

TESIS DOCTORAL



Understanding the links between firms' international and business strategies:
Studies on innovation and sustainability

PRESENTADA POR:

Pia Ellimäki

Facultad de Ciencias Económicas y
Empresariales

Programa de Doctorado en Ciencias
Económicas y Empresariales

Granada, 18 de mayo 2023

DIRIGIDA POR:

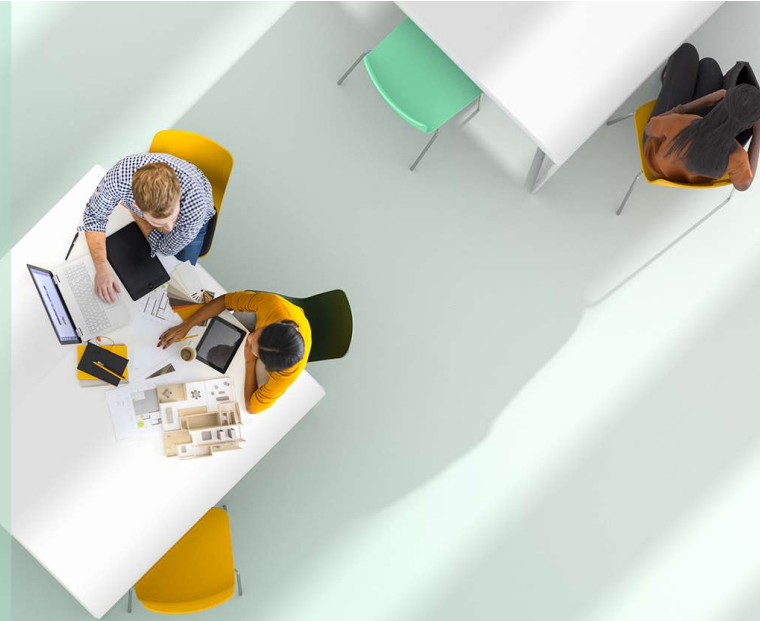
Prof. Nuria Esther Hurtado Torres
Prof. J. Alberto Aragón Correa

Proyecto **PID2019-106725GB-I00** financiado
por MCIN/ AEI /10.13039/501100011033



CONTENIDOS

- 1.** Introducción
- 2.** Foreign institutional owners and MNEs' environmental outcomes
- 3.** Global firms and their symbolic versus effective operations
- 4.** Home and host country development and MNEs' R&D intensity
- 5.** Conclusiones e implicaciones





1.

Introducción



La motivación ^(1/2)

- La sociedad espera cada vez más que las empresas contribuyan a **alcanzar los Objetivos de Desarrollo Sostenible (ODS)**
- Las empresas multinacionales tienen una **posición privilegiada**, debido a sus recursos y alcance global, para abordar el reto del desarrollo sostenible
- Sus decisiones estratégicas están orientadas a **crear valor** no sólo para sí mismas, sino también para sus stakeholders
- La **sostenibilidad** y la **innovación** constituyen estrategias esenciales para que estas empresas asuman un **compromiso empresarial** en el desarrollo de sus actividades en los mercados internacionales



La motivación (2/2)

- Muchas **oportunidades y desafíos** relacionados con los planteamientos medioambientales y el compromiso con la innovación
 - Un reto importante relacionado con alcanzar y mantener su **legitimidad** en los múltiples entornos institucionales
 - **Escepticismo** con respecto a sus **progresos reales** en los planteamientos medioambientales
 - Las estrategias de sostenibilidad e innovación dependen no sólo de los ejecutivos sino también de los **propietarios** de las empresas

→ Esta tesis doctoral contribuye a mejorar el conocimiento sobre los factores internos y externos que condicionan los planteamientos para que las empresas puedan **legitimarse** en entornos internacionales y **contribuir a los ODS**

Objetivos

Propietarios institucionales extranjeros (2)
Diversificación internacional (2)
Diversificación fuera de la región (3)
Internacionalización en países emergentes vs desarrollados (4)

Internacionalización

País de origen

Desarrollo institucional (3, 4)

Planteamientos de sostenibilidad e innovación

Desempeño medioambiental (2, 3)
Innovación medioambiental (2)
Divulgación de planteamientos medioambientales (3)
Inversiones en I+D (4)

Los números en paréntesis refieren al capítulo de la tesis doctoral donde se estudian.

Los artículos de esta tesis

Capítulo	Título del artículo	Año de publicación	Revista	JCR	Cuartil
2	The link between foreign institutional owners and multinational enterprises' environmental outcomes in the chemical industry	2023	Journal of International Business Studies	11.103	Q1 (Business) Q1 (Management)
3	Do global firms increase their environmental disclosure and performance? Symbolic versus effective operations and the moderating role of liability of origin. Legitimation implications	2021	Industrial Marketing Management	8.890	Q1 (Business) Q1 (Management)
4	The impact of home and host country institutional development on multinationals' R&D intensity	2022	Business Research Quarterly	4.204	Q3 (Business) Q3 (Management)



2.

The link between foreign institutional owners and multinational enterprises' environmental outcomes in the chemical industry

Research questions

- What is the impact of foreign institutional owners on their investee firms' environmental outcomes?
- Is this impact the same for short-term and long-term environmental approaches?
- Does the level of international diversification of firms influence these relationships?

