the law through voluntary environmental initiatives (Christmann & Taylor, 2006).

The environmental standardization decision within MNCs is initially costly since it requires a considerable investment in environmental technologies and processes in order to apply them in the different countries. Porter and van der Linde (1995) argue that MNCs benefit from higher environmental standards in their home market because such standards induce them to develop superior environmental management capabilities, which improve an MNC's international competitiveness once

environmental regulations are raised in other countries. However, this situation only happens when the home government has sufficient foresight to anticipate the environmental regulations of all other countries and the home country is a very large, triad-based economy whose influence on the world economy is immense (Rugman & Verbeke, 1998).

Globalization proponents state that lower barriers to trade encourage firms to transfer environmental technologies from countries with stricter environmental standards to developing countries, which lack access to environmental technologies and capabilities (Drezner, 2000). Other works have revealed that there are a variety of benefits resulting from implementing homogeneous environmental management systems within the organizational structure, such as ISO 14001. In fact, firms can increase recycling activity as well as reductions in air emissions, solid waste, and energy usage. In addition, some valuable but less easily quantifiable benefits such as risk reduction and company image can be obtained (e.g. Alberti, Cain, Calabrese, & Rossi, 2000; Darnall, 2006; Florida & Davison, 2001).

The creation of environmental standards helps firms to gain legitimacy among critical stakeholders along the supply chain (e.g. Cordano, Marshall, & Silverman, 2010; Eiadat, Kelly, Roche, & Eyadat, 2008). In the context of MNCs, Christmann (2004) shows that perceived government pressures about the international harmonization of environmental regulations contribute to adoption of stringent global environmental standards; perceived customer pressures contribute to standardization of environmental communication; and perceived industry pressures relate to

standardization of operational environmental policies. Thus, adopting environmental standards is consistent with pursuit of global competitive strategies.

In order to undertake a standardized approach to environmental issues by MNCs, we state that both a high level of slack resources and a low environmental institutional distance between headquarters' and subsidiaries' countries are required (quadrant 4, Figure 1).

2.4.1 Environmental institutional distance and environmental standardization strategy

Due to most environmental regulations being designed at the level of nation states (Rugman & Verbeke, 1998a), the influence that the headquarters' or subsidiaries' environmental regulatory dimension may have on the environmental standardization strategy within the MNC has been widely debated. Results have not been definitive. While some works have suggested that MNCs have competitive incentives to develop a standard approach in the whole network using the headquarters' regulation which is usually more stringent (e.g. Porter & van der Linde, 1995; Rappaport & Flaherty, 1992), others have suggested that MNCs find more advantages by locating dirty operations through subsidiaries in countries with lax environmental regulations (Stewart, 1993). Furthermore, the home and host countries' environmental regulations by themselves are not the only factor that affects the environmental standardization strategy within MNCs. Evidence suggests that even if formal environmental regulations are identical across countries, de facto regulations may differ as a result of differences

in countries' capacities to implement, monitor, and enforce regulations (Dasgupta & Hettige, 2000). Finally, there are differences in countries' capacities to tolerate, dilute, absorb or ignore pollution, as well as differences in economic and environmental priorities (Christmann & Taylor, 2001). Consequently, we propose that the institutional distance in terms of environmental issues, and not the specific institutions and environmental regulations in each country, will be more relevant in deciding whether environmental standardization strategy is finally implemented.

The literature distinguishes two different considerations regarding the relation between institutional distance between countries and the MNC's standardization strategy. On the one hand, it is shown that standardization of managerial practices is easier between countries with similar institutional structures. Ang and Massingham (2007) show that when the pressures for economies of scope are high and pressures for cultural responsiveness are low, the standardization decision is the most appropriate. In addition, a low institutional distance contributes to adjusting the legitimacy requirements of a country that is institutionally similar to its home country (Kostova & Zaheer, 1999). Consequently, a high institutional distance between countries would create a liability of foreignness for firms doing business abroad (Orr & Scott, 2008; Zaheer & Masakowski, 1997). On the other hand, another view suggests that countries' differences might drive creation of international standards within MNCs in order to unify their management rules (Christmann & Taylor, 2006). Thus, the MNC would tend to create its own internal institutional structure through homogeneous management models that justify the MNC's conduct worldwide (Kostova et al., 2008).

Therefore, considering the scarce attention that has been paid to the influence of countries' environmental institutional profile beyond the cross-country analysis of environmental regulations, we expect that MNCs take advantage of the small environmental institutional distance effect between countries to gain easily a good level of legitimacy (Kostova & Zaheer, 1999) and to standardize their environmental practices at a low cost.

Hypothesis 1: The lower the environmental institutional distance between the headquarters and subsidiaries' countries, the greater the environmental standardization within the MNC.

2.4.2 Slack financial resources in MNCs and environmental standardization strategy

MNCs that decide to implement environmental standards within their internal network need to develop a set of non-location-bound green FSAs that go beyond the compliance with national or international environmental regulations (Rugman & Verbeke, 1998). As has been mentioned previously, this strategy initially requires a substantial investment in order to create and transfer environmental practices within the firm (Christmann & Taylor, 2001). Therefore, MNCs' slack resources play an important role in the creation of environmental standards within MNCs. Slack can accrue as a result of organizational performance in prior periods, as a planned buffer, or as a result of poor planning (Voss, Sirdeshmukh, & Voss, 2008). Considering the different types of slack, the financial slack is of great importance. This type of slack refers to the level of liquid assets that is available to an organization (Kraatz & Zajac,

2001). Perfectly divisible for allocation to multiple activities, it is the least absorbed form of slack and the easiest to redeploy (Greve, 2003). It is argued that there should be less motivation to conserve and a greater willingness to deploy financial slack to risky exploration that can strengthen an organization's long-term position (Levinthal & March, 1993). Nevertheless, other relevant findings show that companies equipped with too much financial slack may become complacent and overly optimistic, and feel less compelled to make investments in R&D activities (George, 2005).

Studies have shown a positive relationship between corporate environmental and financial performance (e.g. Hart, 1995; Russo & Fouts, 1997; Smith, 2003). Slack resources theory states that prior corporate financial performance may provide the slack resources necessary to engage in corporate social responsibility. Since corporate social performance represents an area of high managerial discretion, the initiation of voluntary environmental policies may, to a large extent, depend on the availability of excess funds. Indeed, if managers have more discretionary financial slack at their disposal, they can better view environmental issues as opportunities rather than as threats (Bansal, 2005; Sharma, 2000). In contrast, when financial slack is low, other issues dominate the mindset of management, relegating environmental issues to lower priority (Henriques & Sadorsky, 1996).

Considering environmental practices as risky exploration activities (Voss et al., 2008), and the little attention that has been paid to the influence that the existence of slack financial resources in MNCs may have on the creation of non-location-bound green FSAs, it is relevant to determine whether financial slack effectively contributes

to generating this type of green FSA. Hence, assuming the great importance that headquarters have in the design of a sustainable advantage through an MNC's network (Kuemmerle, 1999), we propose the following hypothesis:

Hypothesis 2: The headquarters' slack financial resources have a positive influence on the environmental standardization decision within the MNC.

2.4.3 The moderating influence of slack resources on the relationship between environmental institutional distance and environmental standardization within MNCs

MNCs from quadrant 3 (see Figure 1) are those companies with units based in high-distance countries (deterring the potential of environmental standardization) and with a high level of slack resources (positively influencing the environmental standardization). In this context, companies can generate a set of location-bound green FSAs in specific countries, which are not transferred within their internal network. Then they would not adopt an environmental standardization strategy. However, standardization strategy has strong positive effects as well. Therefore these MNCs need to decide whether they should destine efforts to adopt an environmental standardization strategy within very different countries.

On the one hand, since each country's institutional profile is very complex the implementation of standardized environmental practices worldwide may be difficult (Kostova & Roth, 2002). Other works show that companies that decide to introduce their operations in foreign countries encounter more environmental difficulties than local firms (e.g. King & Shaver, 2001). Additionally, these firms may obtain great

benefits in the short-term from generating and applying location-bound green FSAs in specific countries.

On the other hand, the standardization strategy is a cost-reducing strategy since the knowledge can be transferred easily within the company (Bartlett & Ghoshal, 1989). It is also argued that by specifying a single and stringent environmental standard within the MNC, performance monitoring and evaluation costs would be reduced. This reason would be supported by the fact that a single set of values, specifications and procedures can be deployed throughout the world, without the need to consider local deviations from the norm (Dowell et al., 2000). Adopting an internal corporate environmental standard ahead of legal requirements contributes to reducing special interest group pressures, and may result in positive reputation effects for the MNC, an improvement in its transparency (Dowell et al., 2000), and international institutional legitimacy (Bansal, 2005; Kostova et al., 2008). Indeed, this latter type of legitimacy goes beyond the one obtained at the national level (MNCs from quadrant 2).

Under these circumstances, we state that MNCs from quadrant 3 are willing to convert location-bound into non-location-bound green FSAs in order to take advantage of all the benefits derived from an environmental standardization strategy. Therefore these companies would reduce the negative impact that a high environmental institutional distance between countries has on the adoption of an environmental standardization strategy. Definitely MNCs from quadrant 3 would move to quadrant 4. Considering the great importance that headquarters have in the design of a sustainable advantage in the MNC (Kuemmerle, 1999), we propose the following hypothesis:

Hypothesis 3: The greater headquarters' slack financial resources are, the lower will be the negative effect that the environmental institutional distance between the countries has on the environmental standardization within the MNC.

2.5 Research methods

2.5.1 Sample and data

We focus on MNCs from three industries: chemical (SIC Code 28), energy and petroleum (SIC Code 29), and industrial machinery (SIC Code 37). We chose these industries because they are greatly affected by environmental issues (King and Shaver, 2001). Countries that have been considered are USA, Canada, Mexico, France and Spain. We have chosen these five countries because they offer a good balance between environmental institutional differences, economic connections, and availability of data. Their national environmental registries include detailed information about their facilities' releases and their belonging to a company's corporate tree.

In order to select our sample we used Standard & Poor's database (Capital IQ, 2008). We began by selecting 309 MNCs working in one of the three selected industries and with headquarters based in USA, Canada, Mexico, France or Spain. Each MNC included in our sample was required to have at least one subsidiary based in one of the five countries, but different from the headquarters' country. We only considered those subsidiaries that belonged to the same headquarters' industry. Once we selected the 309 MNCs, the next step consisted of searching facilities'

environmental information in the national environmental registries[3]. We excluded local sales and distribution centre facilities. Our final sample consists of 210 cases (headquarters–subsidiary), and 135 MNCs to give a total of 1872 facilities. The majority of headquarters are based in USA and France (96 from USA, 31 from France, five from Canada, and three from Mexico). In contrast, subsidiaries are more scattered (18 from USA, 73 from Canada, 66 from France, 17 from Spain, and 36 from Mexico). In relation to the industries' distribution, there are 97 cases from the chemical industry, 39 cases from the energy and petroleum industry, and 74 cases from the industrial machinery industry.

2.5.2 Variable measurement

Environmental standardization within the MNC. We analysed the air releases in 2005 for each facility in our sample. We considered the 50 most polluting substances included in the list of pollutants to be reported and whether the threshold value is exceeded and published in the European Pollutant Emission Register (EPER). Since each pollutant has a different impact on the natural environment, we weighted each pollutant by its degree of toxicity (King & Shaver, 2001). To do this we turned to the Reportable Quantities (RQ) measure from the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) statute. Once we calculated the air releases in kilograms at the facility level, we aggregated this data to obtain the headquarters' and subsidiaries' air releases. Finally, with the purpose of obtaining a

[3] USA: Toxic Release Inventory (TRI)
Canada: National Pollution Release Inventory (NPRI)
France and Spain: European Pollutant Emission Register (EPER)
Mexico: Registro de Emisiones y Transferencia de Contaminantes (RETC).

value that shows the environmental impact that each unit has on the natural environment, we calculated a ratio that expresses the coefficient between the air releases of each unit and its total revenues in 2005. In order to calculate the degree of environmental standardization between headquarters and subsidiaries we subtracted the headquarters' environmental ratio from the subsidiary's environmental ratio. A high value shows that headquarters' and subsidiaries' environmental conduct are different. A low value indicates that both the headquarters and the subsidiaries standardize their environmental practices. We normalized this variable in order to avoid detrimental effects of dispersed values (Hair, Andersson, Tatham, & Black, 2008).

Environmental institutional distance between countries. We measured the countries' environmental institutional profile through the Environmental Sustainability Index (ESI) in 2005, published by the Yale Center for Environmental Law and Policy and the Center for International Earth Science Information Network. ESI benchmarks the ability of nations to protect the natural environment. It does so by integrating 76 data sets – tracking natural resource endowments, past and present pollution levels, environmental management efforts, and a society's capacity to improve its environmental performance – into 21 indicators and five different dimensions of environmental sustainability. The environmental institutional distance between countries was calculated considering the differences between the global ESI value of the headquarters' and subsidiary's countries. This variable was normalized to avoid problems related to the dispersal of the information (Hair et al., 2008). Values that are close to zero show that headquarters' and subsidiaries' countries have similar environmental institutional profile. High values reveal that countries have different

environmental institutional profile, and consequently protect the natural environment differently.

Headquarters' slack financial resources. Financial slack is used to recognize extra liquidity that could be invested in sustainable development activities. Headquarters' current assets over current liabilities in 2005 were used in our analysis (Bansal, 2005).

Control variables. These include headquarters and subsidiary size, industry, headquarters' and subsidiaries' countries' environmental regulations, and headquarters' financial performance.

Headquarters and subsidiary size: Firm size is an important determinant of environmental conduct (Aragón-Correa, 1998; Martín-Tapia, Aragón-Correa, & Rueda-Manzanares, 2010) as well as of MNC strategy standardization (Yip, Johansson, & Roos, 1997). Headquarters' and subsidiaries' sizes were measured as the natural logarithm of their number of employees in 2005 (King & Shaver, 2001).

Industry: There might be incentives for companies to sign up to environmental industry codes. These codes can influence environmental management practices because they can produce a form of peer-pressure from other firms within the industry (Lenox & Nash, 2003). We controlled for type of industry by the inclusion of two dummy variables (chemical industry, and energy and petroleum industry) in order to consider the effects of our three different industries (chemical industry, energy and petroleum industry, and industrial machinery industry).

Headquarters' and subsidiaries' countries' environmental regulations: We considered the environmental regulations that each headquarters' and subsidiary's country has. We used the environmental dimension "Social and Institutional Capacity", contained in ESI 2005. We assessed the level of stringency, innovation and consistency that the different environmental regulations have in each country. We normalized this variable to avoid detrimental effects of dispersed values (Hair et al., 2008).

Headquarters' financial performance: Environmental management and corporate social responsibility are related to financial performance (Smith, 2003). Headquarters' return on equity in 2005 was used as a proxy of financial performance (Bansal, 2005).

2.6 Results

We used a moderated hierarchical regression analysis, introducing moderator effects as two-way interaction terms in the final step (Cohen & Cohen, 1984). Before testing our hypotheses, we assessed the likely extent of common method variance, the conformity of our data's distribution to the assumptions to our analytic tools (normality assumptions), and the extent of multicollinearity among the independent and moderator variables. Analysis of variance inflation factors (VIF) show that multicollinearity was not a problem, the VIF values ranging below 5 as recommended by the literature (Hair et al., 2008).[4] Table 2-1 shows the descriptive statistics and correlations. No high correlation between our variables was observed.

[4] The VIF values for last step range from 1.06 to 1.65, and the mean VIF was 1.35.

Table 2-1 Descriptive statistics and correlations

	Mean	Standard deviation	Environmental standardization within the MNC	Headquarters' size	Subsidiar y size	Chemical industry	Energy and petroleum industry	Headquarters' country's environmental regulations	Subsidiary's country's environmental regulations	Headquarters ' financial performance	Environmental institutional distance
Environmental standardization within the MNC	0.46	1.48	1.00								
Headquarters' size	10.48	1.19	–0.13*	1.00							
Subsidiary size	6.25	1.56	–0.15*	0.37***	1.00						
Chemical industry	0.46	0.50	0.15*	–0.46***	–0.25***	1.00					
Energy and petroleum industry	0.19	0.39	–0.08	0.15*	0.13*	–0.44***	1.00				
Headquarters' country's environmental regulation	–0.01	1.03	0.02	0.05	–0.11†	–0.01	–0.03	1.00			
Subsidiary's country's environmental regulation	0.13	0.90	0.12*	–0.12*	0.05	0.01	–0.01	–0.07	1.00		
Headquarters' financial performance	0.06	0.51	–0.40***	0.18**	0.15*	0.04	0.05	–0.01	–0.12*	1.00	
Environmental institutional distance	–0.08	0.90	0.11†	–0.12*	0.17**	–0.01	0.12*	–0.36***	–0.07	0.01	1.00
Headquarters' slack financial resources	–0.03	0.59	–0.27***	–0.12*	–0.01	–0.02	–0.01	–0.18**	0.02	0.12*	0.01

† $p < 0.10$
* $p < 0.055$
** $p < 0.01$
*** $p < 0.001$

Table 2-2 shows the results of the regression analyses testing the hypotheses. In model 1 we included the control variables: headquarters' and subsidiaries' size, industry, headquarters' and subsidiaries' countries' environmental regulations, and headquarters' financial performance. In model 2 we added the variable of environmental institutional distance between countries. In model 3 we incorporated the variable of headquarters' slack financial resources. Finally, in model 4 we included a variable that assesses the moderating effect of headquarters' slack financial resources on the relationship between environmental institutional distance between countries and MNCs' environmental standardization strategy. We wanted to improve the original model introducing key significant variables.

Table 2-2 Results of the moderated hierarchical regression analysis[a]

	Model 1	Model 2	Model 3	Model 4
Intercept	–0.02 (1.03)	–0.26 (1.02)	0.38 (1.01)	0.36 (1.02)
Headquarters' size	0.07 (0.09)	0.11 (0.09)	0.05 (0.09)	0.06 (0.10)
Subsidiary size	–0.07 (0.06)	–0.10 (0.07)	–0.10 (0.06)	–0.10 (0.06)
Chemical industry	0.53 (0.24)	0.53^{*} (0.23)	$0.43^{\dagger}$ (0.23)	$0.44^{\dagger}$ (0.23)
Energy and petroleum industry	0.09 (0.27)	0.02 (0.27)	–0.02 (0.26)	–0.02 (0.26)
Headquarters' country's environmental regulation	0.02 (0.09)	0.10 (0.10)	0.04 (0.09)	0.03 (0.09)
Subsidiary's country's environmental regulation	0.13 (0.10)	0.16 (0.10)	0.16 (0.10)	0.16 (0.10)
Headquarters' financial performance	-1.16^{***} (0.19)	-1.16^{***} (0.19)	-1.05^{***} (0.18)	-1.05^{***} (0.18)
Environmental institutional distance		0.29^{*} (0.11)	0.25^{*} (0.11)	0.25^{*} (0.12)
Headquarters' slack financial resources			-0.55^{**} (0.16)	-0.55^{***} (0.16)
Headquarters' slack financial resources X Environmental institutional distance				–0.03 (0.19)
R^2	0.20	0.22	0.27	0.27
Adjusted R^2	0.17	0.19	0.24	0.23
F Change	7.24^{***}	6.23^{**}	12.07^{**}	0.03

Dependent variable: environmental standardization within the MNC
[a] Standard errors are in parenthesis
N = 210;
† $p < 0.10$; * $p < 0.055$; * $p < 0.01$; *** $p < 0.001$

Negative coefficients show a positive effect on the environmental standardization within the MNC. In contrast, positive coefficients show a negative impact on the environmental standardization within the MNC.

Firstly, we see that the variable chemical industry has a negative and significant effect on the MNCs' environmental standardization strategy. In contrast, headquarters' financial performance is positively related to the MNCs' environmental standardization strategy. The other control variables are not significant.

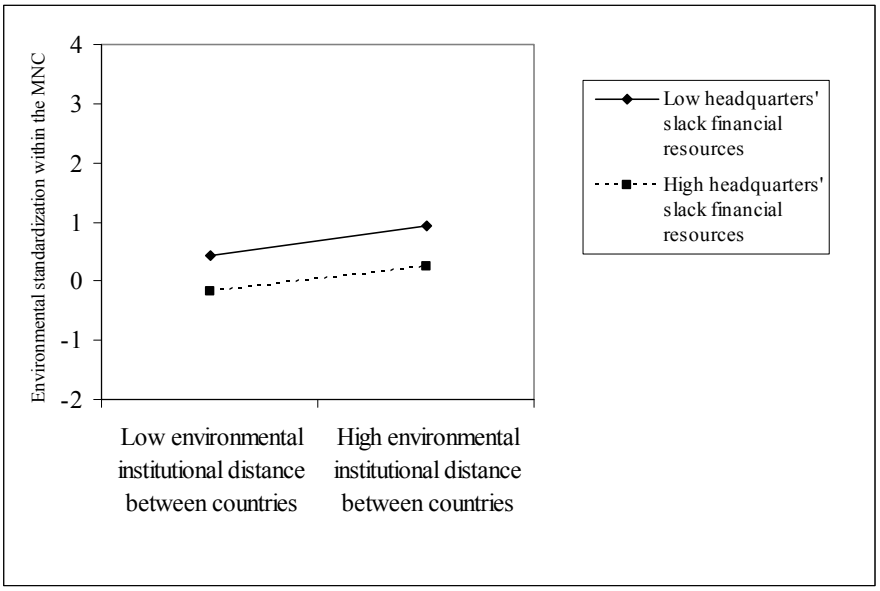
Secondly, the environmental institutional distance between countries has a negative and significant impact on the standardization of environmental practices. Stated differently, the higher the environmental institutional distance, the less will be the degree of environmental standardization within the MNC. This evidence reinforces the fact that the institutional distance between countries better explains the MNC's environmental standardization strategy than the analysis of the headquarters' or subsidiaries' countries' environmental regulations. Hence hypothesis 1 is supported by the data.

Thirdly, we observe that headquarters' slack financial resources have a positive and significant effect on the standardization of those practices ($\beta = -0.55$, $p < 0.001$). This implies that the greater headquarters' slack financial resources are, the greater the environmental standardization within the MNC will be. Thus hypothesis 2 is also supported.

Finally, the headquarters' slack financial resources have a positive but non-significant interacting effect on the negative relationship between the environmental institutional distance between headquarters' and subsidiaries' countries and the environmental standardization within the MNC. We plotted this interaction effect using

procedures outlined in Venkatraman (1989). As we see in Figure 2-2, the fact that headquarters have a high availability of slack financial resources does not lead to reducing the negative effect that a high environmental institutional distance between countries has on this strategy.

Figure 2-2 The moderating effect of headquarters' slack financial resources on the relationship between environmental institutional distance between countries and environmental standardization within the MNC



The level of standardization is greater in headquarters with high availability of slack financial resources (lower line) than in headquarters with low availability of slack financial resources (upper line). Nevertheless, we can see in both cases that the higher institutional distance, the lower will the environmental standardization within the MNC be. Thus hypothesis 3 is not supported.

2.7 Discussion and conclusions

There is a general thought relating to the MNCs' code of conduct that ensures that their activities have a more negative impact on the natural environment than that of other firms (e.g. Vernon, 1992). In contrast, it has been suggested that MNCs increasingly self-regulate their environmental conduct. Therefore companies would not take advantage of the different levels of permissiveness that countries' environmental regulations have (Christmann, 2004). The purpose of this paper is to explain the different international environmental strategies adopted by MNCs and the drivers that lead MNCs to standardize their environmental practices. We distinguish four different contributions.

First, we advance on the CSA–FSA traditional configuration to show the environmental strategies that MNCs can use (Rugman & Verbeke, 1998a). In relation to the CSAs, we consider the global environmental institutional distance between countries. In addition, we apply the slack financial resources concept as an antecedent to analyze the level and type of green FSAs that MNCs can generate and transfer. As a result, we distinguish four different international environmental strategies: pollution haven hypothesis (MNCs that undertake an opportunistic environmental conduct, locating their most polluting activities in countries with lax environmental regulations), environmental compliance (MNCs with low level of slack resources and that only gain national legitimacy in countries with similar environmental institutional profiles), environmental resources (MNCs with units based in high-distance countries and with a high level of slack resources that leads these companies to generate location-bound

green FSAs in specific countries, which are not transferred to the rest of the units), and environmental standardization (MNCs with units based in low-distance countries and with a high level of slack resources that allows them to generate non-location-bound green FSAs).

Second, we test whether the two requisites of the environmental standardization strategy proposed are effectively supported. On the one hand, we find that a low environmental institutional distance between the home and the host country encourages MNCs to generate and transfer environmental standards within their internal network. On the other hand, we show that MNCs with headquarters with a greater availability of slack financial resources are more willing to generate high non-location-bound green FSAs.

Third, we analyze whether MNCs that generate location-bound green FSAs and with units based in high-distance countries have incentives to undertake an environmental standardized approach. We find that sampled headquarters with a high availability of slack financial resources do not contribute to reducing the negative effect that a high institutional distance between countries has on the adoption of environmental standards. Consequently, these MNCs generate location-bound green FSAs in specific countries and do not need to make extra-investments in order to convert location-bound into non-location-bound green FSAs. As they obtain a high volume of slack resources, they are not willing to change their internal orientation. In addition, high-distance countries may deter the implementation and internalization of environmental standards (Kostova & Roth, 2002). Finally, since countries are

institutionally very different, they may be forced to apply green FSAs only in specific contexts.

Fourth, using the CSA–FSA configuration we combine both the institutional and the resource–based view in order to understand the environmental management of MNCs. In fact, not only do these organizations give importance to the green resources that can be generated, but also justify their existence through their direct contact with agents from the countries where they operate (Kolk & Pinkse, 2008; Rugman & Verbeke, 2001).

We can conclude that not all the MNCs are interested in adopting an environmental standardization strategy. Although previous findings suggest that MNCs are increasingly standardizing their environmental practices due to different stakeholders' pressures (e.g. Christmann, 2004; Rappaport & Flaherty, 1992), we can apply this generalization to those MNCs with units based in low-distance countries and that have a great availability of slack resources that lead them to create valuable non-location-bound green FSAs. A low institutional distance encourages MNCs to gain legitimacy in those countries since they do not find difficulties in assimilating their institutional requirements. Additionally, since these MNCs can easily transfer their practices in these countries, they prefer to generate, through their great availability of slack financial resources, non-location-bound green FSAs to reduce their costs (e.g. Bartlett and Ghoshal, 1989), increase their reputation and transparency (e.g. Alberti et al., 2000; Dowell et al., 2000), and gain legitimacy (Bansal 2005; Kostova et al., 2008). Consequently, additional critics of the Porter hypothesis of home-based environmental

regulations beyond the home country size and the difficulties in anticipating the environmental regulations of all countries (Rugman & Verbeke, 1998) are necessary. We show that institutional distance between the home and the host country is the external factor that explains better this strategy, and not the headquarters' or subsidiaries' countries' environmental regulations.

With this paper we aim to shed light on the way in which MNCs' activities affect the natural environment. Since MNCs are key actors in terms of economic and environmental development, they can promote social and environmental values in the society, and at the same time encourage other organizations and institutions to adopt a socially responsible attitude (Kolk & Van Tulder, 2010). It is required that all public and private agents become involved with MNCs' advanced environmental policies through the creation of common social and political mechanisms worldwide that lead organizations to adopt more stringent environmental standards in all the locations where they operate. Indeed, environmental standardization can not only reduce MNCs' ability to exploit cross-national differences in environmental regulations, but is likely to create frictions with organizations in emerging economies which develop opportunistic approaches to environmental problematic.

From a managerial viewpoint, this research encourages managers to develop an environmental standardization strategy. Through this strategy, the MNC will be able to take advantage of positive benefits, such as cost reduction, and improvement of corporate reputation, transparency, and international institutional legitimacy.

2.7.1 Limitations and future research

Although we use secondary data in our sample to avoid bias in the measures of variables, we found some limitations in this research. The main one is that we have assessed the headquarters' and subsidiaries' environmental performance through their air releases. This indicator is incomplete since there are other environmental measures of performance (water and earth releases, waste recovery and processing) (Etzion, 2007). In addition, we use cross-sectional data since we do not include observations in different years. Future works would be benefit from using data that were collected longitudinally.

There are also limitations related to the ESI effectiveness. Indeed, its methodology does not consider the possible interdependencies between variables in the different dimensions of the index. Moreover, the ESI is a relative index in which countries are scored relative to all other countries, which makes it difficult to measure progress towards sustainability for individual countries or the world as a whole (Niemejer, 2002). Finally, although large governments apply pressure, we need to take into consideration that national environmental registries are still incomplete and uniformity between them may not be complete.

For future research, if data were available, it would be interesting to include environmental information of subsidiaries based in countries from Asia and Africa to enrich the transnational analysis and give more robustness to our results (Kolk & Lenfant, 2010). Personal interviews with managers can provide detailed description of their understanding of environmental management attitudes. Furthermore, future

research could consider the strategic importance that subsidiaries may have on the MNCs' environmental management. In fact, subsidiaries can establish diverse valuable relationships with stakeholders (Rugman & Verbeke, 2001) that can contribute to generating non-location-bound green FSAs. Finally, future works could examine how the strategic orientation of MNCs (transnational, global, multidomestic, and home replicator) could moderate the extent to which headquarters and subsidiaries adapt to local environmental practices to gain national legitimacy.

Note

We are grateful to Professor Alan M. Rugman (University of Reading, Henley Business School) for his helpful suggestions on earlier versions. This research was supported by grants from the Spanish Ministry of Education and Science, and the Andalusian Regional Government (Excellence Research Project P06-SEJ-2356). We also want to thank members of group ISDE of the University of Granada for their insightful comments.

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CAPÍTULO 3

ENVIRONMENTAL STANDARDS IN MULTINATIONAL ENTERPRISES: TESTING INSTITUTIONAL DISTANCE DIMENSIONS

ENVIRONMENTAL STANDARDS IN MULTINATIONAL ENTERPRISES: TESTING INSTITUTIONAL DISTANCE DIMENSIONS

Abstract

This paper examines the influence that institutional distance between countries has on adoption of environmental standards within the multinational enterprise. Using an extended version of the country-specific advantages / firm-specific advantages configuration, we break down the institutional distance between the host and home country into distances in relation to regulatory, normative and cognitive dimensions of institutions. We show that not all the national institutional dimensions have the same influence on the generation of environmental standards. Whereas the regulatory dimension leads multinational enterprises to adapt their environmental practices to each country's institutional requirements, the cognitive and normative distance encourages these firms to transfer their environmental practices, independently of the countries where their units are based.

Keywords: Environmental standards, country-specific advantages, firm-specific advantages, institutional distance between countries, regulatory, cognitive and normative dimensions.

3.1 Introduction

Multinational enterprises (MNEs) have a very complex institutional structure since they have units (headquarters and subsidiaries) based in different countries (Kostova & Roth, 2002). Institutional complexity in MNEs exists because they need to consider the home and host country's institutional features (Kostova, 1999), and their own internal institutional profile (Kostova, Roth, & Dacin, 2008).

MNEs' environmental management is highly controversial. On the one hand, it has been stated that MNEs can take advantage of the resulting cross-country differences in environmental regulations by moving production capacity to the country most willing to use lax environmental standards as an investment inducement (Leonard 1988). In contrast, other works reveal that these firms tend to create strict environmental standards within their internal network, independent of the different national environmental regulations' level of stringency (Christmann & Taylor, 2001, 2002; Rappaport & Flaherty, 1992). Environmental standardization strategy in MNEs implies that these firms self-regulate their environmental conduct to transfer efficiently a set of green resources and capabilities to the rest of the units (Christmann, 2004; Rugman & Verbeke, 1998b). Therefore they reinforce their internal institutional profile, gain internal coherence, and international institutional legitimacy (Kostova et al., 2008), and increase their transparency and reputation (Christmann, 2004). Furthermore, the generation of such standards requires innovation and high initial costs (Christmann & Taylor, 2001; Rondinelli & Vastag, 1996).

However, explaining MNEs' environmental management through the analysis of headquarters' and subsidiaries' countries' environmental regulations is not enough. In fact, countries' institutional profile is very complex (DiMaggio & Powell, 1983). The national environmental regulatory dimension cannot by itself explain environmental management within MNEs (Christmann & Taylor, 2001). Similar national environmental regulations do not necessarily imply that the degree of country environmental development is the same, since countries may have different levels of resources and capabilities to monitor environmental issues (Dasgupta, Hettige, & Wheeler, 2000). Consequently, a consideration of different national institutional dimensions is required. International literature widely recognizes three dimensions to define the national institutional profile: regulatory, cognitive and normative (Hoffman, 1999; Kostova & Zaheer, 1999; Scott, 1995; Xu & Shenkar, 2002).

We use an extended version of the country-specific advantages (CSAs)/firm-specific advantages (FSAs) configuration (Rugman, 1981) to propose the influence that each national dimension has on the adoption of environmental standards in the MNE. CSAs refer to location advantages specific to the country in which the unit of the MNE is located. FSAs refer to advantages specific to a firm regardless of location (Rugman & Verbeke, 1992) and can be generated only in specific countries (location bound) or can be easily transferred within the MNE's internal network (non-location bound) (Rugman & Verbeke, 2001). In this paper, instead of applying the traditional CSA concept, we analyze the institutional distance between the home and the host country as a CSA and its effect on the generation of non-location-bound green FSAs via standardization.

Thus, we propose that the institutional distance between the home and the host country is one of the most relevant external factors that explain the MNEs' environmental standardization. Institutional distance between countries reveals the degree of institutional similarity between them (Kostova, 1999). It has been argued that a high institutional distance deters the transfer of practices since each country has different structures and mechanisms that make difficult the internalization of new practices (Kostova & Roth, 2002; Kostova & Zaheer, 1999). Nevertheless, other works reveal that MNEs are not only worried about gaining national legitimacy in each country, but also try to reinforce their own internal institutional profile in order to gain internal coherence and share their business model within their internal network (Bartlett & Ghoshal, 1989; Christmann & Taylor, 2006; Kostova et al., 2008).

Whereas other works have studied the effect of the institutional distance between the home and the host country regarding host country selection or foreign market entry strategies (Xu & Shenkar, 2002), our purpose is to analyze the influence that the environmental institutional distance between the home and the host country, in terms of these three national dimensions, has on the adoption of environmental standards within the MNE. Using a sample of 128 MNEs in three different industries with headquarters and subsidiaries based in the USA, Canada, France and Spain, we find that not all the institutional distance dimensions have the same influence on the generation of these standards. A high environmental institutional distance between countries with reference to certain dimensions encourages these firms to strengthen their internal institutional system, whereas other dimensions drive MNEs to adapt their environmental practices according to each country's requirements.

The main contributions of our paper are threefold. First, we consider the institutional distance's influence on the generation of environmental standards within the MNEs instead of only considering the countries' environmental regulations. Second, we update the CSA–FSA configuration helping to understand that not only the country- and firm-specific advantages influence the MNEs' corporate strategies, but also that the distance between the home and the host country plays a relevant role to delimitate the existence of green firm advantages in all the locations in which the MNEs operate, or only in some of them. Third, we provide evidence for the governments and the rest of stakeholders to control and monitor the MNEs' environmental impact in each country. Therefore they can encourage these companies to protect the natural environment and, at the same time, be efficient.

This paper proceeds with a theoretical review in section two. In the third section we focus on explaining each institutional distance dimension and its influence on the generation of non-location-bound green FSAs. The fourth section reports on the methodology. The fifth section describes the empirical results, and the final section offers the discussion and conclusions.

3.2 Green firm-specific and country-specific advantages

In order to study the environmental standardization within MNEs, a combined analysis of country and firm-specific advantages is required. Both factors justify the MNEs' existence. Therefore, we use the traditional CSA–FSA configuration (Rugman, 1981). The strategic complexity for MNEs is that they have to combine FSAs and

CSAs, which usually means adapting FSAs to attain optimal CSA–FSA configurations (Rugman & Verbeke, 1992, 2003).

3.2.1 Green firm-specific advantages

FSAs refer to advantages specific to a firm regardless of location (Rugman & Verbeke, 1992). Resource commitments to activities such as pollution prevention and waste reduction have a strategic use only if they lead to the creation of green FSAs. Whether this is the case depends on the leveraging potential of resource commitments and the flexibility regarding their reversibility (Rugman & Verbeke, 1998b). Leveraging potential shows whether committing resources to environmental management leads to the creation or improvement of FSAs that simultaneously advance environmental and industrial performance (Kolk & Pinkse, 2008). Environmental investments have this potential if they enable MNEs to improve performance in existing markets, enter new markets, or boost technological capabilities valuable in the long run. Flexibility makes it easier for firms to decide upon resource commitments, as mistakes can be corrected. However, environmental investments are not easily reversible and consequently firms may be hesitant to engage in this kind of investment (Kolk & Pinkse, 2008; Rugman & Verbeke, 1998b).