“We will be increasingly disposed to vote against management and board directors when companies are not making sufficient progress on sustainability-related disclosures and the business practices and plans underlying them”

Larry Fink, CEO and Chairman of BlackRock

What we know about foreign institutional owners

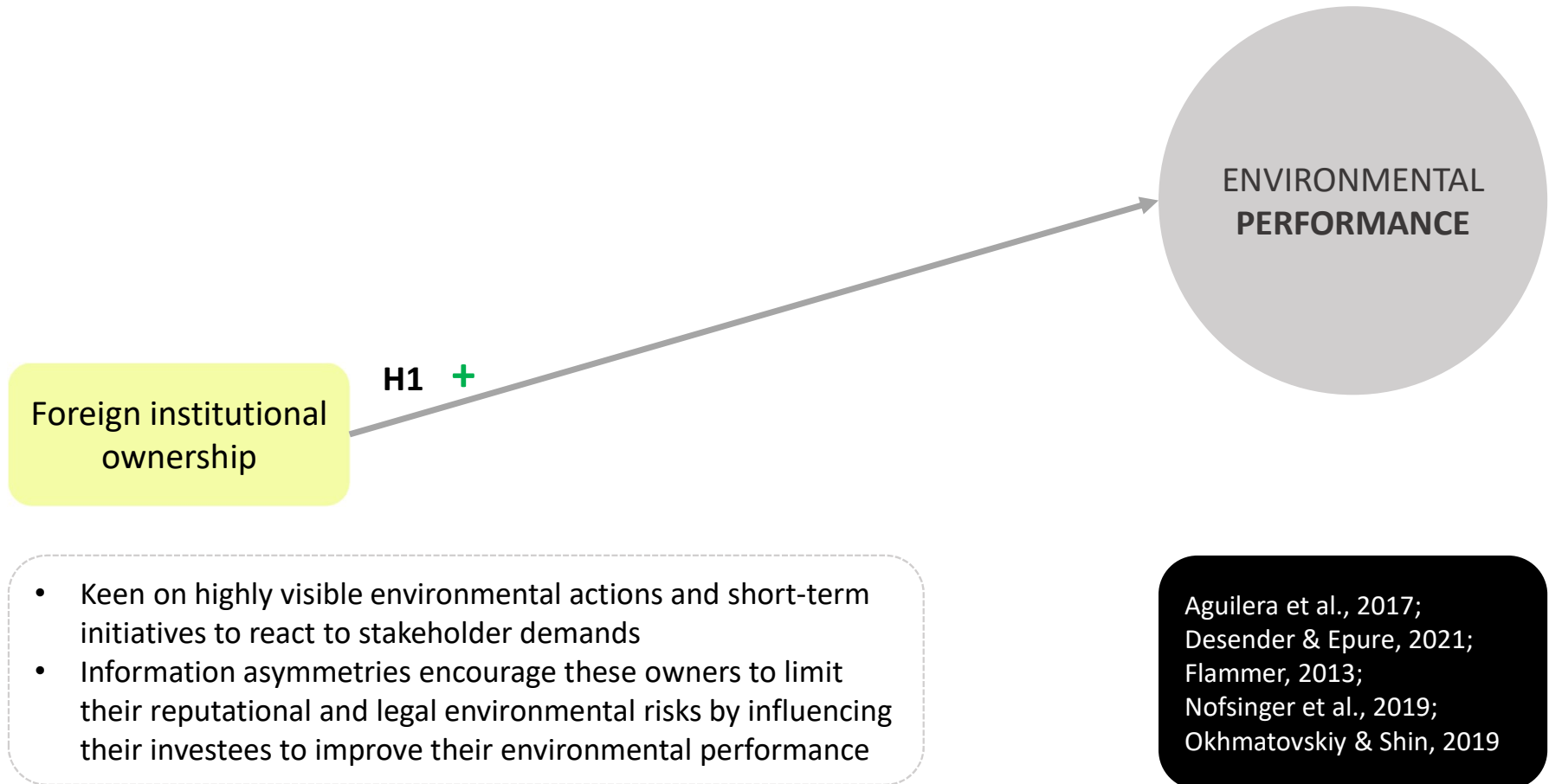
Face higher levels of **information asymmetry** than domestic owners

Greater **risk aversion** and interest in **short-term profits** vs long-term value

Place more emphasis on **agency monitoring** to reduce their information asymmetries

Highly **sensitive to poor performance signals** and react quickly to protect their investments

Hypotheses



Hypotheses

- Skeptic about environmental innovations due to their costs, long-term investment horizons and risky, uncertain outcomes
- MNEs will direct their efforts towards meeting short-term performance goals to retain these owners and executives have strong incentives to align their firms' priorities with key investors

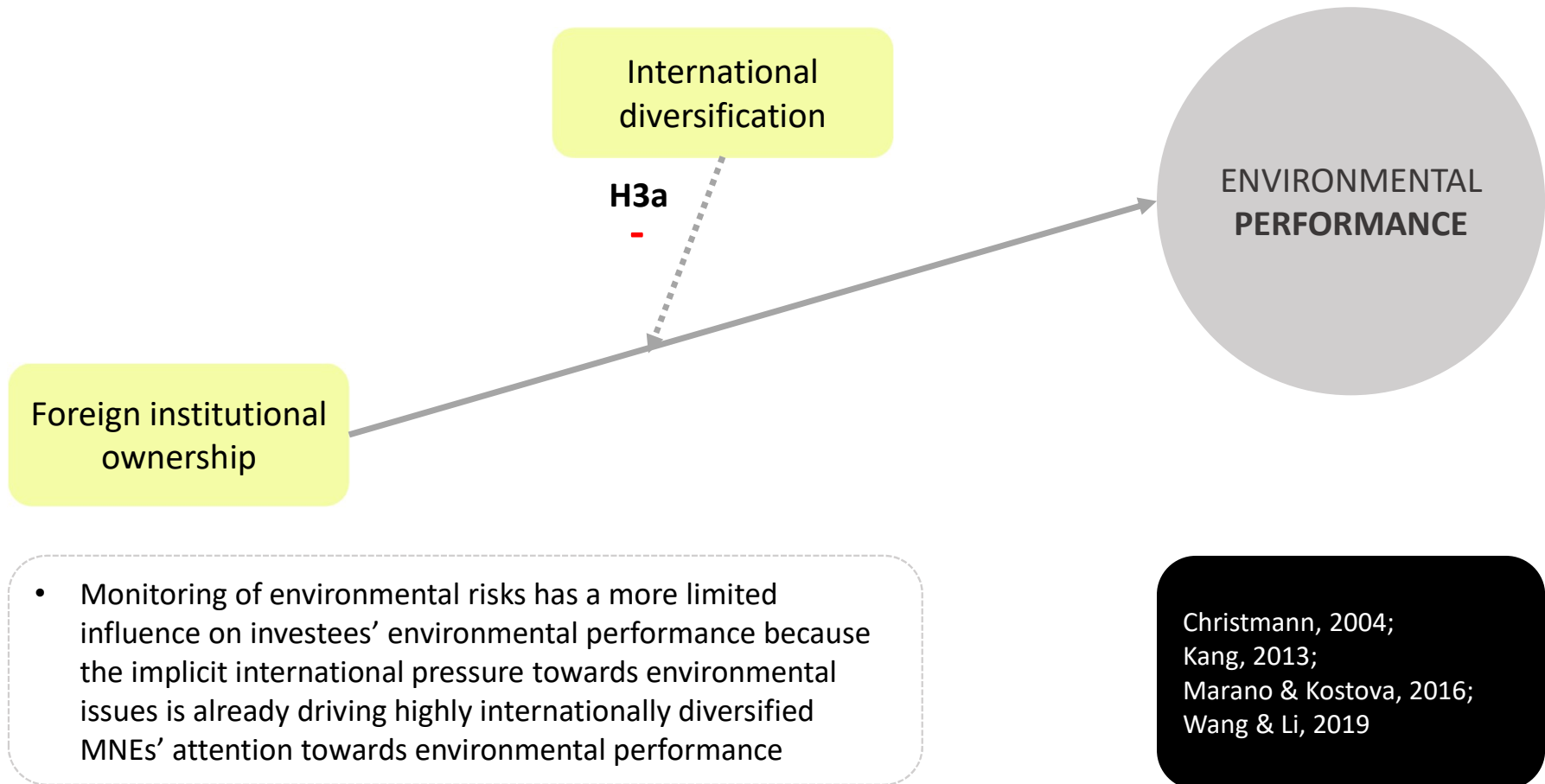
Aragón-Correa et al., 2006;
David et al., 2006;
DesJardine et al., 2021;
Geng et al., 2016;
Kim et al., 2019