Two types of FSAs can be clearly differentiated: non-location and location bound FSAs. On the one hand, non-location-bound FSAs usually lead to scope economies and can be transferred abroad at low marginal costs and used effectively in foreign operations without substantial adaptation. On the other hand, location-bound FSAs can be defined as FSAs that benefit a company only in a particular location (or set of

locations) and lead to benefits of national responsiveness. These location bound FSAs cannot be easily transferred as an intermediate good and require significant adaptation in order to be used in other locations (Rugman and Verbeke 2001). The distinction between non-location and location bound FSAs as a resource-based interpretation of Bartlett and Ghoshal's work (1989) was developed by Rugman and Verbeke (1992, 1998a, 1998b). In relation to the green FSAs, MNE managers must decide whether specific green FSAs can be developed and used within individual countries (location bound) or whether they can be used globally through environmental standards (non-location bound) (Rugman & Verbeke, 1998a, 1998b).

Environmental standardization within MNEs implies that these firms generate a set of green non-location-bound green FSAs that can be easily transferred to the rest of their units (Rugman & Verbeke, 2001). Indeed, a firm self-regulates its environmental conduct due to a commitment beyond what is required by the law (Barnett & King, 2008; King & Lenox, 2000; Rappaport & Flaherty, 1992) through voluntary environmental initiatives (Christmann & Taylor, 2002). Lenox (2006) refers to the industry self-regulation, arguing that companies that belong to that association may considerably improve their operational efficiency. In fact, previous empirical findings show that companies experience efficiency gains as a result of adopting the types of pollution-prevention practices required by the industry association. To the extent that members are only exposed to these beneficial practices by participating in the self-regulatory program, firms may be motivated to self-regulate (King & Lenox, 2002). Firms can also voluntarily implement environmental management systems such as the ISO 14001 standard and achieve certification by independent third-party auditors

(Boiral, 2007; Christmann & Taylor, 2006; King, Lenox, & Terlaak, 2005; Roome & Wijen, 2006). ISO 14001 certification assumes that a firms' upper management has made an active environmental commitment, thereby facilitating and legitimizing requests for resources needed to attain the objectives laid down in the standard (Boiral, 2007). Globalization proponents state that lower barriers to trade encourage firms to transfer environmental technologies from countries with stricter environmental standards to developing countries, which lack access to environmental technologies and capabilities (Drezner, 2000). Other works show that firms operating in a developing country that sell a large proportion of their output to multinational customers within the country, or that export large proportions of their output to developed countries, are more likely to adopt environmental internationally certifiable management standards (Christmann & Taylor, 2001). It is also argued that environmental monitoring costs would be considerably reduced through the creation of these standards within the company, it not being necessary to adapt to the local norms of each country (Bartlett & Ghoshal, 1989). In addition, Christmann (2004) shows that pressures by different stakeholders (governments, industry and customers) contribute to global standardization of different dimensions of MNEs' environmental policies.

Finally, it is important to point out that proponents of the standardization also argue that MNEs can reinforce their internal structure (Christmann & Taylor, 2006), transparency (Christmann, 2004), reputation (Dowell, Hart, & Yeung, 2000), and international institutional legitimacy (Kostova et al., 2008).

3.2.2 Country-specific advantages

The peculiarities of MNEs arise particularly from the potential to leverage non-location-bound FSAs (Rugman & Verbeke, 2001). Similar or identical procedures for every subsidiary facilitate the exchange of experiences, breed internal consistency, enable benchmarking, and are clear to outsiders. Consequently, some MNEs strive to harmonize their environmental management system and standards at all locations (Christmann, 2004). Nevertheless, the situation in specific countries, for example, as a result of stakeholder or government pressures, may create location-bound green FSAs (Rugman & Verbeke, 2001). In some cases these can be used only in the country in question; in others they might help to increase MNEs' competitiveness elsewhere (Kolk & Pinkse, 2008).

CSAs refer to location advantages specific to the country in which the unit of the MNE is located. It is a wide concept that groups factors such as availability of natural resources, access to markets to sell products and services, factor costs (labor, capital and land), and knowledge-intensive assets such as skilled labor and public infrastructure (Dunning, 1998). It has been shown that MNEs are confronted not only by the issue of whether or not to develop green FSAs, but also by the fact that environmental regulations differ in each country (Rugman & Verbeke, 1998a, 1998b). However, CSAs are not only a result of national or international environmental regulations. In fact, the broader institutional framework plays an important role as well (Makino, Isobe, & Chan, 2004).

National institutional profile is very complex (DiMaggio & Powell, 1983; Kostova, 1999). For example, Scott (1995) states that institutions have three pillars: the regulative, the normative and the cognitive. Kostova and Roth (2002) recognize the importance of considering these three pillars or dimensions in cross-country analysis. Indeed, each dimension may have a different influence on the adaptation versus standardization decision of managerial practices within MNEs. First, the regulatory dimension of an institutional environment reflects the existing laws and rules in a particular national environment that promote certain types of behavior and restrict others (DiMaggio & Powell, 1983; Kostova, 1999). Second, the cognitive dimension reflects the widely shared social knowledge and cognitive categories used by people in a given country (Markus & Zajonc, 1985; Zucker, 1983). Third, the normative dimension reflects the values, beliefs, norms and assumptions about human nature and human behavior held by the individuals in a given country (Kostova & Roth, 2002).

However, it is important to remark that not only do MNEs face different national institutional dimensions, but also create their own internal institutional profile. The single operating model used by an MNE subunit has to be approved by many actors, who might perceive the unit to be part of different organizational fields (Kostova et al., 2008). Therefore, since these firms face complex institutional pressures and act on a large scale, they need to reinforce their own internal institutional profile (DiMaggio & Powell, 1993; Kostova et al., 2008), which is characterized by a set of internal procedures, principles and organizational culture that make certain practices and structures more acceptable and desirable than others (Kostova & Zaheer, 1999; Westney, 1993). From this lens, all units in an MNE might be viewed as belonging to

the same intraorganizational institutional field, which is contained within the boundaries of the firm. Such a field may be even stronger in exerting influence over its units than the traditional external field (country) discussed in neoinstitutionalism. This is because subunits are often more dependent on the parent company than their local external environments for critical resources. This internal institutional profile contributes to reducing organizational units' ambiguity, increasing MNEs' trust, and transferring a set of capacities and competences within the MNE (Bartlett & Ghoshal, 1989). Consequently, MNEs can promote their own legitimacy in each country, increase their transparency (Christmann, 2004), and involve in activities that are seen to be socially responsible by the stakeholders (Kostova et al., 2008).

3.3 National environmental dimensions and generation of non-location bound green FSAs: Hypotheses

Previous works suggest that the elements of the regulatory, cognitive and normative dimensions, including laws and regulations, cognitive structures and cultural norms, are issue-specific (Kostova & Roth, 2002; Rosenzweig & Singh, 1991). The application of these three national institutional dimensions to environmental issues is widely recognized by the community. Indeed, Hoffman (1999) uses the environmental regulatory, normative and cognitive dimensions to explain how they evolve through time and their influence on the environmental management of firms from the chemical industry in the USA.

We update the CSA–FSA configuration by considering the environmental institutional distance between the headquarters' and subsidiaries' countries as a CSA

that has a direct influence on the environmental standardization decision in the MNE. Therefore, we analyze whether a high environmental institutional distance between the home and the host country deters the creation of non-location-bound green FSAs within the MNE or, in contrast, if the company creates its own environmental standards through a reinforcement of its internal institutional system, independently of the countries' institutional profile. In Figure 3-1 we propose that the three national institutional dimensions have different impacts on the generation of location-bound and non-location-bound green FSAs within the MNE.

Figure 3-1 Environmental institutional distance dimensions and MNEs' green FSAs.

		MNEs' GREEN FSAs	
		LOCATION-BOUND GREEN FSAs	NON-LOCATION-BOUND GREEN FSAs
HIGH INSTITUTIONAL DISTANCE BETWEEN THE HOME AND THE HOST COUNTRY	REGULATORY	X	
	COGNITIVE		X
	NORMATIVE		X

According to each dimension's characteristics and the increasing role that the MNEs' internal institutional profile plays, we state that a high environmental institutional distance in the cognitive and normative dimensions is going to contribute to generating non-location-bound green FSAs within the MNE. In contrast, a high

environmental regulatory distance will lead MNEs to generate location-bound green FSAs only in specific countries, and consequently adapt their environmental practices to each country's legal requirements.

Regulatory, cognitive and normative dimensions may invoke different types of motivations for adopting social patterns that, in turn, may lead to different types and levels of adoption (DiMaggio & Powell, 1983). Hence, taking into account that each dimension reflects different facets of the same institutional environment, a separate analysis of each one to assess their influence on the generation of non-location-bound green FSAs within the MNE is necessary.

3.3.1 The national regulatory dimension and environmental standardization within MNEs

This dimension is invoked by a coercive motivation, which arises from asymmetric power relationships. The regulatory domain is the easiest domain to observe, understand, and interpret correctly because it is formalized in laws, rules, and regulations (Kostova & Zaheer, 1999). They guide organizational action and perspectives by coercion or threat of legal sanctions. Organizations accede to them for reasons of expedience, preferring not to suffer the penalty for non-compliance (DiMaggio & Powell, 1983). For instance, firms adopt new pollution control technologies to conform to environmental regulations (Hoffman, 1999).

The environmental regulatory dimension is basically conditioned by the countries' environmental legislation. The national and international environmental

regulations and their influence on the adoption of environmental strategies by MNEs have been widely studied (Rugman & Verbeke, 1998b). Results have not been definitive. Porter and van der Linde (1995) argue that it is good policy for a government to pass strict environmental regulations. Then firms based in that country will have to develop new core competencies in environmentally sensitive manufacturing. Consequently, they can go abroad and use their strong base as a staging ground to outperform other less environmentally sensitive firms in global markets. Nevertheless, several critics about this assumption reveal that this situation only would happen in case the home government has sufficient foresight to anticipate the environmental regulations of the rest of the countries. Moreover, this hypothesis would not work either if the home country is small, since its influence on the world economy would be insignificant (Rugman & Verbeke, 1998a). Other works indicate that transfer of green FSAs to relatively 'distant' countries (Ghemawat, 2001; Kostova, 1999) in terms of dissimilarity of environmental regulations usually results in higher adaptation costs (in order to realize location-specific 'linking' investments) for alignment with the CSAs of these particular host countries (King & Shaver, 2001; Rugman & Verbeke, 2005). In addition, it is argued that MNEs tend to locate their most polluting activities in those countries with lax environmental regulations (Stewart, 1993; Vernon, 1992). In contrast, recent studies show that MNEs create their own internal rules in the form of environmental standards independently of countries' environmental regulations (Christmann & Taylor, 2001, 2006). Finally, Christmann (2004) indicates that the rise in international governmental cooperation would contribute to harmonization of

environmental regulations across countries. However, most environmental regulations are still designed at the level of nation states (Rugman & Verbeke, 1998b).

Therefore, considering the environmental regulatory nature as coercive, it is expected that a high environmental regulatory distance between headquarters' and subsidiaries' countries will lead MNEs to generate location-bound green FSAs in specific countries. Indeed, if a practice is perceived by the employees at a recipient unit to be in conflict with the regulatory institutions in their country, it is highly unlikely they will engage in transferring and implementing it (Kostova & Roth, 2002), since there are severe sanctions in case of violations of national regulations. Moreover, foreign firms that decide to have operations in other countries usually face more legal environmental requirements by the different stakeholders than the rest of local firms (King & Shaver, 2001). Consequently, foreign firms are required to adapt their environmental practices according to each country's legal requirements in order to gain national legitimacy and be able to have operations. Thus MNEs would be just interested in avoiding penalties, sanctions, and cost of litigation in each country where they operate. They would limit compliance with environmental regulations and would not strengthen their internal institutional profile.

Hypothesis 1: The greater the environmental institutional distance between the headquarters and subsidiaries' countries in the environmental regulatory dimension, the lower will be the environmental standardization within the MNE.

3.3.2 The national cognitive and normative dimensions and environmental standardization within MNEs

Not only does the national environmental regulatory dimension condition the environmental standardization within MNEs, but so do the other two national institutional dimensions. Indeed, evidence suggests that even if formal environmental regulations are identical across countries, de-facto regulations might differ as a result of differences in countries' capacities to implement, monitor, and enforce regulations (Dasgupta et al., 2000). In addition, there are differences in economic and environmental priorities (Christmann & Taylor, 2001).

Cognitive (or cultural) aspects of institutions embody symbols (words, signs and gestures) as well as cultural rules that guide understanding of the nature of reality and the frames through which that meaning is developed (Zucker, 1983). They form a culturally supported and conceptually correct basis of legitimacy that becomes unquestioned. For example, it is regarded as natural that environmental activists pursue idealistic or collectivist interests, whereas corporations pursue economic and materialistic goals (Hoffmann, 1999). These beliefs are taken for granted. Traditionally, literature argues that this dimension is invoked by a mimetic motivation and isomorphism. Therefore the different processes become institutionalized, so that copying continues because of its institutional acceptance rather than its competitive necessity (DiMaggio & Powell, 1983).

Normative (or social) aspects of institutions generally take the form of rules of thumb, standard operating procedures, occupational standards, and educational

curricula. Their ability to guide organizational action and beliefs stems largely from social obligation or professionalization. Organizations will comply with them out of moral/ethical obligation or in conformance to norms established by universities, professional training institutions, and trade associations (Hoffman, 1999). Bansal (2003) pays special attention to the importance of the normative dimension in relation to environmental issues, including aspects pertaining to information technology and educational institutions. Traditionally, it has been argued that normative isomorphism consists of conforming to a privileged world view within the organizational field where change occurs through the development and communication of this world view by peers and/or common socialization experiences (DiMaggio & Powell, 1983).

We state that both environmental normative and cognitive dimensions are of great importance in the environmental standardization process within MNEs. Compared with the regulatory domain, the normative domain is more tacit and part of the deep structures of a country (Gersick, 1991). It is, therefore, more difficult to sense and to interpret, particularly for an outsider. The cognitive domain lies between the regulatory and the normative domains, as to the degree to which it can be observed and interpreted correctly (Kostova & Zaheer, 1999). When the cognitive profile is favourable, unit employees and other agents can understand the value of the practice and are likely to develop positive attitudes. A favourable normative profile will also lead to internalization of practices since they will be consistent with the norms, values and beliefs held by unit employees and the rest of society (Kostova & Roth, 2002).

These two national dimensions have been traditionally studied by the neoinstitutional approach. Consequently, in order to gain legitimacy in these two dimensions, cognitive and normative isomorphism in each country would be required (Scott, 1995; Kostova, 1999). However, legitimacy in the normative and cognitive domains, rather than in the regulatory domain, might pose a more difficult challenge for MNEs (Kostova & Zaheer, 1999). Therefore these companies need to reinforce their internal institutional profile to gain international legitimacy in all the countries in which they have operations. MNEs may find more efficiency to get legitimacy in an international and local context by using a standardized approach than by trying to understand and satisfy a complex set of tacit influences, with the subsequent risk of being misunderstood. Since MNEs bring something distinctive to their host countries that is valued and appreciated by local constituents, it is less likely they will be expected to adopt locally established practices. In addition, local institutional environments may have limited capacity to enforce MNE isomorphism. First, host countries do not have a clear view of which companies belong to a certain organizational field, since field boundaries are blurred and shifting. Second, local environments do not necessarily control all scarce resources that MNEs need, given that they may have alternative sources. Hence, in their international operations they may decide to follow local practices or to borrow from any other institutional model they are aware of. Then, similarity among firms may be observed, but it is the result of choices firms make rather than compliance with external isomorphic pressures (Kostova et al., 2008).

We argue that as long as MNEs act within the boundaries of the law, foreign firms have the latitude to choose their level of responsiveness to the local institutional environment. While there will be some power to enforce regulatory institutional rules through coercion, there will be very little enforcement of cognitive and normative institutional components for MNEs (Kostova et al., 2008). Thus, we state that MNEs strengthen their internal institutional profile if there is a high environmental cognitive and normative institutional distance between the home and the host country. Consequently, they decide to generate non-location-bound green FSAs to transfer to the rest of the units their environmental business model, gain internal coherence (Christmann & Taylor, 2006), transparency, reputation (Christmann, 2004), and international institutional legitimacy by the external agents (Kostova et al., 2008).

Hypothesis 2: The greater the environmental institutional distance between the headquarters and subsidiaries' countries in the environmental cognitive dimension, the greater will be the environmental standardization within the MNE.

Hypothesis 3: The greater the environmental institutional distance between the headquarters and subsidiaries' countries in the environmental normative dimension, the greater will be the environmental standardization within the MNE.

3.4 Research methods

3.4.1 Sample and data

The hypotheses were tested in a sample of MNEs with headquarters based in USA, Canada or France, and with subsidiaries that belong to four countries (USA,

Canada, France and Spain). The four countries offer a good balance between environmental institutional differences, economic connections, and availability of data. We focused on three different industries: chemical (SIC Code 28), industrial machinery (SIC Code 37), and energy and petroleum (SIC Code 29). The selection of these industries is appropriate due to they have a great impact on the natural environment (King & Shaver, 2001).

This study used public data available from the different national environmental registries and private information from the Standard & Poor's database (Capital IQ, 2008). In relation to the national environmental registries, USA has the Toxic Release Inventory, Canada the National Pollution Release Inventory (NPRI) in Canada, and the European Pollutant Emission Register (EPER) in Spain and France. We selected MNEs according to three criteria. First, we chose MNEs that had at least one subsidiary based in one of the four countries, but different from the headquarters' country. Second, we selected those subsidiaries that belonged to the same headquarters' industry and activity. Third, we identified in each national environmental registry the different facilities that headquarters and subsidiaries have. We excluded local sales and distribution centres facilities.

The final population consisted of 170 cases (each case shows the comparison between a headquarters and one of its subsidiaries), 128 MNEs and 1790 facilities. On the one hand, we have 90 headquarters which are based in the USA, 31 in France, and 7 in Canada. On the other hand, the sample includes 18 subsidiaries based in the USA, 69 in Canada, 66 in France, and 17 in Spain. Finally, there are 82 cases from the

chemical industry, 58 cases from the industrial machinery industry, and 30 cases from the energy and petroleum industry. Part of this database has been used in other papers, including new and different variables, and using a different approach. These papers have not been published yet.

3.4.2 Variable measurement

Environmental Institutional Distance between Headquarters' and Subsidiaries' Countries. The environmental institutional distance between the home and the host country was calculated considering their differences in the environmental regulatory, cognitive and normative dimensions.