Foreign institutional
ownership

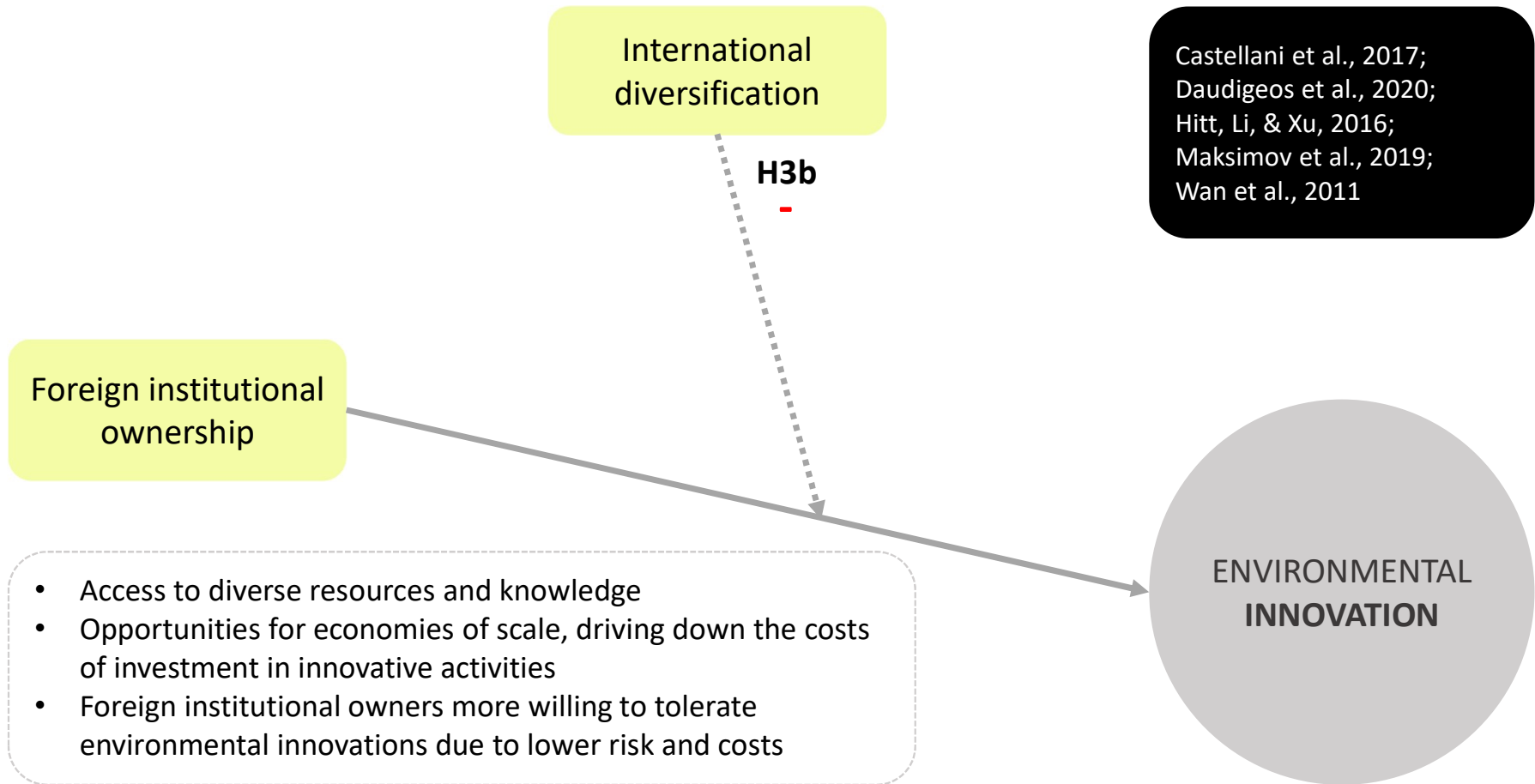
H2 -

ENVIRONMENTAL
INNOVATION

Hypotheses



Hypotheses



Context: Chemical manufacturing MNEs

- Second largest manufacturing industry in the world
 - Over US\$ 4 trillion in revenue
- Its production processes generate considerable amounts of emissions, waste and chemical releases to air, water, and soil
 - Responsible for 18.6% of the particulate matter (PM10) in the air
- The industry is also becoming more global and reliant on complex global supply chains

Sample:



197 chemical industry MNEs

2010-2019

1200 observations

33 countries

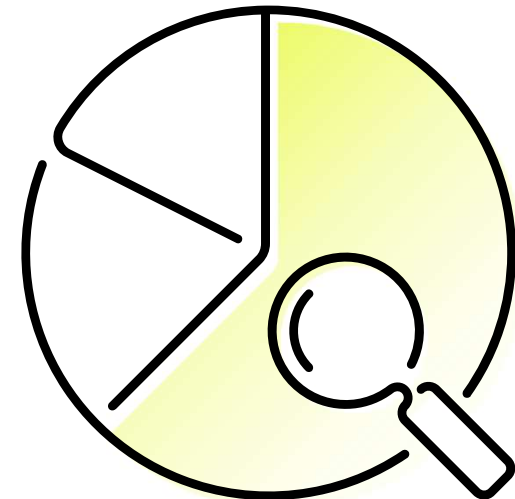
Methodology

– Data sources:

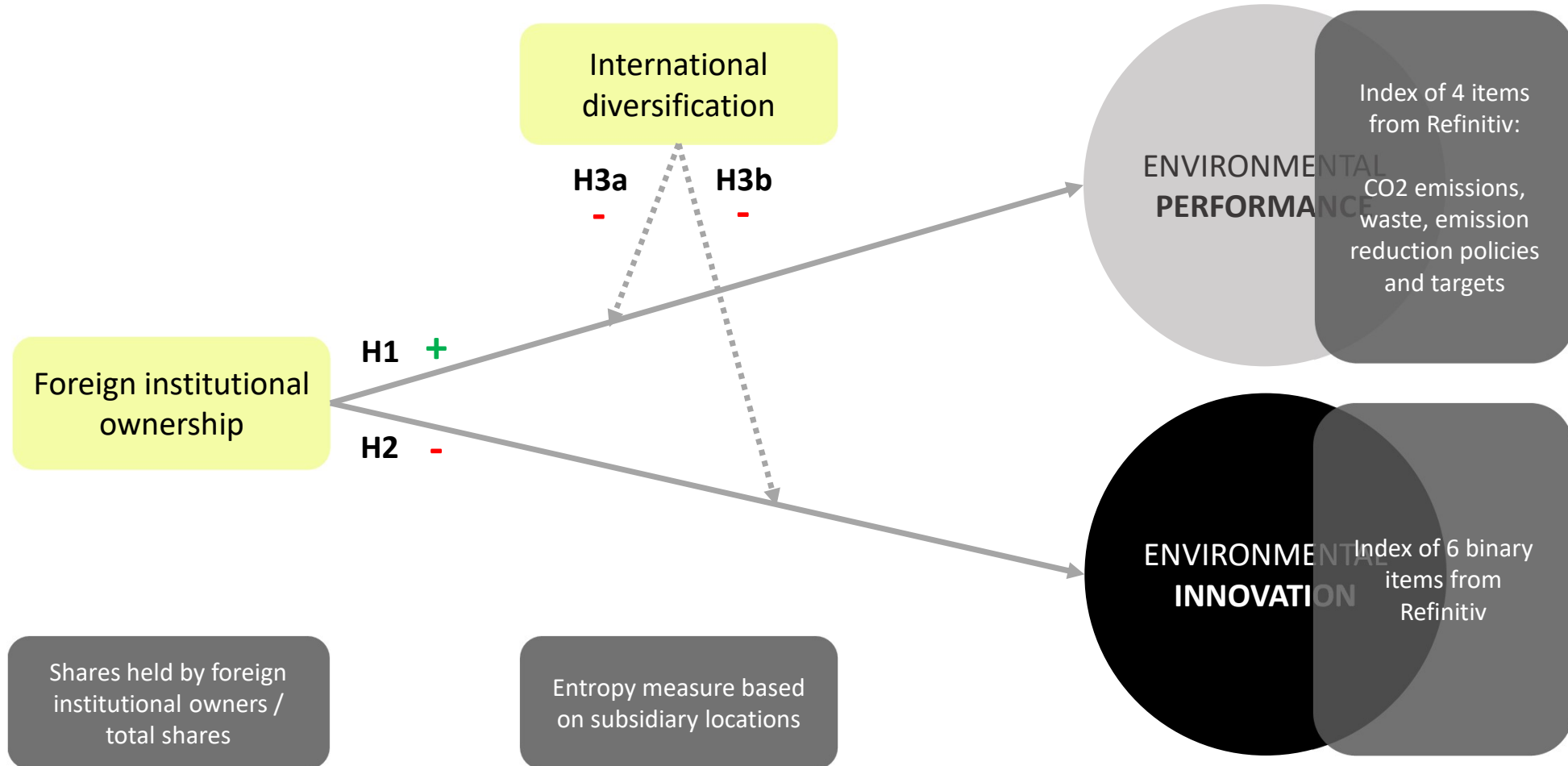
- Refinitiv Eikon database
- Bureau van Dijk's Orbis database
- World Economic Forum
- The World Bank

– Method:

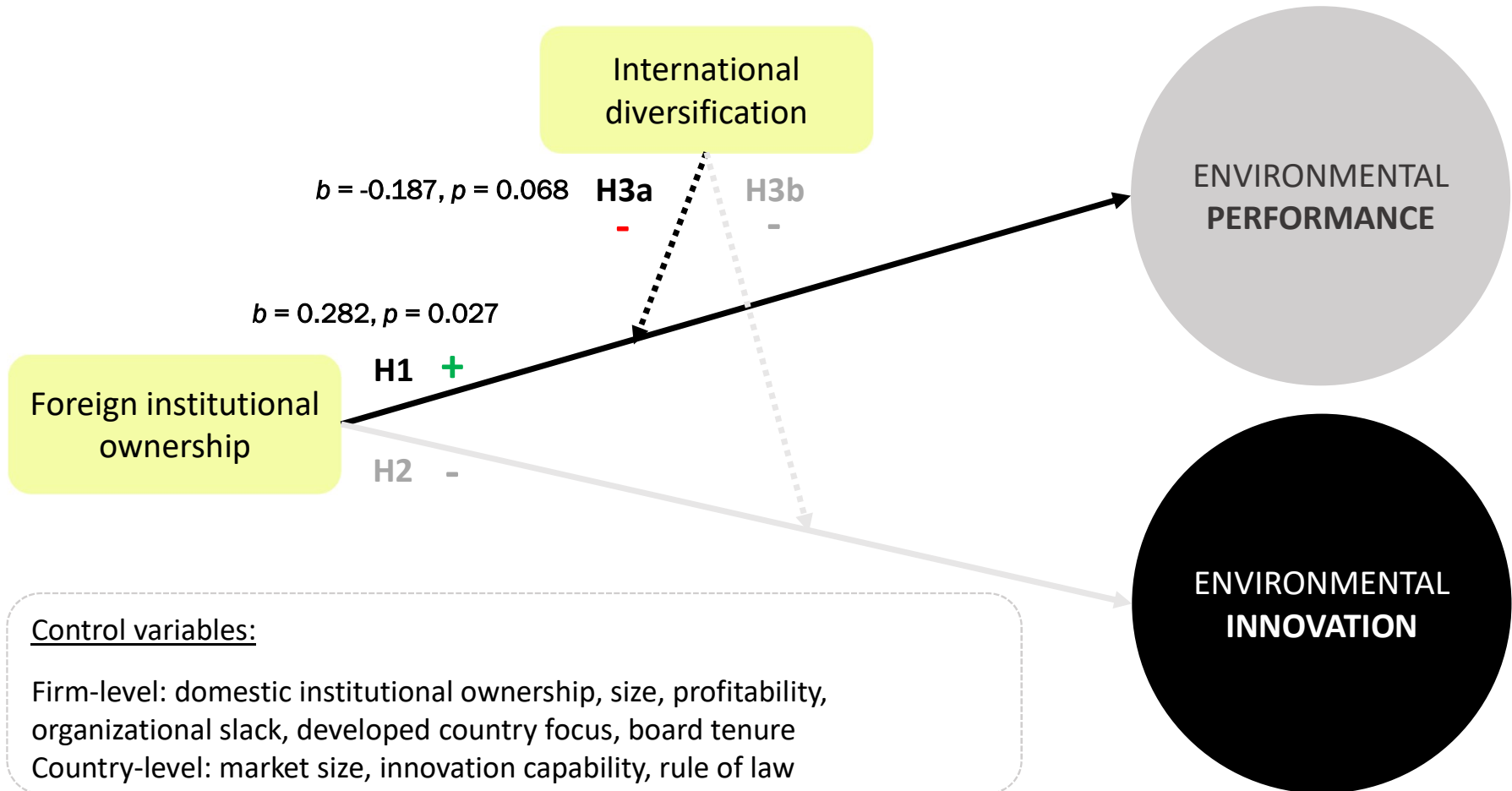
- Generalized least squares (GLS) regressions
- Fixed effect estimators
- Robust standard errors