Environmental regulatory distance between countries: We took into account the variable 'Environmental Governance' (World Economic Forum, 2005). This represents principal components of survey questions addressing several aspects of environmental governance and legislation: air pollution regulations, chemical waste regulations, clarity and stability of regulations, flexibility of regulations, environmental regulatory innovation, leadership in environmental policy, consistency of regulation enforcement, environmental regulatory stringency, toxic waste disposal regulations, and water pollution regulations. The environmental regulatory distance between headquarters and subsidiaries' countries was calculated considering their differences in value of this variable. Values that are close to zero show that environmental regulatory issues have similar importance in headquarters' and subsidiaries' countries. On the other hand, high values reveal that countries have a different environmental regulatory profile.

Environmental cognitive distance between countries: We considered the variable 'Rules of law' (World Bank, 2005). The indicators measuring this variable are defined as the extent to which the different agents perceive environmental issues and have confidence in and abide by the rules of the society. These rules have a direct effect on ensuring that violations of environmental regulations are enforced. The environmental cognitive distance between headquarters and subsidiaries' countries was calculated considering their differences in value of this variable. Values that are close to zero show that environmental cognitive issues have similar importance in headquarters' and subsidiaries' countries. On the other hand, high values reveal that countries have a different environmental cognitive profile.

Environmental normative distance between countries: Since the normative dimension reflects wider societal values in a country (Parsons, 1960) we analyzed how the public sector protects environmental issues. We considered the variable FUNDING. The indicators measuring this variable assess the public sector's contribution to international and bilateral funding of environmental projects and development aid (Global Environmental Facility, 2005; Organisation for Economic Co-operation and Development, 2005). Its logic is that participation in environment and development assistance programs, either as a donor or a recipient, is an important sign of government commitment to environmental sustainability. The environmental normative distance between headquarters and subsidiaries' countries was calculated considering their differences in value of this variable. Values that are close to zero show that environmental normative issues have similar importance in headquarters' and

subsidiaries' countries. On the other hand, high values reveal that countries have a different environmental normative profile.

Environmental Standardization within the MNE. In order to create this variable, we took into account the degree of similarity between headquarters and subsidiaries' environmental performance. This measure has been obtained through the air releases in 2005 for each facility. We included in the analysis the 50 most polluting substances to be reported in the European Pollutant Emission Register (EPER). We weighted each substance by its degree of toxicity (EPA, 1997; King & Lenox, 2000, 2002; King & Shaver, 2001). The next step consisted of aggregating the data at the facility level to obtain the headquarters' and subsidiaries' air releases. Next, in order to avoid bias in the environmental conduct and impact of each organizational unit, we calculated a ratio that shows the coefficient between headquarters' and subsidiaries' air releases and their total revenues in 2005 (Hart & Ahuja, 1996). Finally, the environmental standardization within MNEs was calculated subtracting the headquarters' ratio from the subsidiary's ratio. Low values indicate that both headquarters and subsidiaries standardize their environmental performance. In contrast, high values reveal that headquarters' and subsidiaries' environmental performance differ. We normalized this variable in order to avoid detrimental effects of dispersed values (Hair, Anderson, Tatham, & Black 2008).

Control Variables. These include headquarters' and subsidiary size, headquarters' financial performance, and industry.

Headquarters and subsidiary size: Organizational size has a great repercussion on its environmental conduct (Aragón-Correa, 1998). We controlled for headquarters' and subsidiaries' size using the neperian logarithm of their number of employees in 2005 as a proxy of firm size (King & Shaver, 2001).

Industry: In order to consider the possible effects of the three different industries of our sample, we created two dummy variables (chemical industry, and energy and petroleum industry) (Christmann & Taylor, 2001).

Headquarters' financial performance: Firms with superior performance might be more likely to pursue environmental self-regulation (Christmann & Taylor, 2001). Headquarters' financial performance was measured through the ratio of return on equity in 2005 (Bansal, 2005).

3.5 Results

We tested the hypotheses using ordinary least-square (OLS) regression techniques. Precautionary and post-hoc analyses indicated that multivariate outliers were not present in the dataset, and therefore did not exert any significant impact on the results. Analyses of condition indices and variance inflation factors (VIF) show that multicollinearity did not seem to threaten the estimates (Hair et al., 2008). VIF values were all within adequate parameters, with values less than 5. In model 1 values range from 1.08 for the variable headquarters' financial performance to 1.70 for the variable chemical industry. In model 2 values goes from 1.08 for the variable environmental cognitive distance between countries to 1.71 for the variable chemical industry.

Descriptive statistics and correlations for all variables are presented in Table 3-1. No high correlation among the variables was observed.

Table 3-1 Descriptive statistics and correlations

	Mean	Standard deviation	Environmental standardization	Headquarters size	Subsidiary size	Chemical industry	Energy and petroleum industry	Headquarters' financial performance	Environmental regulatory distance between countries	Environmental cognitive distance between countries
Environmental standardization	0.55	1.62	1.00							
Headquarters size	10.42	1.22	–0.13*	1.00						
Subsidiary size	6.25	1.58	–0.18**	0.43***	1.00					
Chemical industry	0.46	0.50	0.16**	–0.49***	–0.30***	1.00				
Energy and petroleum industry	0.18	0.39	–0.08	–0.12†	0.20**	–0.44***	1.00			
Headquarters' financial performance	0.02	0.53	–0.42***	0.18*	0.15*	0.03	0.07	1.00		
Environmental regulatory distance between countries	3.11	1.91	0.30***	0.00	–0.04	0.05	–0.05	–0.14*	1.00	
Environmental cognitive distance between countries	0.27	0.16	–0.06	0.04	–0.08	0.03	–0.07	–0.06	–0.09	1.00
Environmental normative distance between countries	8.02	6.19	–0.19*	0.05	–0.21**	0.09	–0.18†	0.03	0.27***	–0.18**

† $p < 0.10$
* $p < 0.055$
** $p < 0.01$;
*** $p < 0.001$

Our regression results can be seen in Table 3-2. The control variables were entered in Model 1 (headquarters' and subsidiaries' size, industry, and headquarters' financial performance). Model 2 shows the complete model, including the environmental regulatory, cognitive and normative distance between the home and the host country. Our two models show good fits with *adjusted* R^2 ranging from 0.19 to 0.35. Thus model 2 explains in a very accurate way the environmental standardization within MNEs.

Table 3-2 Results of the hierarchical regression analysis[a]

	Model 1	**Model 2:**
Intercept	–0.36 (1.24)	–0.20 (1.12)
Headquarters size	0.11 (0.12)	0.20 (0.11)
Subsidiary size	–0.10 (0.08)	–0.20** (0.06)
Chemical industry	0.69* (0.23)	0.67** (0.26)
Energy and petroleum industry	0.20 (0.33)	–0.02 (0.30)
Headquarters' financial performance	–1.30*** (0.22)	–1.14*** (0.20)
Environmental regulatory distance between countries		0.27*** (0.06)
Environmental cognitive distance between countries		–1.49* (0.67)
Environmental normative distance between countries		–0.09*** (0.02)
R^2	0.22	0.38
Adjusted R^2	0.19	0.35
F Change	8.96***	14.17***

Dependent variable: Environmental Standardization within the MNE
[a] Non-standardized regression coefficients are shown. Standard errors are in parenthesis
N = 170
† $p < 0.10$; * $p < 0.055$; ** $p < 0.01$; *** $p < 0.001$

Negative coefficients show a positive effect on the environmental standardization within the MNE. In contrast, positive coefficients show a negative impact on the environmental standardization within the MNE.

In relation to the control variables, we can see that the headquarters' financial performance variable has a positive and significant influence on the adoption of environmental standards within the MNE in the two models (model 1: $\beta = -1.30$, $p < 0.001$; model 2: $\beta = -1.14$, $p < 0.001$). In addition, the subsidiary size has a positive influence on the generation of environmental standards within MNEs in model 2 ($\beta = -0.20$, $p < 0.001$). In contrast, the chemical industry variable has a negative and significant effect on the MNEs' environmental standardization strategy in our two models (model 1: $\beta = 0.69$, $p < 0.055$; model 2: $\beta = 0.67$, $p < 0.01$). The other control variables were not significant.

The environmental regulatory distance between headquarters' and subsidiaries' countries has a negative and significant impact on the MNEs' environmental standardization ($\beta = 0.27$, $p < 0.001$). In other words, the higher the regulatory distance between the home and the host country, the less the degree of environmental standardization within the MNE will be. Therefore hypothesis 1 is supported by the data.

The environmental cognitive distance between headquarters' and subsidiaries' countries has a positive and significant effect on the standardization of those practices ($\beta = -1.49$, $p < 0.055$). This implies that the more the cognitive distance between these countries is, the greater the environmental standardization within the MNE will be. Thus, hypothesis 2 is supported.

Finally, the environmental normative distance between headquarters' and subsidiaries' countries has a positive and significant effect on the adoption of environmental standards within the MNE ($\beta = -0.09$, $p < 0.001$). This implies that a high normative institutional distance between the home and the host country encourages these firms to adopt more stringent environmental standards within their internal network. Therefore, hypothesis 3 is supported by the data as well.

3.6 Discussion and conclusions

There are still many national institutional barriers to transfer green technologies and capabilities within the MNE since CSAs play a crucial role in the whole green FSA life cycle. Nevertheless, these firms also tend to generate non-location-bound green FSAs through a reinforcement of their internal institutional profile in order to gain international legitimacy (Kostova et al., 2008), transparency, reputation (Christmann, 2004), and increase their internal coherence and uniformity in the different countries in which they operate (Bartlett & Ghoshal, 1989; Kostova et al., 2008). Considering the influence of countries and firm advantages on the MNEs' strategies (Rugman, 1981; Rugman & Verbeke, 1998a, 1998b, 2001), we help to understand how the different dimensions of institutional distance are relevant in this analysis.

It is widely recognized that the countries' regulatory, cognitive and normative dimensions may have a direct impact on the adaptation versus standardization decision of managerial practices within MNEs (Kostova & Roth, 2002). Our results show that a high environmental regulatory distance between the home and the host country does

not contribute to creating non-location-bound green FSAs. Instead, in this context, MNEs merely comply with the different environmental regulations to avoid penalties, sanctions and legal costs. Consequently, they do not reinforce their internal institutional system in order to adopt environmental standards within their different units. Indeed, they limit to adapt their environmental practices to each country's legal requirements and generate location-bound green FSAs only in certain countries. MNEs in our sample seem to find it more efficient to know the fixed regulation in the local context than to adopt a standardized approach according to the most stringent regulation of the different countries in which they operate.

On the other hand, a high environmental cognitive and normative distance between the home and the host country positively contribute to generating non-location-bound green FSAs. First, MNEs, instead of adapting their practices to the environmental cognitive values of each country, create their own environmental cognitive values which justify their existence. Second, since the environmental normative dimension is difficult to sense and interpret for an outsider because it flows in the deep structure of the society (Gersick, 1991), MNEs decide to transfer environmental normative principles and presumptions independently of the countries' institutional profile. Undoubtedly these firms prefer to reinforce their own internal institutional profile. Since these two dimensions are not coercive, they have autonomy to design and transfer effectively their own environmental business model within their internal network. Thus, MNEs can easily gain international legitimacy in all the contexts where they operate through an environmentally standardized approach.

Consequently, they do not need to satisfy a complex set of tacit influences that may not be well interpreted.

This paper encourages us to think about the influence that the different national institutional dimensions have on the degree of environmental standardization within the MNEs. Our results support previous research that justifies the need to consider different national institutional dimensions beyond the regulatory one (Hoffman, 1999; Kostova & Roth, 2002). Additionally, the fact of analyzing diverse dimensions is an important contribution to the international environmental literature. Environmental studies of MNEs are focusing on the analysis of national and international environmental regulations (Christmann, 2004; Rugman & Verbeke, 1998a, 1998b). Other papers consider different institutional dimensions at the country level and their influence on the environmental management of organizations (Hoffman, 1999), but without making a trans-country analysis and analyzing the generation and transfer of non-location-bound green FSAs. Hence, we help different stakeholders to better understand the MNEs' environmental conduct and to control their environmental impact in each social context where they have operations. In particular it is remarkable that managers' perception of a strong relevance of cognitive and normative country dimensions might push their interest for a more advanced and standardized environmental approach. In contrast, if the regulatory dimension is perceived as the main determinant, local adaptation is more likely for MNEs' development.

For policy-makers, our research provides new insight into the importance of considering different national environmental dimensions, beyond the regulatory one, in

order to create incentives to protect the natural environment. For MNEs, our research highlights relevant institutional factors that may lead managers to pay special attention to reinforce the MNEs' internal institutional profile, and consequently create environmental standards within the MNEs' internal network.

3.6.1 Limitations and future research

There are, of course, several limitations to this study that we should acknowledge. First, our data are cross-sectional, making it impossible to examine the evolution of the different variables in our study. Second, MNEs' environmental performance was measured through their air releases. It is important to remark that there are other complementary measures such as water and land releases, waste recovery and recycle processing (Etzion, 2007). Third, regulatory, cognitive and normative dimensions are measured using perceptions, and not objective data. Finally, the different national environmental registries are not complete yet. Indeed, lack of uniformity in the quality and quantity of information is still latent. Hence, we had to select previously in the environmental registries the common and available environmental information that was going to be processed.

Additional works that deep in the national regulatory, cognitive and normative dimensions with complementary measures may provide with robustness to our findings. Moreover, it will be interesting for future studies to complement our findings with other MNEs with organizational units located in developing countries from Asia and Africa. Indeed, these countries may have a very different national environmental institutional profile and may deter the transfer of environmental practices (Peng, Wang,

& Jiang 2008). Finally, we also propose for future research an analysis that combines the institutional and the resource-based view (Aragón-Correa & Sharma, 2003; Oliver, 1997). Through this mixed analysis we can study the joint influence that both institutional factors and internal resources may have on the adoption of environmental strategies by MNEs.

Note

This research was supported by grants from the Spanish Ministry of Education and Science. We want to thank members of group ISDE of the University of Granada (Spain) and members of Henley Business School (University of Reading, UK) for their insightful comments.

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CAPÍTULO 4

DOES HAVING INTERNATIONAL EXPERIENCE HELP FIRMS TO BE GREEN? A KNOWLEDGE-BASED VIEW OF INTERNATIONAL EXPERIENCE AND ORGANIZATIONAL LEARNING ON PROACTIVE ENVIRONMENTAL STRATEGIES

DOES HAVING INTERNATIONAL EXPERIENCE HELP FIRMS TO BE GREEN? A KNOWLEDGE BASED-VIEW OF INTERNATIONAL EXPERIENCE AND ORGANIZATIONAL LEARNING ON PROACTIVE ENVIRONMENTAL STRATEGIES

Abstract:

While previous literature has assumed cumulative acquisition of knowledge through many years of operating in international markets, we highlight the importance of paying attention to the value of the different sources of a firm's international experience and to the learning requirements. Using external databases and internal data from direct interviews with the CEOs of 106 export firms from the food industry, we show that the numbers of years operating internationally does not contribute to reinforcing a proactive environmental strategy for the sampled firms. In contrast, the more complex experience of increasing the environmental international diversification of the firm is positively related to its proactive environmental strategy. Finally, the firm's capability of organizational learning imposes a moderating effect on the relationship between environmental international diversification and proactive environmental strategy.

Keywords: Organizations and natural environment, proactive environmental strategy, firm international experience, organizational learning.

4.1 Introduction

Although some studies have stated that a firm's international experience reinforces competitive advantages when the firm is challenged by different environmental requirements (e.g. Porter & van der Linde, 1995), other studies have highlighted that international firms face competitive difficulties when they face different levels of environmental stringencies (e.g. King & Shaver, 2001; Leonard, 1988). This debate is highly relevant. Indeed, when the processes of selling abroad and global integration of the economy are gaining vital importance (Sapienza, Autio, George, & Zahra, 2006), the growing concerns related to the natural environment are generating considerable challenges for export firms because environmental regulations and priorities are still significantly different in the international arena (e.g. Bansal, 2005; Christmann, 2004; Christmann & Taylor, 2001, 2006; Rugman & Verbeke, 1998).

Literature has urged analysis of whether a firm's international experience can help to generate innovative capabilities (e.g. Autio, Sapienza & Almeida, 2000; Lu & Beamish, 2004) and how the firm's international experience affects its environmental strategy (e.g. Bansal, 2005; Christmann & Taylor, 2006). We believe that the knowledge-based framework for international firms (Barkema & Vermulen, 1998) offers an appropriate but unexplored context for this analysis.

In fact, the knowledge view has proven to be useful for explaining multiple processes of the international firms such as the knowledge transfers in the processes of

acquisition and joint ventures (e.g. Nadolska & Barkema, 2007), the expansion of the new venture firms (e.g. Zahra, Ireland, & Hitt, 2000), or the reduction of technological gap (e.g. Salomon & Jin, 2008), among others. However, limited attention has been paid to the existence of differences in the value and complex nature of the knowledge generated by the firm's international experience, and their connections with the development of organizational capabilities of innovation in the firm.

Building on the behavioral theory of the firm, the traditional process theories of internationalization (Eriksson, Johanson, Majkgard, & Sharma, 1997, 2000; Johanson & Vahlne, 1977; Johanson & Wiedersheim-Paul, 1975) have suggested that, once initiated, internationalization occurs incrementally and regulated by the time-based accumulation of foreign organizing knowledge. Even when emphasizing the inertial character of gaining knowledge has been questioned by those analyzing the growing speed of the firm's international movements (e.g. Andersson & Wictor, 2003; Autio et al., 2000; Oviatt & McDougall, 2005), previous studies of international business typically use duration in host country as a proxy for a firm's international experience (e.g. Chetty, Eriksson, & Lindbergh, 2006; Fang, Wade, Delios, & Beamish, 2007).

However, more dynamic aspects of the firm's operations abroad might offer a complementary perspective of the firm's international experience. This paper analyzes firms' international diversification, delimitated as expansion into multiple and different geographic locations, as one of the most relevant dimensions in corporate behavior from a strategic point of view (e.g. Hitt, Hoskisson, & Kim, 1997; Hitt, Tihanyi, Miller, & Connelly, 2006; Li & Qian, 2005).

In this paper, we develop a knowledge-based view to examine the effects of the international experience of export firms on the innovative capability of developing a proactive environmental strategy. Our framework combines three arguments.

Secondly, we draw on the knowledge view to emphasize that the level and complexity of the firm's international experience is crucial to delimitate its potential value to generate competitive capabilities. Complexity happens when a large number of inter-related but heterogeneous factors interact (Barney, 1991). We propose that a higher complexity of the firm international experience eases the generation of a more tacit, ambiguous and difficult to substitute source of value for the organization. Firstly, we specifically focus our attention on the connections between different dimensions of a firm's international experience and the generation of a valuable and innovative capability of proactive environmental strategy (Hart, 1995; Marcus & Geffen, 1998; Russo & Fouts, 1997). A proactive environmental strategy has showed positive influences on the corporate financial performance (e.g. Hull & Rothenberg, 2008; Klassen & McLaughlin, 1996; Montabon, Sroufe, & Narasimhan, 2007; Wagner, 2005) and implies the dynamic capability of designing or altering operations, processes, and products to voluntarily prevent the negative environmental impacts generated by the firm (Aragón-Correa & Sharma, 2003; Sharma & Vredenburg, 1998). In this context, Bansal (2005) shows that an index aggregating the number of countries in which the firm operates and the percentage of foreign sales relative to total sales is positively linked with the corporate sustainability. So far as we know, no additional attention has been paid to the connections between differentiated sources of the international

experience, the capability of organizational learning, and the adoption of proactive environmental strategies.

Thirdly, our hypotheses also highlight that the contribution of the firm's international experience to the generation of innovative capabilities will be different depending on the level of the capability of organizational learning in the firm (Fiol & Lyles, 1985). We expect that a high level of organizational learning reinforces the positive influence of the number of years of a firm's international experience, meanwhile the higher complexity of the firm's international experience derived from its international diversification influences more when the level of organizational learning is low.

Using secondary information from the World Bank and the Yale Center for Environmental Law and Policy, we build a unique environmental entropy index of international diversification related to the environmental situation of the markets where the firm operates. Besides, we use firm data from the D&B database and our direct interviews with CEOs of 106 export firms in the food industry to delimitate three contributions for our paper.

First, we directly contribute to the natural resource-based view literature (Christmann, 2000; Hart, 1995; Marcus & Geffen, 1998; Russo & Fouts, 1997) showing how the export firms' international experience may be related to the development of proactive environmental strategies and the moderating roles of the capability of organizational learning in this process. Second, we extend the knowledge-

based framework of the international firms by paying specific attention to the value of the firm's international experience depending on its complexity. We also show how the capability of organizational learning moderates the relationship between the firm's international experience and the generation of innovative capabilities reinforcing the value of the complex experiences when the capability of organizational learning is low. Third, while literature has paid prevalent attention to show how firms can increase their knowledge through subsidiaries, international alliances or joint ventures (e.g. Carson, Madhok, Varman, & John, 2003; McDougall, Shane, & Oviatt, 2003; Zahra, 2005; Zahra & Hayton, 2008; Zahra et al., 2000), our work will focus on the export firms, which generate the most common process of market entry.

The article is organized as follows: the next section reviews the theoretical background of our paper under the knowledge-based view of the firm. The third section refers to the hypotheses' development. The fourth and fifth sections contain the research methodology and results respectively. The final section presents our study's main conclusions, limitations, and future research implications.

4.2 A knowledge-based view of the firm's international experience and the proactive environmental strategy

The knowledge-based view of the firm (e.g. Nonaka, 1994; Nonaka & Takeuchi, 1995) considers knowledge as the most strategically significant resource of a firm. Its proponents argue that knowledge-based resources and capabilities are among the major determinants of sustained competitive advantage among firms (Barney, 1991).

Early studies suggested that knowledge is gradually accumulated over time in the international process (e.g. Eriksson et al., 1997; Johanson & Vahlne, 1977, 1990; Johanson & Wiedersheim-Paul, 1975). These studies have assumed that a firm's experience acquired abroad basically requires a period of years to develop knowledge.

In this context, the knowledge-based literature of the international firms has paid special attention to how existing knowledge allows informed decisions on market selection, mode choice, pace of internationalization (e.g. Eriksson et al., 2000; Young, Hamill, Wheeler, & Davies, 1989; Johanson & Vahlne, 2006) and how to deal with environmental uncertainties that characterize internationalization (e.g. Liesch and Knight, 1999). Literature explaining the new process of "born-global" firms has treated knowledge as an endowed resource that enables the firm to rapidly expand its international operations (e.g. Andersson & Wictor, 2003; Autio, 2005; Autio et al., 2000; Oviatt & McDougall, 1994, 2005; Zahra, 2005).

However, some studies have also begun to analyze the positive effects of the firm's internationalization process on the generation of knowledge (e.g. Li, Li, & Dalgic, 2004; Blomstermo, Eriksson, & Sharma, 2004; Petersen, Pedersen, & Lyles, 2008). Nachum and Zaheer (2005) explained that the motivation to expand internationally is not only financial performance, but also access to knowledge and resources. Indeed, knowledge acquisition thought internationalization can greatly favor the development of organizational capabilities (Barkema & Vermeulen, 1998). In this context, several studies have shown how the existence of international alliances (e.g. Carson et al., 2003; McDougall et al., 2003) or the different modes of entry in

international markets (Andersen, 1997; Tihanyi, Griffith, & Russell, 2004; Zahra & Hayton, 2008; Zahra et al., 2000) may contribute to acquiring and developing new valuable knowledge by firms. Our work uses this approach to focus on how the firms' international experience may increase their potential to be more innovative in the environmental field.

More recently, the role of organizational learning has been emphasized in the international literature (e.g. Autio et al., 2000; Petersen et al., 2008). Indeed, internationalizing firms need to be adept at learning to enhance their stock of market knowledge (Prashantham, 2005). In this context, Autio et al. (2000) argued that early internationalization may confer certain learning advantages that may be difficult to replicate by older firms, which are called learning advantages of newness. Further, it has been argued that organizational learning compels managers to consider the knowledge gained from their diverse international markets and how that knowledge can be used in the firm (Casillas, Moreno, Acedo, & Gallego, 2009; Hsu & Pereira, 2008). Thus, the emphasis on the capability of organizational learning is especially important when analyzing the influence of the firm's international experience because the complexity linked to that experience may be especially difficult to face by the export firm if the organization does not possess the capabilities to do it.

The knowledge-based view of the firm's international experience helps understanding of how internationalization may contribute to generating organizational capabilities. Our specific interest in this paper is to analyze the effect on the dynamic

and innovative capability of developing a proactive environmental strategy (Aragon-Correa & Sharma, 2003; Sharma & Vredenburg, 1998).

A natural resource-based view of the firm (Christmann, 2000; Hart, 1995, Marcus & Geffen, 1998; Russo & Fouts, 1997) states that the development of an advanced environmental strategy requires and generates other organizational capabilities in the firm. Previous literature on the environmental situation of international firms has analyzed the effects that national and international environmental regulations may have on the design of corporate environmental strategies (e.g. Rugman & Verbeke, 1998; Darnall, Henriques, & Sadorsky, 2008), the influence of the different stakeholders' pressures on the development of advanced environmental postures in international firms (e.g. Christmann, 2004; Darnall et al., 2008), or the adaptation versus standardization decision regarding implementation of environmental management systems (e.g. Christmann & Taylor, 2001, 2006; Darnall, 2006).

Although the specific effects of firms' international experience on the proactive environmental strategies have not been analyzed yet, knowledge management and the capability of organizational learning have showed a very relevant role in the development of proactive environmental strategies (e.g. Marcus & Geffen, 1998; Sharma & Vredenburg, 1998). Previous literature has showed that formal and explicit knowledge (e.g. legal and technical) and tacit and implicit knowledge (e.g. motivational and coordinative) are both relevant to develop a proactive environmental strategy (Roy & Thérin, 2008).

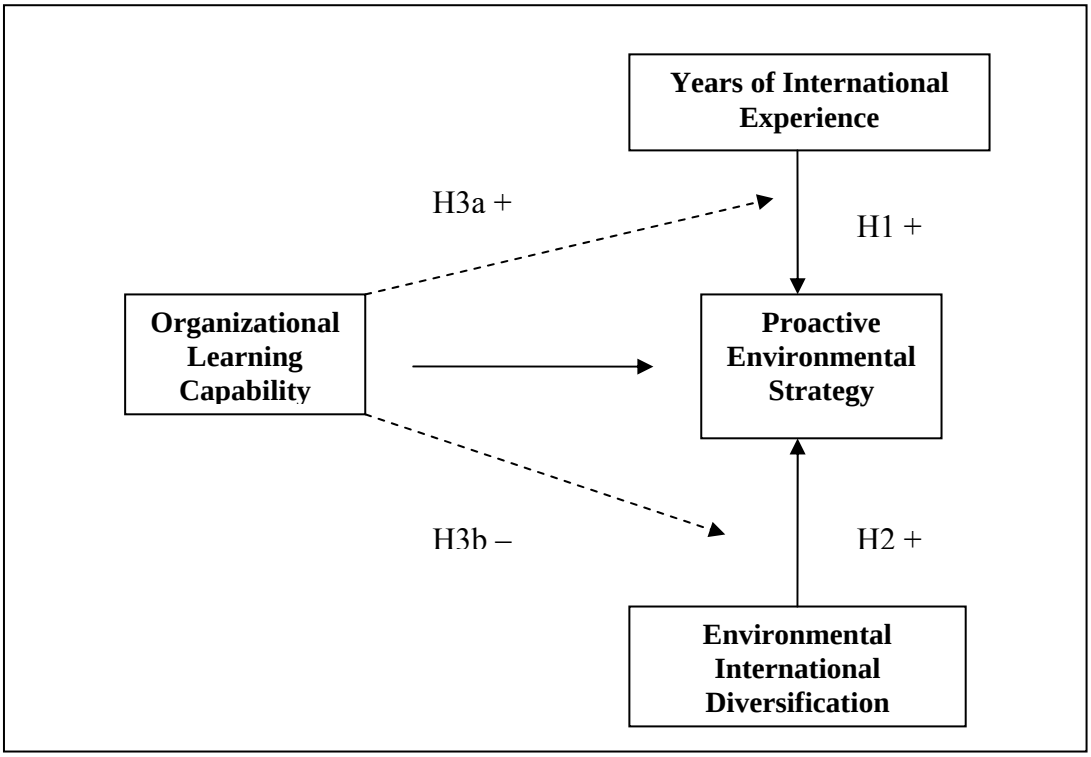
In the next sections we analyze how the international experience of export firms, represented by the numbers of years operating internationally and degree of environmental international diversification, may be related to the adoption of a proactive environmental strategy. In addition, we will study the moderating role of the organizational learning on these effects.

4.3 Hypotheses

We will propose hypotheses stating the effects of firms' international experience on the generation of a proactive environmental strategy and the moderating role of the capability of organizational learning in this process.

The linkages proposed among the different constructs are illustrated in Figure 4-1.

Figure 4-1 Proposed model



4.3.1 International experience and proactive environmental strategies of export firms

As stated in previous sections, firms gain international experience through different activities. We are going to consider the separate impact that developing activities abroad during a period of time and operating in multiple and different markets may have on the adoption of a proactive environmental strategy.

4.3.1.1 Number of years of international experience and proactive environmental strategy

The behavioral internationalization theory claims that learning about internationalization is a cumulative process, in which each step abroad adds to the

firm's experiential knowledge (Eriksson et al., 1997; Johanson & Vahlne, 1977). The implications of this learning process are that the firm's previous experience results in its present knowledge and that the internationalization behavior of the firms is path dependent, which implies that there is an incremental process where the pattern of behavior by firms is contingent upon and a function of its past international experience (Benito & Gripsrud, 1992).

The interactive process of selling abroad generates a progressive accumulation of knowledge about foreign markets, operations, and agents' preferences which enables them to overcome the potential liability of foreignness (Blomstermo et al., 2004). Experiential knowledge refers to knowledge that is acquired through operating in the market during a period of time (Penrose, 1959). Prior experiential knowledge gained through export operations can be viewed as an intangible and complex resource, since many of the social and cognitive processes underlying this asset may not be well understood by other firms that lack this tacit asset as a partial consequence of the multiple factors related to this experience (Westhead, Wright, & Ucbasaran, 2001). Even when explicit knowledge regarding different aspects of the international markets may be available before developing activities abroad, the experience of exporting allows firms to understand in depth the host context's institutional requirements and the interconnections with different agents. In sum, the complex social nature of the knowledge gained operating abroad offers an opportunity for implementing business strategies more appropriate in those markets.

In relation to environmental issues, a higher number of years developing export activities allows a progressive approach to understand the environmental situation of the host context. In fact, the process of exporting for many years may offer a more accurate view of the control of the environmental regulation in the host country, the environmental concerns and preferences of the costumers, or the reaction of the market to environmental crisis. Besides, dealing with environmental situations in foreign markets can lead firms to generate and develop a set of best environmental practices (Bansal, 2005).

Accumulation of knowledge is not only useful for the successful development of future exports, but also to reinforce the capabilities gained in the process. In fact, previous export experience is a good training to deal with the complexity of gaining the tacit knowledge to collaborate with others and the ability to handle new situations (Simonin, 1997). These dimensions are a key requirement for the proactive environmental approaches of the firms (e.g. Hart, 1995; Marcus & Geffen, 1998). Therefore, the experience gained from a foreign marketplace can translate into knowledge that may be used to resolve similar or different problems that relate to international (Hsu & Pereira, 2008) or to domestic operations (e.g. Blomstermo et al., 2004).

Hence, we propose that those firms with much international experience gained by the number of years of exporting activity have a great opportunity to gain access to available environmental knowledge. A longer period of time offers the opportunity of a progressive assimilation of complex knowledge to implement a more advanced

environmental approach emerging from a mixture of the best practices in the domestic and international markets.

Hypothesis 1: The firms' international experience gained by the number of years of exporting activity is positively related to their proactive environmental strategy.

4.3.1.2 Environmental international diversification and proactive environmental strategy

Despite the discussed effect of the international experience, other studies criticize the passive view of the experiential knowledge in the firms' internationalization process and show that firms can rapidly acquire valuable knowledge abroad without a high number of years in international activity (e.g. Andersson & Wictor, 2003; Autio, 2005). Some studies have also showed that certain firms have patterns of international expansion marked by high speed and have mostly analyzed how the original conditions of being a born-global firm influence the internationalization process (e.g. Vermeulen & Barkema, 2002; Oviatt & McDougall, 1994, 2005; Zahra, 2005; Zahra & Hayton, 2008). We propose that the subsequent decisions influencing the complex nature of the firm's international experience may also involve a non-inertial step of the internationalization process on the generation of innovative capabilities.

A firm's international diversification is delimitated by the number of different markets in which it operates and their importance to the firm, reflecting especially well the complex nature of international operations (Hitt et al., 1997; Li & Qian, 2005). Export firms that diversify internationally may have diverse motives, including some extension of innovative capabilities (e.g. Salomon & Jin, 2008), and a range of

economic advantages including economies of scale, access to new customers, or location advantages (e.g. Hitt et al., 2006).

Firms often find it easier to do business in countries where the social climate is similar to their own (e.g. Hitt, Hoskisson, & Ireland, 1994; Kogut, 1985; McDougall & Oviatt, 1996). However, firms operating in environments with a different institutional profile experience more complex challenges to gain organizational legitimacy than purely domestic firms (Kostova & Zaheer, 1999).

Focusing on the firms' environmental strategies, the firms' experience of dealing with differences among regions in terms of their environmental institutional profiles can offer direct evidence of how the environmental proactivity provides better opportunities to export to any market, ranging from the most to the less stringent markets. When multinational firms might want to install subsidiaries with a low environmental proactivity, just to provide products to less environmentally stringent markets, export firms that act in regions with a very different environmental institutional profile may be more willing to adopt a proactive environmental strategy in order to avoid the costs of internal and external bureaucracy of different approaches for each level of stringency. The higher complexity of this type of process increases the difficulties for other non-diversified firms to understand and copy the same vision and implementation.

Additionally, a context of environmental international diversification may generate more value to the relationship between the proactive environmental strategy

and firms' transparency and reputation (Christmann, 2004), and institutional legitimacy (Bansal, 2005; Kostova, Roth, & Dacin, 2008). Finally, exposure to and greater involvement with foreign customers and businesses in multiple and diverse markets may also promote creation of other organizational capabilities useful for the environmental developments (Starik, Marcus, & Ilinitch, 2000), such as flexibility or stakeholders' management. Consequently, we propose:

Hypothesis 2: The firms' international experience gained by environmental international diversification of exporting is positively related to their proactive environmental strategy.

4.3.2 Organizational learning and proactive environmental strategies of export firms

While information is relatively easy to obtain nowadays, learning to transform information into knowledge and manage it is among the most critical assets for achieving a sustainable competitive advantage (Gupta & Govindarajan, 2000; Fiol & Lyles, 1985). Organizational learning may be defined as the development or acquisition of new knowledge or skills in response to internal or external stimuli and that leads to a change in collective behavior (Spicer & Sadler-Smith, 2006). Hence, the final output of this learning capability may be collective actions into new products, procedures, systems, or strategies (Crossan, Lane, & White, 1999).

In relation to environmental issues, different studies have emphasized the importance of the firm's organizational learning capability as an antecedent of the

proactive environmental strategy (e.g. Hart, 1995; Marcus & Geffen, 1998; Sharma & Vredenburg, 1998). We propose that, even when the exposure of export firms to many years of international operations or diverse markets may offer a better opportunity to be close to valuable environmental information and experiences, the capability of organizational learning provides the final thrust to understand and use those firms' experiences in a proper way. Considering the idiosyncrasies of the two sources of international experience analyzed in this paper, we expect a different effect of organizational learning capability on the relationship between each source and the proactive environmental strategy.

Regarding the firm's international experience as reflected by the number of years of exporting activity, we expect that the potential of the sequentially-gained knowledge may be reinforced by a high level of organizational learning. In fact, the intensive routines of organizational learning (Autio et al., 2000) may help firms to assimilate better the environmental knowledge emerging from the years of experience. This idea is based on the assumption that learning is a process that depends on history (Cohen & Levinthal, 1990) and also underlines the role of experiential knowledge following the classic lens of the sequential theories of the international firm (Eriksson et al., 1997; 2000; Johansson & Vahlne, 1977).

We expect that firms with high organizational learning capability will be in a better situation to assimilate and integrate effectively the new environmental knowledge derived from the time path. Indeed, the capability of organizational learning allows that the new knowledge emerging from the years in the international market will

be easily adjusted and implemented within the firm's internal network, coexisting with the pre-existing knowledge and complementing each other. Consequently, firms with high organizational learning capability will exploit in a better way the advantages derived from the use of the external information acquired through operating abroad during a long period of time in order to develop a proactive environmental strategy. We therefore propose the following hypothesis:

Hypothesis 3a: Organizational learning capability is likely to increase the positive relationship between international experience gained by the number of years of exporting activity and proactive environmental strategy.