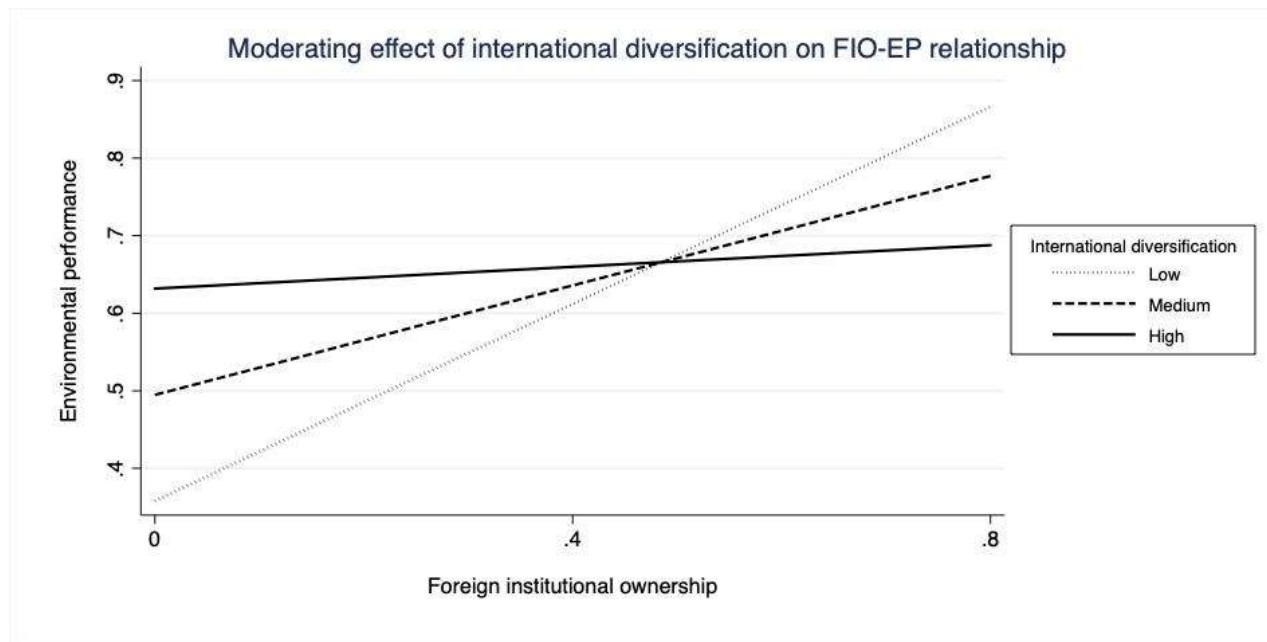
Measures



Results



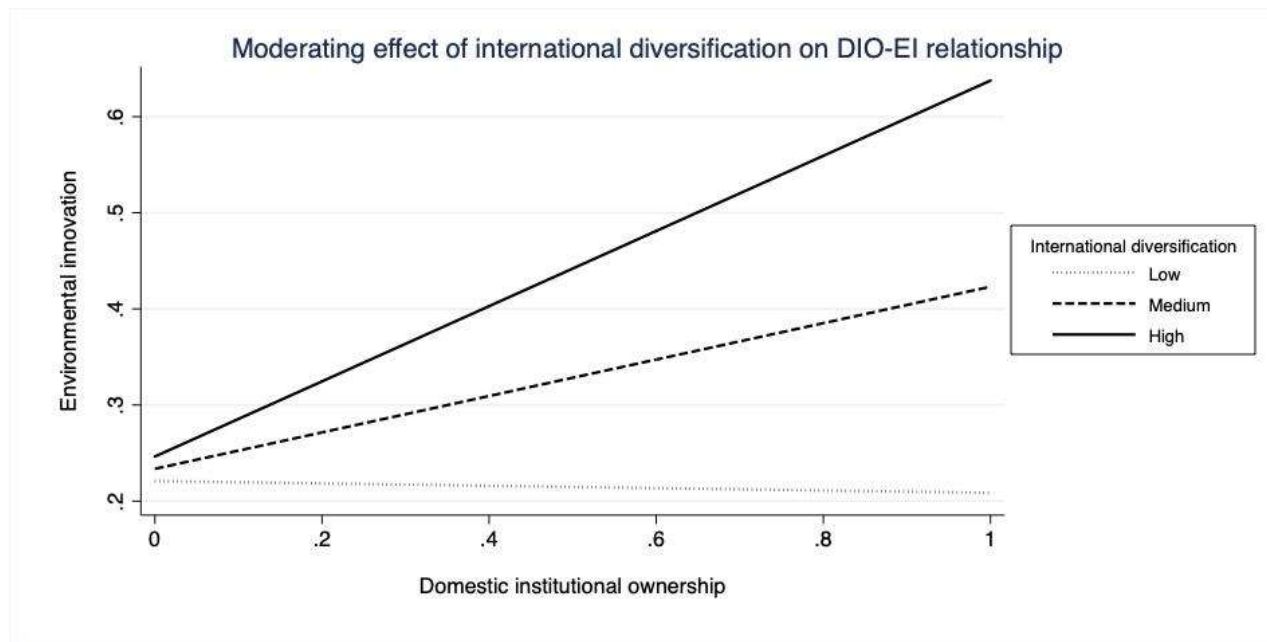
Results



FIOs' positive effect on EP is stronger for *less* internationally diversified firms

FIO = foreign institutional owners; EP = environmental performance

Results



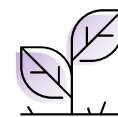
DIOs' positive effect on EI is stronger for *more* internationally diversified firms

DIO = domestic institutional owners; EI = environmental innovation



Key conclusion

- The presence of institutional investors has implications for the environmental outputs of their investees
- However, the improvements linked to FIOs are **much more limited** than the public statements made by executives of global institutional owners



3.