Regarding the firm's international experience of developing a process of international diversification in terms of the environmental situation of its markets, it is essential to begin by remarking that the environmental diversification will offer a high availability of experiences and valuable knowledge to be gained. Dealing with multiple regions showing different legal and institutional requirements in terms of cultural, economic and political approaches to the natural environment requires the development of functional abilities of logistics, commercial reputation, and trained human resources. At the same time, firms surviving the process of international diversification have had to improve the general conditions of flexibility, planning, understanding, or engaging stakeholders (e.g. Arranz & Fernández de Arroyabe, 2009; Hitt et al., 1997)

When firms have a low level of capability of organizational learning, the environmental international diversification might be especially useful requiring the adoption of more innovative approaches, such as the proactive environmental strategy.

Meanwhile, we expect that firms with a high level of organizational learning will be able to translate a set of shared understandings and collective action into new products, processes and strategies (Crossan et al., 1999), including the proactive environmental strategy, but with a minor influence of the advantages generated by a high level of environmental international diversification. In other words, those firms with high organizational learning capability will be able to obtain environmental management improvements by themselves with a relatively minor influence of the volume of training derived from operating in few or many regions with different environmental institutional profiles. We therefore propose the following hypothesis:

Hypothesis 3b: Organizational learning capability is likely to decrease the positive relationship between international experience gained by environmental international diversification of export firms and proactive environmental strategy.

4.4 Research methods

4.4.1 Sample and data

Our sample is chosen from the Dun & Bradstreet (D&B) database at the end of 2004. This database includes 1556 export firms belonging to the food industry and operating in Spain. Focusing on one specific sector and country is often suggested in the resource-based view literature to remove the possible disturbing influence exerted by specific peculiarities related to the context (Barney, 2001).

We chose the food industry for our analysis since this industry has strong connections with the internationalization and environmental issues all around the

world. Regarding the natural environment, the food industry generates a large amount of industrial waste water, solid wastes, and unpleasant smells, and consumes quite a lot of energy. The food industry also has a large impact on the atmosphere due to industrial gas effluents and transport emissions. Finally, when products are consumed, a lot of waste is generated such as plastics, paper, organic material and aluminum. Consequently, it is common that each domestic government tries to create local mechanisms to reduce the environmental impact of the food firms. At the same time, other stakeholders are also paying increasing attention to the environmental implications of the food industry in relation to multiple issues such as eco-labels, organic production, or genetically non-modified. Additionally the contribution of the food industry to gross domestic production is high (e.g. 13.6% of EU-15 manufacturing or 12.6% of US manufacturing according to Bureau of Economics, 2005) and, at the same time, the export percentage of products from the food industry is also growing quite fast all over the world (according to the World Bank, nearly 9% of total exports in the world are derived from products of this industry in the year 2005, with a total value of 850 billion dollars). The Spanish context reflects well the common situation in a developed country, where firms that belong to this industry are receiving growing pressure from the social agents and regulators to improve their environmental situation and, meanwhile, firms have to be especially active in order to be competitive in the international arena, keeping in mind the influence of local and international competitors and distributors.

Using a random sampling method, our initial sample consisted of 155 firms. We had complete information on 68.39% of those (106 firms) which constituted the final

sample. We used three different approaches to obtain the data. First, we obtained objective data regarding firm size, number of years of international experience, and return on equity through the D&B database. Second, we used data from the World Bank delimitation of international markets and the Yale Center for Environmental Law and Policy to analyze the environmental situation of the international markets. We use this information as delimitated in the Measures section. Third, since data on firms' environmental strategies are not available from published sources, we used personal interviews with CEOs of each firm as is usual in strategic and environmental research (Christmann 2000; Cordano & Frieze 2000; Sharma 2000). Regarding the personal interview, the CEO of each of the firms responded to a structured questionnaire during a personal interview completely delimitated by the authors for research purposes and carried out by the survey company TNS in December 2004 and January 2005.

The personal interview was useful to reinforce the data accuracy via ensuring the appropriate identity of those interviewed and their understanding of the questions. The questionnaire was constructed using validated scales obtained from a review of the literature, adapting them to the industry. In order to construct and refine the questionnaire, we conducted in advance interviews with a panel of experts in the food industry (including two academics, two consultants, and two general managers) and pre-test with managers of six different firms belonging to the food sector (these executives were not included in the final sampling). Considering the complete and available information, our final sample consisted of 106 firms. We did not find significant differences between the descriptive characteristics of the firms finally included in the study (e.g. location, activities, and size) and the original population.

The high and significant correlation (0.71) between external information from the D&B database and the information emerging from interviews for the turnover of the firm suggests confidence and accuracy for the whole questionnaire. The sampled firms had an average size of 54.66 employees reflecting the nature of the industry which is mostly integrated by small and medium firms. The firms in the final sample mostly export to the EU (68.56%), but also to Latin America (11.66%), the US and Canada (6.92%), Eastern Europe (4.32%), Africa (4.55%), and Asia, Australia and New Zealand (3.98%).

4.4.2 Variable measurement

Proactive environmental strategy. Most empirical studies have measured the diverse components of proactive environmental strategies via managerial perceptions of their practices (e.g. Buysse & Verbeke, 2003; Christmann, 2000, 2004). We adopted the 14 items used by Aragón-Correa (1998) to measure proactive environmental strategy in a general context, adding four items related to the food industry (see Appendix). Using a seven-point Likert scale, interviewees were asked to assess their firm's degree of development in relation to the environmental activities mentioned and comparing their activities with those of their competitors. A confirmatory analysis using LISREL 8.50 showed a single factor model fitting the data well (χ^2 = 237.58, df = 135, p = 0.00; RMSEA = 0.07, NNFI = 0.96, CFI = 0.97). Following the recommendations of the literature (Hair, Andersson, Tatham, & Black, 2009), we found that indicators were reliable, resulting in standardized factor loadings above .60 and significant at 5% (t-value > 1.96). Specifically, standardized loads ranged from

0.66 to 0.98. The average variance extracted estimate is 0.74 for this construct and construct reliability is 0.98, both exceeding the rule of thumb suggested by Hair et al. (2009). The final value of the proactive environmental strategy of a firm was calculated using the mean of these 18 items (*Cronbach's alpha = 0.92*). A high average score was indicative of a high degree of proactive environmental strategy.

Environmental international diversification. We created an environmental entropy index (EEI) based on the general entropy index (GEI). The GEI, calculated using a measure that weights a firm's diversification strategy by different market regions and common calculus (e.g. Hitt et al., 1997; Li & Qian, 2005), is:

$$GEI = \sum_{i=1}^{n} P_i \cdot Ln\left(\frac{1}{P_i}\right)$$

where P_i is the sales percentage attributed to region$_i$ and Ln (1/ P_i) reflects the weight given to each global market region$_i$. The advantage of using this measure is that it considers both the number of global market regions in which a firm exports and the relative importance of each global market region to total sales (Hoskisson, Hitt, Johnson, & Moesel, 1993).

Our EEI represents the degree of environmental international diversification that firms have and we measure it as:

$$EEI = \sum_{i=1}^{n} \frac{P_i \cdot ES_i}{\sum_{i=1}^{n} P_i \cdot ES_i} \cdot Ln \left(\frac{1}{\frac{P_i \cdot ES_i}{\sum_{i=1}^{n} P_i \cdot ES_i}} \right)$$

where P_i is the sales percentage attributed to global market region$_i$ and ES_i refers to the "environmental score" attributed to market region$_i$.

Regarding the environmental situation of the markets where the firm is operating, we first used the typology of the group of markets in the world according to their institutional similarities provided by the World Bank (2005). Drawing on this typology, we categorized ten different regions for our sample: Northern Europe (Sweden, Norway, Denmark, Finland, and the Netherlands), Central Europe (Germany, Austria, Belgium, France, United Kingdom, and Ireland), Southern Europe (Italy, Portugal, and Greece), Eastern Europe (Russia, Poland, and Czech Republic), North America (USA and Canada), Latin America, Asia (excluding Japan), Japan and Oceania, Africa, and the domestic market.

Finally, we assigned an environmental score for each region by using the average sum of the Environmental Sustainability Index (ESI) of the countries that belong to that region in 2005. The ESI is published by the Yale Center for Environmental Law and Policy and benchmarks the environmental regulations' level of stringency of each nation, and the different actions that governments and social agents implement to protect the natural environment. Consequently, the percentage of sales attributed to

each market is corrected by its environmental score. A high value of our index means that the firm is operating in multiple and differentiated markets in terms of their environmental regulations and sensitivity of social agents. In contrast, low values imply that the firm is acting either in one or in a group of regions with very similar environmental institutional profiles.

Years of international experience. As in previous literature, we measured this type of international experience through the number of years in which the firm has been exporting (e.g. Losada, Ruzo, Barreiro, & Navarro, 2007).

Organizational learning capability. Organizational learning capability is a complex multidimensional construct, defined by several dimensions or characteristics. Specifically we used three items from Calantone, Cavusgil and Zhao (2002) to measure the organizational commitment to learn (see Appendix), which implies an organizational ability to learn new key abilities and valuable competences in the firm's development (Kale, Singh, & Perlmutter, 2000; Lyles & Schwenk, 1994). We asked CEOs to evaluate each of the items measured on a seven-point Likert response scale (1 = strongly disagree, 7 = strongly agree). We found that indicators were reliable, resulting in standardized factor loadings above 0.80 and significant at 5% (t-value > 1.96). The average variance extracted estimate was 0.76 for this construct and construct reliability was 0.91, both exceeding the rule of thumb suggested by Hair et al. (2009). The final value of the organizational learning of a firm was calculated using the mean of these three items (*Cronbach's alpha = 0.88*). A high average score was indicative of a high degree of organizational learning.

Control variables. These include firm size and firms' financial performance.

Firm size: Organizational size has been shown to be an important determinant of the firm's environmental conduct (e.g. Aragón-Correa, 1998; Christmann, 2004). This size was measured as the natural logarithm of total employees in 2004 (King & Shaver, 2001).

Firms' financial performance: Environmental strategy may be related to the corporate financial performance (e.g. Hart & Ahuja, 1996; Russo & Fouts, 1997). Return on equity (ROE) in 2004 was the applied financial performance indicator we used to control this influence (Bansal, 2005).

4.5 Results

In order to test the hypotheses, we used a moderated hierarchical regression analysis (Cohen & Cohen, 1984), introducing the moderating effect as a multiplicative variable. We previously assessed the likely extent of common method variance, the conformity of our data's distribution to the assumptions to our analytic tools, and the extent of multicollinearity among the independent variables. In order to create the multiplicative terms, we proceeded to fix both the independent and the moderating variables on their means to avoid multicollinearity (Venkatraman, 1989). Analysis using the Kolmogorov–Smirnov test indicated that the distributions of the variables generally conformed to the normality assumption of regression analysis. Finally, examinations of condition indices and variance inflation factors (VIF) show that

multicollinearity was not a problem for our analysis, the VIF values ranging below five as recommended by the literature (Hair et al., 2009).

Table 4-1 shows the descriptive statistics and correlations.

Table 4-2 shows the results of the regression analyses testing the hypotheses.

Table 4-1 Descriptive statistics and correlations

	Mean	Standard deviation	Proactive environmental strategy	Firm size	Firm's financial performance	Years of international experience	Environmental international diversification
Proactive environmental strategy	3.64	1.43	1.00				
Firm size	3.00	1.36	0.27*	1.00			
Firms' financial performance	1.74	13.70	–0.14†	0.07	1.00		
Years of international experience	-0.07	23.27	0.04	0.19*	0.26**	1.00	
Environmental international diversification	0.03	0.46	0.29***	0.23**	–0.06***	0.26**	1.00
Organizational learning capability	0.32	1.16	0.28**	0.09	–0.07†	0.18*	–0.17*

† $p < 0.10$
* $p < 0.055$
** $p < 0.01$;
*** $p < 0.001$

Table 4-2 Results of the moderated hierarchical regression analysis[a]

	Model 1	Model 2	Model 3
Intercept	2.77*** (0.32)	2.88*** (0.32)	3.06*** (0.32)
Firm size	0.30** (0.10)	0.23* (0.10)	0.19* (0.10)
Firms' financial performance	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
Years of international experience		0.00 (0.01)	0.00 (0.01)
Environmental international diversification		0.59* (0.23)	1.06** (0.36)
Organizational learning capability		0.27** (0.12)	0.28** (0.12)
Organizational learning capability X Years of international experience			0.00 (0.01)
Organizational learning capability X Environmental international diversification			–0.71** (0.30)
R^2	0.10	0.20	0.24
Adjusted R^2	0.08	0.16	0.20
F Change	5.77*	5.64**	2.91*

Dependent variable: Proactive environmental strategy.
The values correspond to the non-standardized regression coefficients, with the typical errors in parentheses.

[a] Non-standardized regression coefficients are shown. Standard errors are in parenthesis
N = 106
† p < .10; * p < .055; ** p < .01; *** p < .001

In model 1 the control variables were entered. In model 2 we added the independent variables: number of years of international experience, environmental international diversification, and organizational learning capability. Finally, in model 3 the two moderating variables were introduced. Our three models show good fits with *adjusted* R^2 value of 0.20 for our final model. We now highlight our main results.

First, in relation to the control variables, we show that firm size is positively related to the adoption of a proactive environmental strategy. The other control variables were not significant for the sampled firms.

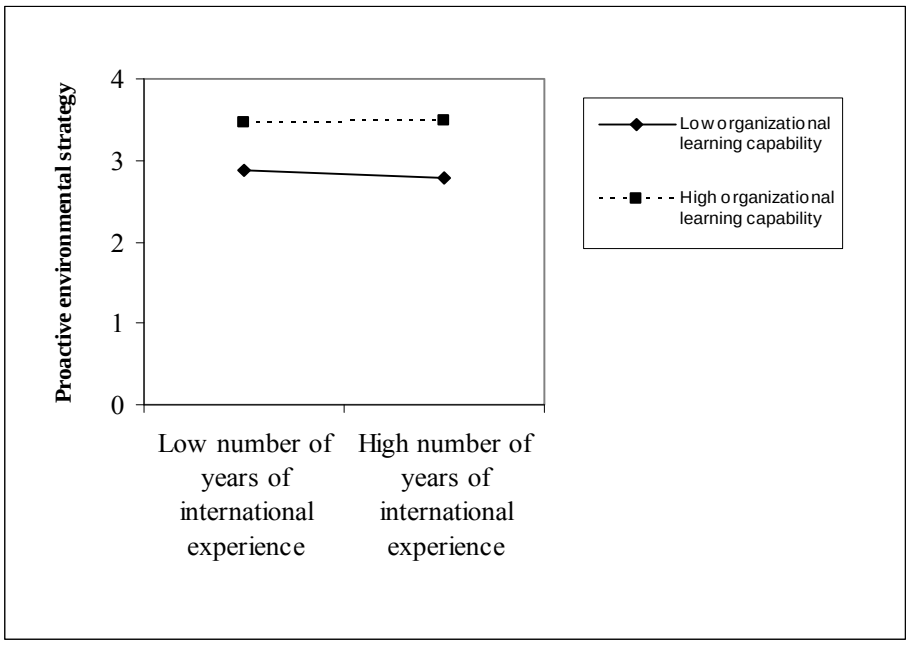
Second, our results show that international experience gained by the number of years of international experience is not positively related to the adoption of a proactive environmental strategy. Thus, hypothesis 1 is not supported for our sampled firms.

Third, the international experience gained by environmental international diversification is positively related to the adoption of a proactive environmental strategy by these firms. Hence, hypothesis 2 is supported. The organizational learning capability is also positively related to the adoption of proactive environmental practices, but this result is out of the scope of our hypotheses in this work.

Fourth, we find that organizational learning capability does not impose any interactive effect on the relationship between number of years of international experience and proactive environmental strategy. Stated differently, organizational learning capability neither increases nor decreases the effect that international

experience gained by the number of years of exporting activity has on the adoption of a proactive environmental strategy for our sampled firms. Figure 4-2 illustrates this relationship. Consequently, hypothesis 3a is not supported by our data.

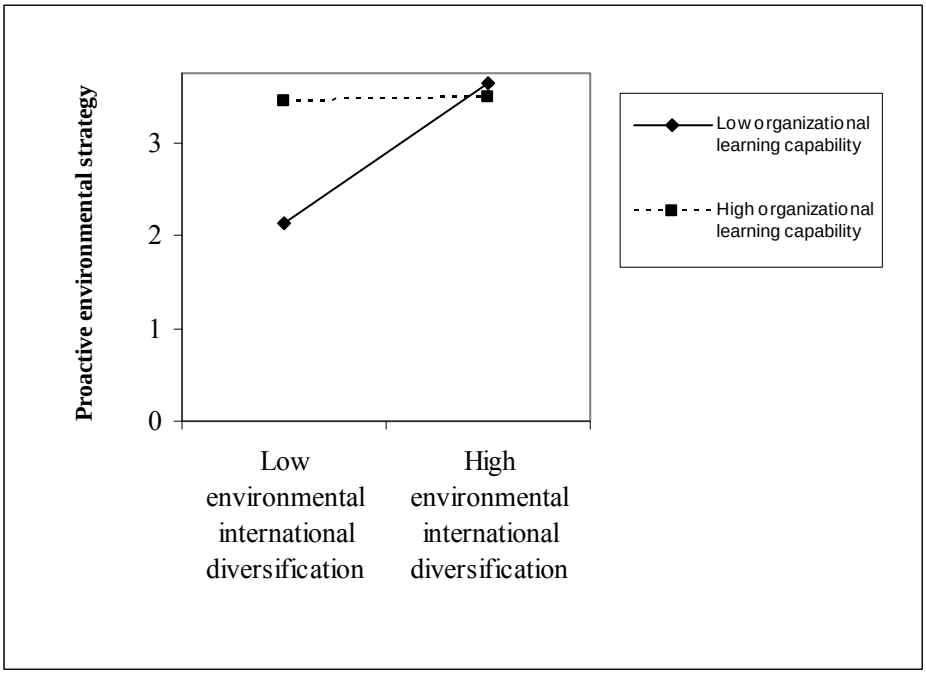
Figure 4-2 The moderating effect of organizational learning capability on the relationship between number of years of international experience and proactive environmental strategy



Finally, we observe that the greater the organizational learning capability, the weaker the relationship between international experience gained by environmental international diversification and proactive environmental strategy will be. Therefore, organizational learning capability diminishes the positive effect that environmental international diversification has on the development of proactive environmental practices. Figure 4-3 is important to illustrate our findings and shows that firms with a low capability of organizational learning need to operate in regions with different environmental institutional profiles, providing an external thrust of valuable

environmental knowledge gained abroad, to develop a higher level of proactive environmental strategy.

Figure 4-3 The moderating effect of organizational learning capability on the relationship between environmental international diversification and proactive environmental strategy



Consequently, the positive relationship between environmental international diversification and proactive environmental strategy is strengthening in the case of firms that have low organizational learning capability, but remains strong when firms have a high capability of organizational learning. Hence, hypothesis 3b is supported by our data.

4.6 Discussion and conclusions

Our research shows that certain forms of international experience are positively related to making firms more innovative and proactive on their environmental approach. Drawing on a knowledge-based view of the firm, we originally stated that export firms could benefit from their international experiences to develop an innovative capability of being proactive to environmental issues.

Our results illustrate well the importance of considering the qualitative nature of the firm's international experience and show that being involved in diverse markets in terms of their environmental institutional situation is positively related with a stronger capability of proactive environmental strategy. However, the experience acquired through a high number of years of exporting activity is not related to the generation of proactive environmental management practices for our sample. Hence, while our hypothesis 2 is completely supported for our sample, results are not supporting definitive results for hypothesis 1.

These results support the arguments of those who impose less importance to the role of accumulative knowledge in the firms' internationalization process (e.g. Autio, 2005; Autio et al., 2000; Oviatt & McDougall, 1994, 2005; Zahra, 2005; Zahra & Hayton, 2008). Consequently, firms that undertake a dynamic internationalization process including experiences in markets with different environmental institutional profiles are gaining a background of complex knowledge that is positively related with the innovative capability of generating a proactive environmental strategy. Results suggest that this complex knowledge derived from environmental international

diversification contributes to generating a more tacit, ambiguous and difficult to substitute source of value for the organization. In sum, we can conclude that it is not the quantity of time, but the *quality of the international time*, reflected in the degree of complexity derived from the firm's environmental international diversification, that matters in order to develop proactive environmental strategies.

The results regarding the lack of a significant relationship between the number of years exporting and the proactive environmental strategy might be related with the poor value generated by the process of spending years of exporting by itself. We believe that the increasing availability of information regarding the international markets (e.g. via governments' agencies or online blogs, forums, and web pages) explains why a less complex experience for a firm is becoming less influential and might be substituted by external information.

Nevertheless, the capability of organizational learning influences the final connection between the firm's international experience and the proactive environmental strategy. We were originally expecting to show here the differences between the availability of knowledge emerging from the firm international experience and the effective assimilation and integration of this knowledge through the capability of organizational learning. Our final results show two complementary aspects.

On the one hand, we observe that organizational learning capability does not strengthen the relationship between international experience gained by the number of years of exporting activity and proactive environmental strategy for our sample. In fact,

those firms with high organizational learning capability show a much more proactive environmental strategy, but independent of the number of years of exporting activities. This result emphasizes the lack of connection between the number of years of international experience and the proactive environmental strategy for our sample and it does not provide the opportunity of accepting our hypothesis 3a.

On the other hand, as expected by our hypothesis 3b, firms with a high level of organizational learning capability also tend to develop a higher level of proactive environmental strategy, independent of their degree of environmental international diversification. This might be due to these firms possessing a set of internal mechanisms and capabilities that allow them to generate valuable environmental management practices by themselves. At the same time, the knowledge acquired through environmental international diversification is highly relevant for those firms that have low organizational learning capability and that want to develop a proactive environmental strategy. This might be due to firms with a low level of organizational learning capability needing to draw more on external experiences to gain enough knowledge to generate advanced and innovative proactive environmental strategies.

This paper supports the knowledge-based view of the international firm and provides evidence about how the complexity emerging from the firm's international experience and the capability of organizational learning can contribute to generating the innovative capability of being environmentally proactive. Our results suggest that managers' dynamism in the internationalization process of firms is required to involve the firm in the process of being in contact with tacit and complex knowledge and to use

it via organizational learning. Hence, the firm's ability to learn by actively seeking knowledge about different international markets with different environmental profiles, potential customers and competitors, and issues of operations management in distant and unfamiliar environments may generate more rewarding knowledge than just operating abroad during a long period of time.

We also contribute to the natural resource-based view (Christmann, 2000; Hart, 1995; Marcus & Geffen, 1998; Russo & Fouts, 1997). Although previous studies have analyzed the influence of firms' international experience on corporate sustainability (Bansal, 2005), no efforts have been made to establish distinctions between differentiated sources of firms' international experience and the adoption of proactive environmental strategies. Besides, we extend previous works that analyze the influence of national and international environmental regulations on corporate environmental strategies (e.g. Christmann, 2004; Rugman & Verbeke, 1998). Indeed, environmental regulations may not affect by themselves the corporate environmental strategies (Christmann & Taylor, 2001). Therefore we have developed a unique index to take into consideration a broader environmental institutional profile of the different markets where firms operate, including not only environmental regulatory aspects, but also environmental cognitive and normative issues. Our environmental entropy index shows the degree of environmental international diversification of a firm taking into consideration three aspects: the number of different regions where it operates, the weight given to each region, and the environmental institutional profile of each region.

Our results have relevant implications for practitioners and policy-makers as well. From a managerial viewpoint, this research encourages managers to consider that integrating knowledge emerging from international markets into the firm's corporate strategy may add real value to the firm not only by increasing short-term revenues, but also contributing to generating organizational capabilities useful in the long term (Barkema & Vermeulen, 1998; Casillas et al., 2009). Further, managers can better understand that operating in foreign markets can contribute to acquiring valuable environmental knowledge that can be assimilated and integrated within their internal organizational structure. Through that integration, the international firm will be able to take advantage of the benefits derived from a more advanced proactive environmental strategy, such as improvement in operation costs (e.g. Christmann, 2000; Shrivastava, 1995), and increase in corporate transparency (Christmann, 2004), reputation and legitimacy (e.g. Bansal, 2005; Kostova et al., 2008). Finally, managers need to coordinate and integrate the external environmental information with that already existing through their organizational learning capability. From a government perspective, our results imply that governments should design special programmes and incentives that encourage the learning from and for the internationalization process. Through the creation of these incentives, firms will be able to develop organizational capabilities that reinforce their competitive advantage, and, at the same time, protect the natural environment and develop a socially responsible conduct.

4.6.1 Limitations and future research

We find some limitations in our paper. First, we caution against a direct generalisation of our results, given the specific location and activity of our sample. Second, we used cross-sectional data since we do not include observations in different years. Future longitudinal analyses should empirically reinforce the theoretical logic of our hypotheses. Third, in relation to the moderating effects, we have to point out that other types of interacting relations may be analyzed in the future. Four, and finally, due to lack of public information about firms' environmental strategies and organizational learning, we used questionnaires. The main disadvantage of this method is that responses might not reflect the shared orientation of the whole firm.

For future research it would be very interesting to consider other firms from different industries in order to see the effect that different contexts may have on the established relationships. Furthermore, combining firms' international factors with other internal capabilities (e.g. capability of engaging with host, domestic, and transnational stakeholders) can complete the partial framework of our analysis. Finally, a detailed comparison between multinational enterprises' and export firms' environmental management practices can provide tools to identify the role of the firm size in terms of their corporate environmental strategy in an international context.

Note

A preliminary version of this paper was a finalist paper for the Carolyn Dexter Award in the Academy of Management Meeting 2010, selected for inclusion in the

Academy of Management 2010 Proceedings as one of this year's Best Papers, and a finalist paper for "Best Paper Prize" in the Division ONE ("organizations and natural environment").

This research was supported by grants from the Spanish Ministry of Education and Science through the project SEJ2007-67833, the Andalusia Regional Government (Excellence Research Project P06-SEJ-2356), and the Foundation BBVA. We want to thank members of group ISDE of the University of Granada and reviewers of the Academy of Management Meeting 2010 for their insightful comments.

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4.8 Appendix: Items in scales

Proactive Environmental Strategy

Compared with your competitors and using a 1 to 7 scale, please specify the degree of development in your firm of the following activities related to the natural environment.

1. Natural environmental aspects in administrative work (paper, toner recycling, etc.).
2. Periodic natural environmental audits.
3. Recycling of residues and waste produced by the organization.
4. Purchasing manual with ecological guidelines.
5. Natural environmental seminars for executives.
6. Natural environmental training for the firm's employees.
7. Total quality programme including natural environmental aspects.
8. Prevention systems to cover possible environmental accidents and emergencies caused by the organization.
9. Natural environmental management manual for internal use.
10. Sponsorship of natural environmental events.
11. Use of natural environmental arguments in marketing.
12. Natural environmental information and training programmes for our distributors and customers.
13. Filters and controls for emissions and discharges.
14. Systematic control of energy consumption so as to reduce the organization's demand.
15. Recycling of the water used by the organization with the purpose of re-using it in other processes before discarding it.
16. Use of ecological ingredients in the manufacture of our products.
17. Natural environmental analysis of the product life-cycle (LCA).
18. Design of products and services according to ecological criteria (eco-design).

Organizational Learning Capability

Compared with your competitors and using a 1 to 7 scale, please specify the degree of agreement with the next statements.

1. The organization has learnt and acquired new and important knowledge in the last three years.
2. The new members of the organization have learnt critical abilities in the last three years.
3. The organization's performance has been positively influenced by knowledge acquisition in the last three years.

CAPÍTULO 5

CONCLUSIONES, LIMITACIONES Y FUTURAS LÍNEAS DE INVESTIGACIÓN

5.1 Introducción

El presente capítulo trata de ofrecer un resumen general de las distintas aportaciones obtenidas por los tres artículos de investigación presentados en esta tesis doctoral. En primer lugar, pondremos de relieve las principales conclusiones generales obtenidas de la investigación desarrollada así como las conclusiones particulares que se derivan de cada uno de los artículos. A continuación, destacamos tanto las implicaciones académicas como las implicaciones para la gestión y para los reguladores públicos. Seguidamente se presentan las limitaciones que han surgido a lo largo del trabajo y, finalmente, planteamos futuras líneas de investigación.

5.2 Conclusiones del trabajo de investigación

La aportación principal del trabajo de investigación desarrollado, y que está presente en cada uno de los artículos, reside en el estudio combinado e interrelacionado de la gestión medioambiental e internacionalización de las organizaciones mediante el empleo de enfoques teóricos novedosos y el uso de información primaria y secundaria variada. A lo largo del trabajo, nuestros resultados ponen de manifiesto que la expansión internacional que experimentan las organizaciones va a ejercer una influencia directa en sus planteamientos y estrategias medioambientales. Es decir, las organizaciones van a poder por medio de la internacionalización llevar a cabo una gestión medioambiental responsable y que sea a su vez fuente de ventaja competitiva. Asimismo, van a poder lograr reforzar su propia estructura organizativa interna, e incrementar su reputación, transparencia y legitimidad en los distintos mercados donde

actúan. Por todo ello, las empresas deben valorar las posibles sinergias derivadas de la adopción de forma conjunta de estrategias de internacionalización y estrategias de gestión medioambiental avanzadas.

Tras destacar la principal contribución de la tesis doctoral, procedemos a continuación a recoger las conclusiones de cada uno de los tres artículos de investigación.

Capítulo 2: "Firm and country determinants of environmental standardization strategy in multinational companies". Este artículo presenta varias conclusiones. En primer lugar, integrando la perspectiva de recursos y capacidades y la teoría institucional de las organizaciones (Oliver, 1997), explicamos y justificamos las diferentes estrategias medioambientales que pueden adoptar las empresas multinacionales mediante la readaptación de la matriz de ventajas a nivel país (*country-specific advantages*) y ventajas a nivel de empresa (*firm-specific advantages*) (Rugman, 1981; Rugman & Verbeke, 1998a, 1998b). Como ventajas a nivel país consideramos la distancia institucional medioambiental existente entre el país de la matriz y el de la subsidiaria. Como ventajas a nivel empresa, tenemos en cuenta la capacidad de generar recursos (*slack resources*) como antecedente que permite la obtención de ventajas competitivas en su gestión medioambiental. En segundo lugar, vemos que la distancia institucional medioambiental entre el país de la matriz y el de la subsidiaria es el factor externo condicionante que ejerce influencia en la estandarización medioambiental en las empresas multinacionales, no ejerciendo tanto

peso el nivel de exigencia de las legislaciones medioambientales del país de la matriz o del país de la subsidiaria tal y como tradicionalmente argumentaba parte de la literatura (ej. Porter & van der Linde, 1995). En tercer lugar, demostramos que una elevada distancia institucional existente entre el país donde se ubica la empresa matriz y la subsidiaria ejerce un efecto negativo sobre la estandarización medioambiental en dichas organizaciones. En cuarto lugar, vemos que aquellas empresas multinacionales que tienen una empresa matriz con una elevada capacidad para generar recursos no sólo van a destinar esfuerzos para generar prácticas medioambientales novedosas y avanzadas sino que también van a transferir dichas prácticas al resto de unidades organizativas, con independencia del país donde estén ubicadas. Sin embargo, en el caso de que la distancia institucional medioambiental entre el país de la matriz y el de la subsidiaria sea muy elevada, preferirán generar y aplicar esas prácticas medioambientales novedosas únicamente en determinados países. Este último hecho puede deberse a que dicha distancia puede dificultar la asimilación de las nuevas prácticas debido a la existencia de requerimientos diferentes por parte de los países y a la existencia de diferentes esquemas conceptuales por parte de los empleados de las unidades y de la población en su conjunto (Kostova & Roth, 2002). En definitiva, apreciamos que, a pesar de que estudios recientes aseguran que la opción de estandarización medioambiental es muy ventajosa para las empresas multinacionales (ej. Christmann, 2004; Christmann & Taylor, 2006), no en todas las circunstancias dichas organizaciones optan por implementar la referida estrategia a lo largo de su entramado organizativo.

Capítulo 3: "Environmental standards in multinational enterprises: Testing national institutional dimensions". La principal conclusión obtenida de este trabajo de investigación radica en la necesidad de prestar una mayor atención al efecto que ejercen las diferentes dimensiones del perfil institucional medioambiental de los países sobre la estrategia de estandarización medioambiental en la empresa multinacional. Usando el enfoque teórico de ventajas a nivel país (*country-specific advantages*) y ventajas a nivel empresa (*firm-specific advantages*) (Rugman, 1981; Rugman & Verbeke, 1998a, 1998b), observamos que la distancia institucional entre el país de la matriz y el de la subsidiaria necesita ser desagregada en tres vertientes diferentes que integran el perfil institucional de los países: regulatoria, normativa y cognitiva (Kostova & Roth, 2002; Scott, 1995). Nuestros resultados muestran que una elevada distancia institucional entre el país de la matriz y el de la subsidiaria referida al componente regulatorio va a contribuir a que las empresas multinacionales adapten sus prácticas medioambientales a las exigencias legales marcadas por cada entorno, evitando de tal forma sanciones, multas y sentirse vistas como enemigas por parte de las empresas locales. Sin embargo, una elevada distancia institucional referida al componente cognitivo y normativo sí va a contribuir a que dichas empresas refuercen su perfil institucional interno con el fin de crear prácticas medioambientales que serán transferidas al resto de unidades de la empresa multinacional, logrando así obtener legitimidad internacional e incrementar su reputación y transparencia (Bansal, 2005; Kostova, Roth, & Dacin, 2008). En definitiva, observamos que mientras que las diferencias regulatorias parecen llevar a los gestores de dichas empresas a soluciones que se basan en seguir fielmente las diferentes directrices legales del país, los

directivos parecen asumir que el manejo de diferencias en las dimensiones cognitiva y normativa, ambas de un carácter claramente más intangible, aconsejan más bien seguir un patrón homogéneo de planteamientos y rendimientos medioambientales que fortalezca internamente a la empresa multinacional.

Capítulo 4: "Does having international experience help firms to be green? A knowledge-based view of international experience and organizational learning on proactive environmental strategies". En este trabajo de investigación profundizamos en el efecto que ejerce la experiencia internacional de las empresas exportadoras en la adopción de estrategias medioambientales proactivas. A pesar de que existen trabajos en la literatura medioambiental que estudian el efecto de la experiencia internacional en el planteamiento medioambiental de la empresa (Bansal, 2005; Bansal & Roth, 2000), la literatura no ha tenido en cuenta cómo las distintas modalidades de experiencia derivada de la internacionalización de la empresa influyen en el desarrollo de estrategias medioambientales proactivas. Es por ello por lo que en este trabajo analizamos distintas modalidades de experiencia internacional, cada una con una naturaleza propia y con diferentes implicaciones para la gestión. Las principales conclusiones extraídas de este trabajo de investigación giran en torno a tres ideas:

En primer lugar, a pesar de que la literatura tradicionalmente ha argumentado que la experiencia internacional marcada por el transcurso del tiempo puede contribuir significativamente a generar conocimiento valioso para la empresa que permita a su vez el desarrollo de capacidades organizativas (ej. Eriksson Johanson, Majkgard, &

Sharma, 1997; Johanson & Vahlne, 1977), observamos en nuestros resultados que dicho tipo de experiencia no ejerce ninguna influencia en la adquisición de conocimiento medioambiental valioso, y consecuentemente, en la adopción de una estrategia medioambiental proactiva por parte de las organizaciones objeto de estudio. Pensamos que la gran disponibilidad de información referente a los mercados internacionales (ej. información proveniente de los gobiernos a través de sus políticas y agentes implicados, e información extraíble de foros públicos y de Internet) explica el por qué la experiencia de la empresa derivada del trascurso del tiempo, caracterizada por su escasa complejidad, ejerce poca influencia para la empresa y puede ser susceptible de ser sustituida por otras vías de adquisición de información externa.

En segundo lugar, el conocimiento medioambiental adquirido por medio de la experiencia internacional derivada de la actuación en regiones con perfil institucional medioambiental diferenciado (distintas legislaciones medioambientales, distintos mecanismos institucionales distintos para proteger el medio ambiente, etc.) sí va a permitir a dichas empresas la asunción de planteamientos medioambientales avanzados así como fomentar su capacidad de innovación en materia medioambiental. Estos resultados apoyan las argumentaciones de aquellos que otorgan un menor peso al papel del conocimiento experimental derivado del transcurso de los años (ej. Andersson & Wictor, 2003; Autio, 2005; Autio, Sapienza, & Almeida, 2000; Oviatt & McDougall, 1994, 1999, 2005). Por tanto, podemos afirmar que aquellas empresas exportadoras que llevan a cabo un proceso de internacionalización dinámico, basado en el contacto con multitud de agentes ubicados en regiones medioambientalmente diferentes, pueden sin duda adquirir conocimiento medioambiental diverso y de gran complejidad que

contribuya de manera efectiva a adoptar una estrategia medioambiental proactiva. De hecho, la elevada complejidad derivada de la diversificación internacional medioambiental va a permitir a las empresas exportadoras poder introducir conocimiento valioso y difícilmente imitable por parte de los competidores.