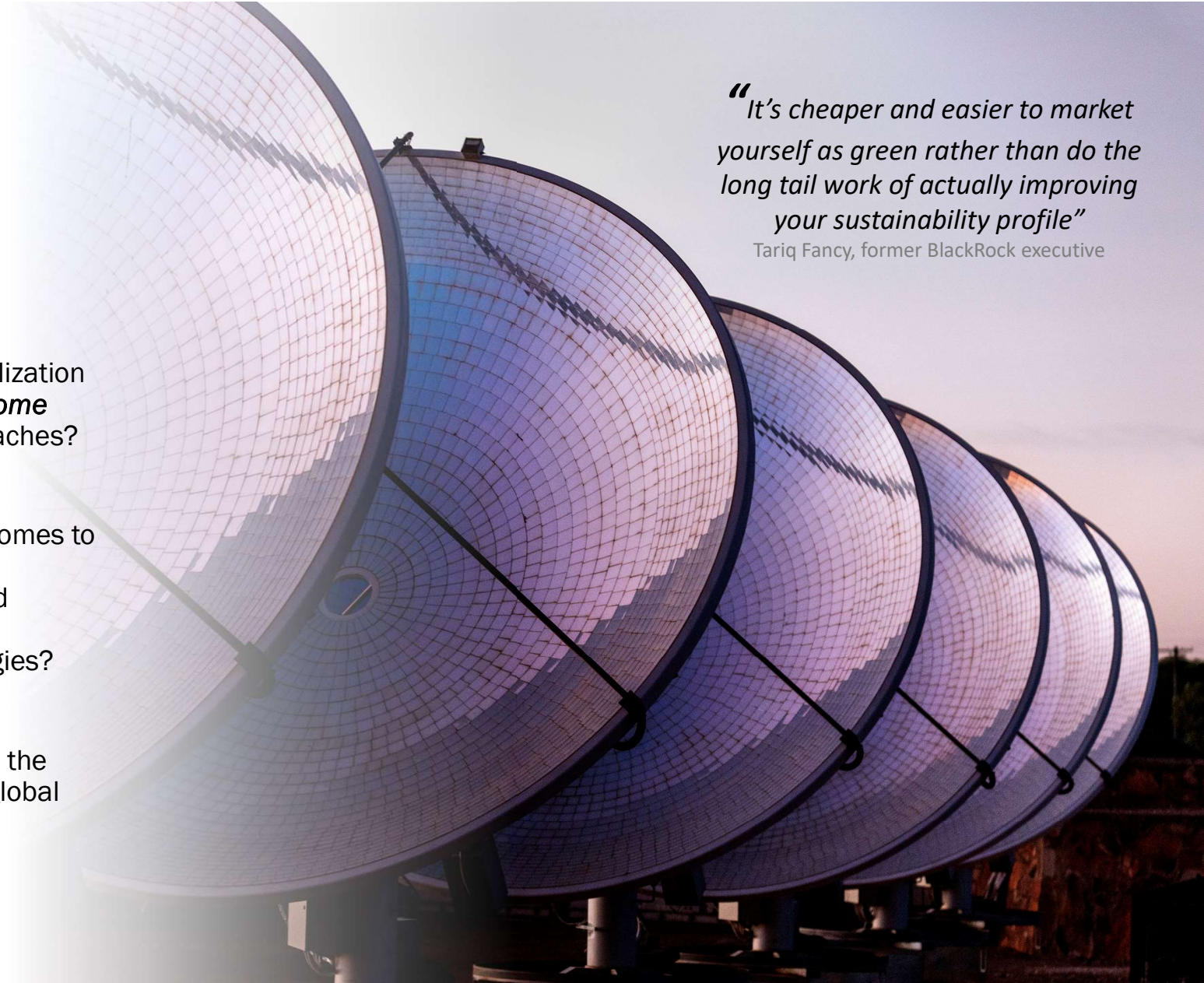
Do global firms increase their environmental disclosure and performance? Symbolic versus effective operations and the moderating role of liability of origin

Research questions

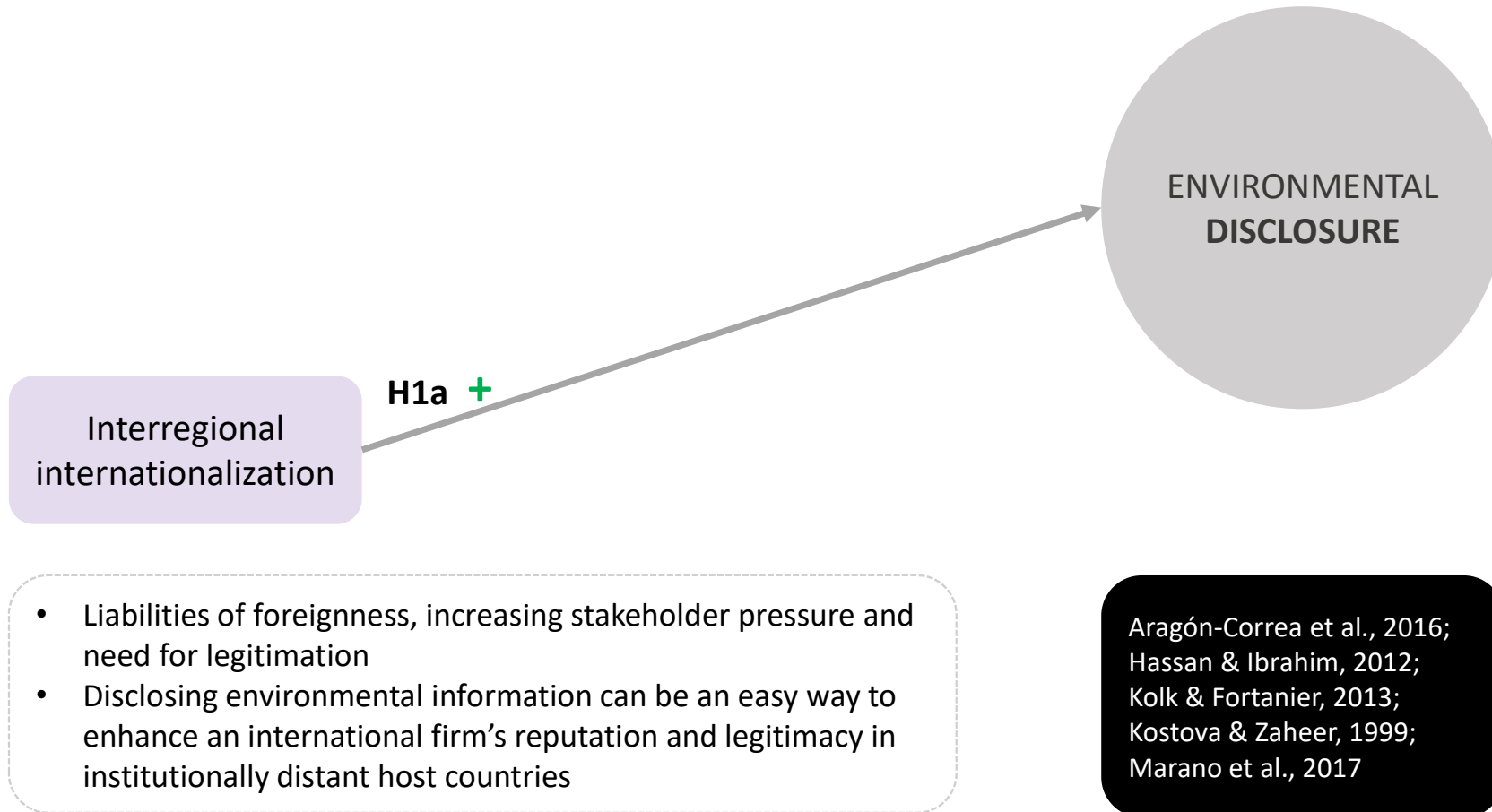
- How does a firm's internationalization in *regions further away from home* affect its environmental approaches?
- Are there differences when it comes to *symbolic* (i.e. disclosure of environmental information) and *effective* (real reduction in environmental impacts) strategies?
- Do *liabilities of origin* influence the relationship between a firm's global internationalization and its environmental approaches?