En tercer lugar, comprobamos que la capacidad de aprendizaje organizativo juega un papel esencial en la integración del conocimiento medioambiental derivado de las distintas modalidades de experiencia internacional de la empresa. Por un lado, vemos que dicha capacidad no refuerza la relación experiencia internacional derivada del transcurso del tiempo y proactividad medioambiental. De hecho, aquellas empresas exportadoras que cuentan con una alta capacidad de aprendizaje tienden a adoptar una estrategia medioambiental más proactiva, independientemente del número de años que lleven desarrollando actividades de exportación. Este resultado pone de manifiesto la relación inexistente para nuestra muestra entre experiencia internacional manifestada a través del transcurso del tiempo y la adopción de una estrategia medioambiental proactiva.

Por otro lado, las empresas con alta capacidad de aprendizaje tienden a desarrollar prácticas de gestión medioambiental avanzadas, con independencia de su nivel de diversificación internacional medioambiental. Esto puede deberse a que estas empresas poseen unos mecanismos organizativos internos y capacidades que les permiten generar prácticas medioambientales avanzadas por ellas mismas. En estas circunstancias, la capacidad de aprendizaje organizativo permite a la empresa reforzar el potencial para adoptar planteamientos medioambientales avanzados y proactivos,

pero sin necesidad de estar presente y actuar en regiones medioambientalmente diversas.

No obstante, el conocimiento adquirido a través de la diversificación internacional medioambiental es de vital importancia para aquellas empresas que tienen una baja capacidad de aprendizaje y que están dispuestas a desarrollar una estrategia medioambiental proactiva. Esta idea puede venir motivada por el hecho de que aquellas organizaciones con poca capacidad para aprender no pueden llevar a cabo planteamientos medioambientales avanzados por ellas mismas. De hecho, necesitan basarse en sus experiencias fuera de sus fronteras para generar prácticas medioambientales proactivas, avanzadas e innovadoras. En resumen, dichas empresas van a necesitar adquirir fuera conocimiento medioambiental diverso, novedoso y de gran complejidad que les permita llevarlo a la práctica en la actividad rutinaria de la organización. Por todo ello, en este último caso observamos que la expansión internacional va a resultar muy necesaria para poder desarrollar estrategias medioambientales proactivas.

5.3 Implicaciones del trabajo de investigación

5.3.1 Implicaciones académicas

La investigación académica sobre gestión medioambiental es relativamente reciente en el campo de estudio de la organización de empresas. La literatura que relaciona gestión medioambiental e internacionalización de organizaciones se ha desarrollado fundamentalmente en la última década debido a la globalización de los

mercados producida en las últimas décadas (Dowell, Hart, & Yeung, 2000). Se ha prestado especial atención a la gestión medioambiental que llevan a cabo las empresas multinacionales, centrándose en aspectos relacionados con la influencia de los grupos de interés o *stakeholders* en las estrategias medioambientales de dichas organizaciones (ej. Christmann, 2004), en la influencia que ejercen las legislaciones medioambientales en el diseño de la estrategia medioambiental de las mismas (Rugman & Verbeke, 1998a, 1998b). También se han estudiado aspectos internos y externos que influyen en la adopción de normas de certificación de calidad medioambiental, tales como las normas ISO 14001 o EMAS, por parte de empresas que también operan fuera de las fronteras nacionales (ej. Christmann & Taylor, 2006; Darnall, 2006; Darnall, Henriques, & Sadorsky, 2008). Por otro lado, se han llevado a cabo estudios que analizan cómo la adopción de prácticas medioambientales proactivas favorece el éxito exportador de pequeñas y medianas empresas (ej. Martín-Tapia, Aragón-Correa, & Rueda-Manzanares, 2010; Martín-Tapia, Aragón-Correa, & Senise-Barrio, 2008). Sin embargo, se ha prestado poco interés hasta ahora al estudio detallado de las distintas conexiones existentes entre el fenómeno de internacionalización *per se* y la gestión medioambiental llevada a cabo por distintas organizaciones que experimentan un proceso de expansión internacional. Por tanto, la presente tesis doctoral supone un intento de profundizar en esta nueva línea de investigación mediante la aplicación de consolidados postulados teóricos y el desarrollo de diversos análisis empíricos.

En relación al análisis de la estrategia de estandarización medioambiental de las empresas multinacionales, integramos la teoría de recursos y capacidades así como la teoría institucional de las organizaciones a través de una adaptación de la reconocida

matriz que recoge las ventajas a nivel país (*country-specific advantages*) y las ventajas a nivel empresa (*firm-specific advantages*), ampliamente utilizada por los teóricos que estudian el fenómeno de la internacionalización de dichas empresas (Kolk & Pinkse, 2008; Rugman, 1981; Rugman & Verbeke, 1992, 1998a, 1998b, 2003, 2005). De esta forma podemos determinar una serie de condicionantes tanto internos (capacidad para generar exceso de recursos, también denominada *slack*) como externos (distancia institucional medioambiental entre el país de la matriz y el de la subsidiaria) que influyen en la referida estrategia.

En relación al análisis de la estrategia de proactividad medioambiental de las empresas exportadoras, nos basamos en la teoría del conocimiento para explicar cómo la internacionalización de dichas empresas permite la adquisición de conocimiento valioso, complejo, no imitable y, a su vez, fuente de ventaja competitiva (Blomstermo, Eriksson y Sharma, 2004; Eriksson, Johanson, Majkgard, & Sharma, 2000; Petersen, Pedersen, & Lyles, 2008.). De esta manera, analizamos cómo distintas modalidades de experiencia internacional de dichas empresas van a influir en la adquisición de conocimiento que permita desarrollar una serie de capacidades organizativas, siendo una de ellas la medioambiental (Aragón-Correa, 1998; Hart, 1995). Asimismo, pretendemos fortalecer los postulados del referido enfoque teórico mediante la consideración del papel que puede jugar la capacidad de aprendizaje organizativo de las empresas exportadoras. De hecho, dicha capacidad puede permitir en gran medida que dichas empresas aprovechen y conjuguen el conocimiento derivado de su expansión internacional con el que ya existe en la organización (Casillas, Moreno, & Barbero, 2010; Casillas, Moreno, Acedo, & Gallego, 2009; Hsu & Pereira, 2008).

Por último, el uso de diversas fuentes de información primaria y secundaria, las distintas muestras finales de empresas y sectores considerados, así como la rigurosidad estadística empleada en nuestros trabajos de investigación, hacen posible que los resultados puedan ser relevantes para la comunidad científica, incluyendo a directivos, reguladores públicos y el resto de grupos de interés.

5.3.2 Implicaciones para la gestión

Como principales implicaciones para la gestión destacamos la necesidad por parte de los directivos de prestar especial interés al papel que la internacionalización tiene a la hora de planificar y gestionar las prácticas de gestión medioambiental de las organizaciones. Deben aprovechar la presencia de la organización en otros mercados internacionales con perfil institucional diferenciado para diseñar prácticas medioambientales novedosas y avanzadas. Además, afirmamos que la gestión medioambiental puede ser fuente de ventaja competitiva y aprovechada por las organizaciones en las distintas localizaciones donde operan.

En relación a las empresas multinacionales, el hecho de que opten por llevar a cabo una estrategia de estandarización medioambiental a lo largo de su red organizativa va a reforzar su perfil institucional interno y va a contribuir a que autorregulen sus propias prácticas medioambientales, sin necesidad de verse limitadas al cumplimiento de reglas mínimas de actuación. Todo ello va a permitirles adquirir una buena posición competitiva respecto a la competencia, obtener transparencia, reputación y legitimidad internacional. Por un lado, vemos que los directivos van a tener más dificultades a la hora de llevar a cabo una estrategia de estandarización medioambiental en el caso de

que exista una elevada distancia institucional medioambiental global entre el país de la matriz y el de la subsidiaria, incluso en el caso de que la organización cuente con una elevada capacidad para generar recursos. Por otro lado, apreciamos que, mientras que los gestores cuentan con herramientas fiables para responder a la influencia regulatoria, es necesario que presten atención suficiente al resto de planteamientos sociales y cognitivos de cara a determinar si un patrón estandarizado es la opción más eficaz para sus organizaciones.

En relación a las empresas exportadoras que no cuentan con instalaciones permanentes en los mercados exteriores, es preciso tener en cuenta que su actuación en los mercados internacionales puede ser también una fuente importante de conocimiento que le favorezca el desarrollo de prácticas medioambientales más avanzadas. En la medida en que los directivos destinen esfuerzos suficientes podrán dichas organizaciones adquirir conocimiento medioambiental valioso así como capacidades en materia de gestión medioambiental. La actuación en regiones diferentes con unas exigencias y perfiles institucionales medioambientalmente distintos puede constituir una vía adecuada de obtención de dicho conocimiento. Junto a ello, los directivos deben ser capaces de crear unas estructuras organizativas que permitan conjugar e integrar el conocimiento medioambiental que viene de fuera con el que ya existe en la organización.

A lo largo de este trabajo, observamos que el tratamiento conjunto de los factores institucionales de los países y regiones donde las organizaciones tienen presencia (perfil institucional medioambiental de los países y regiones) así como la consideración

de los recursos y capacidades internos de las mismas (ej. *slack* y capacidad de aprendizaje organizativo) son aspectos vitales que han de ser considerados por los gerentes a la hora de diseñar y desarrollar la gestión medioambiental de la organización, obtener ventaja competitiva e incrementar la reputación de la misma en los distintos mercados internacionales.

Por todo ello, afirmamos que los directivos deben aprovechar la presencia de la organización en mercados internacionales para adquirir nuevos conocimientos medioambientales valiosos, entablar contactos con diferentes agentes y reforzar la estructura organizativa interna de la empresa, reduciendo al mismo tiempo sus costes operativos e incrementando su transparencia y legitimidad. Por tanto, no únicamente la integración de la gestión medioambiental en la estrategia general de la empresa contribuiría a una mejora en el desempeño empresarial de la empresa, sino que también la organización sería vista como un ente socialmente responsable en todos los países donde tiene actuaciones.

5.3.3 Implicaciones para los reguladores públicos y agentes de interés

Tradicionalmente se ha afirmado que el nivel de exigencia de las legislaciones medioambientales de los países marca en gran medida la pauta de actuación medioambiental de las organizaciones (Porter & van der Linde, 1995). No obstante, vemos que la dimensión regulatoria no es la única dimensión condicionante puesto que el perfil institucional medioambiental de los países es muy amplio y complejo. En dicho perfil tienen también cabida otros aspectos institucionales tales como la concienciación de la sociedad por la protección medioambiental, actitudes y valores

medioambientales de los habitantes, acuerdos de cooperación con entes públicos y privados en materia medioambiental, o la puesta en marcha de incentivos por parte de los gobiernos y dirigidas a aquellos agentes que lleven a cabo una gestión medioambiental responsable.

Las autoridades públicas y reguladores pueden observar que una acción regulatoria alejada de los planteamientos de otros ámbitos territoriales suele conducir a las empresas internacionales a una adaptación a los niveles exigidos en ese territorio, pudiendo atraer a empresas de escaso desempeño medioambiental a las zonas con regulaciones menos exigentes. El interés por contar con planteamientos regulatorios homogeneizados internacionalmente se ve indirectamente avalado por los resultados obtenidos.

Por otro lado, los agentes de interés pueden comprobar con nuestros resultados la importancia que la dimensión normativa y cognitiva tienen en los logros medioambientales de las empresas internacionales. Por ejemplo, los grupos ecologistas y asociaciones de consumidores podrían querer desarrollar un papel más activo en destacar los perfiles diferenciados de los distintos territorios en los que la empresa se encuentra. La posibilidad de que los grupos de países desarrollados tengan un papel activo en la vigilancia de la actuación en países no desarrollados puede constituir un incentivo para que la empresa busque conseguir logros estandarizados en todos los ámbitos territoriales. Esto presenta la ventaja de que los mismos tendrían entonces que adaptarse al nivel más exigente de las zonas en las que la empresa se encuentra. Este

resultado de logros estandarizados es particularmente interesante a los objetivos de los grupos conservacionistas.

Por todo ello, desde la presente tesis doctoral queremos resaltar la necesidad creciente de que exista un mayor compromiso medioambiental por parte de gobiernos y resto de agentes y organismos, tanto públicos como privados, para proteger el medio ambiente y alentar a las distintas organizaciones a llevar a cabo comportamientos socialmente responsables en los distintos contextos internacionales donde operan. Ese mayor compromiso ha de ser efectivo y requiere igualmente la existencia de acuerdos de cooperación a nivel internacional con el resto de países.

5.4 Limitaciones del trabajo de investigación

Todo trabajo de investigación no queda exento de limitaciones. A continuación vamos a indicar las limitaciones que hemos encontrado en la presente tesis doctoral.

- Los análisis empíricos realizados en los tres artículos son de corte transversal, lo cual impide analizar la evolución de las variables a lo largo del tiempo. Este aspecto sería de interés para futuros trabajos teniendo en cuenta la naturaleza dinámica de las variables objeto del estudio.

- Respecto a la base de datos utilizada para la realización del primer y segundo artículo (capítulo 2 y capítulo 3), cabe aludir al hecho de que la información medioambiental obtenida de las empresas matrices y subsidiarias se ha obtenido de la información pública de los distintos registros nacionales sobre

las emisiones al aire que emiten las distintas fábricas. Dicha información medioambiental puede resultar incompleta ya que pueden existir otros indicadores tales como emisiones al agua, vertidos a la tierra, o indicadores del procesamiento de residuos y reciclado. Los registros nacionales están aún en proceso de mejora y unificación y es por ello por lo que algunos datos no están disponibles. Teniendo en cuenta todo ello, y tras haber realizado un análisis preliminar acerca de la información medioambiental existente, hemos tratado de obtener un valor que refleje de la manera más real posible el impacto medioambiental de las distintas unidades organizativas de la empresa multinacional.

- En relación al artículo 3 (capítulo 4), cabe especificar que la información medioambiental y la derivada de la capacidad de aprendizaje organizativo de las empresas exportadoras de la muestra se obtiene a través de cuestionario. El uso de esta técnica conlleva que las respuestas se basen en la percepción por parte de los propios encuestados. No obstante, debido a que no nos fue posible obtener la información por otra vía, optamos finalmente por el uso de entrevista personal a los directivos a través de cuestionario.

- En cuanto a la generalización de los resultados cabe hacer dos aclaraciones. En primer lugar, la base de datos utilizada para el capítulo 1 tiene en cuenta a una serie de países: Estados Unidos, Canadá, México, Francia y España. El capítulo 3 utiliza igualmente la misma base de datos, pero excluyendo a México del análisis. Por tanto, la extensión de los resultados a otros países

distintos debe hacerse con cautela. En segundo lugar, la muestra de empresas obtenida en el capítulo 4 es únicamente del sector de la alimentación y con sede en España. Por tanto, hay que ser prudentes a la hora de generalizar los resultados al hablar de otro sector y/o de empresas con sede en otro país.

- Para el análisis de la información del primer y tercer artículo se utilizó el análisis de regresión múltiple incluyendo variables moderadoras. Esta metodología utiliza un tipo de moderación de naturaleza lineal. Por tanto, en los casos en los que no se ha encontrado efecto moderador no quiere decir que no exista moderación, ya que ésta podría ser no lineal. En definitiva, existe la posibilidad de que se puedan presentar formas funcionales alternativas a la lineal (Jaccard, Turrisi, & Wan, 1990: 24).

5.5 Futuras líneas de investigación

La presente tesis doctoral pretende servir como marco de referencia para el desarrollo de futuros trabajos de investigación. Éstos pueden surgir con idea de contrastar los resultados obtenidos en nuestros tres artículos de investigación y de solventar las limitaciones encontradas, expuestas en el epígrafe anterior. Entre las líneas de investigación que serían susceptibles de realización en un futuro destacamos las siguientes:

En primer lugar, resulta de gran interés realizar un estudio longitudinal que nos permita analizar la evolución de nuestras variables a lo largo del tiempo y dar una mayor robustez a las relaciones obtenidas.

En segundo lugar, estudios futuros pueden tratar de contrastar las hipótesis planteadas en empresas de otros sectores de actividad y que tengan gran peso en otras regiones tales como Latinoamérica, Asia y/o África.

En tercer lugar, proponemos la inclusión de nuevas variables que refuercen el estudio combinado de internacionalización – gestión medioambiental. De manera más concreta, proponemos introducir nuevas variables mediadoras y moderadoras que enriquezcan los resultados obtenidos en nuestros tres trabajos de investigación, tales como la capacidad de innovación de la empresa, la cultura innovadora de los miembros de la organización (*innovativeness*), la capacidad de absorción, o la influencia que puede ejercer la obtención de normas de certificación internacional de calidad medioambiental (ej. ISO 14001, EMAS) en la gestión medioambiental de las organizaciones así como en la reputación y legitimidad alcanzada en los diferentes mercados internacionales donde operan.

En cuarto lugar, otra línea de investigación a destacar se centra en el estudio pormenorizado del papel estratégico que puede desempeñar la subsidiaria en los distintos países así como en la influencia que puede ejercer la misma en la generación y transferencia de prácticas medioambientales avanzadas y novedosas a lo largo del entramado organizativo de la empresa multinacional. De hecho, una actuación medioambientalmente responsable por parte de la subsidiaria puede repercutir de manera muy positiva en el entorno donde esté ubicada así como en la gestión medioambiental de la empresa multinacional en su conjunto.

Finalmente, planteamos como futuro trabajo de investigación la realización de un estudio del caso de una empresa multinacional, siendo objeto de análisis en la actualidad. A través de esta metodología es posible tener un acercamiento más directo a la realidad empresarial, y por consiguiente a la gestión medioambiental que realizan. El objeto de llevar a cabo dicho análisis del caso reside en dos aspectos de vital importancia. Por un lado, podremos estudiar cómo se llevan a cabo las transferencias de prácticas de gestión medioambiental entre las distintas unidades de la empresa, teniendo en cuenta los mercados internacionales donde actúan. Por otro lado, podremos delimitar cómo se produce la transferencia de conocimiento medioambiental entre los distintos miembros que pertenecen a una misma unidad. De tal forma, se puede interrelacionar la transferencia de conocimiento *inter* e *intra* unidades y, al mismo tiempo, establecer pautas para futuros trabajos que tengan en cuenta la transferencia de prácticas de gestión medioambiental llevadas a cabo a lo largo de la empresa multinacional así como el rol de los equipos de trabajo insertos en cada unidad organizativa de la misma.

5.6 Bibliografía utilizada en el capítulo

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