“It's cheaper and easier to market yourself as green rather than do the long tail work of actually improving your sustainability profile”

Tariq Fancy, former BlackRock executive



Hypotheses



Hypotheses

- Debate on the sign of the relationship
- Positive: Maintain standards across countries; mitigate litigation risks
- Negative: limited monitoring systems globally; search for locations where tax requirements allow companies to operate as they desire
- Improvements in environmental performance may be neither easy nor efficient in reinforcing legitimacy

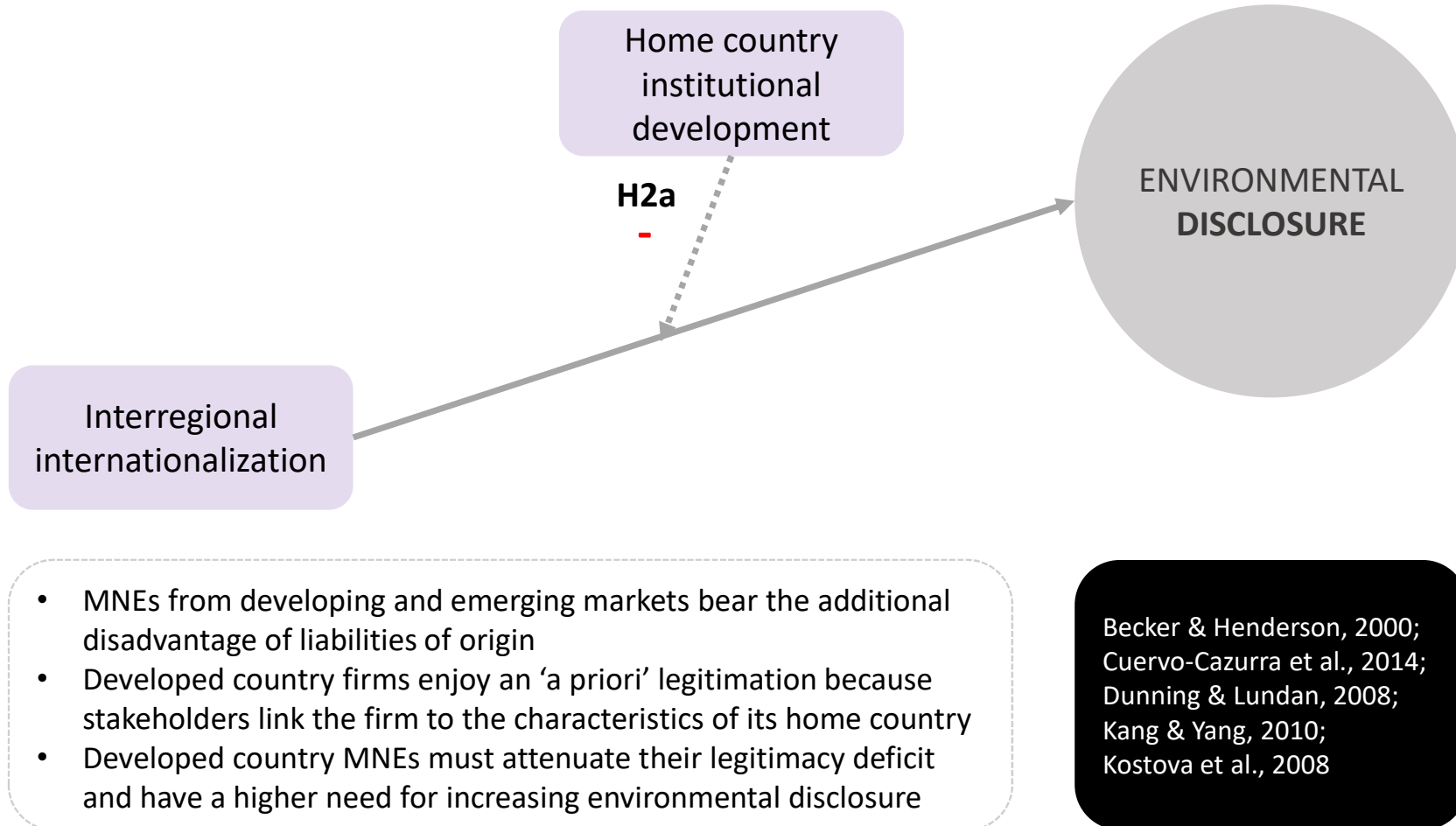
Aragón-Correa et al., 2016;
Christmann & Taylor, 2001;
Sharfman et al., 2004;
Strike et al., 2006;
Surroca et al., 2013

Interregional
internationalization

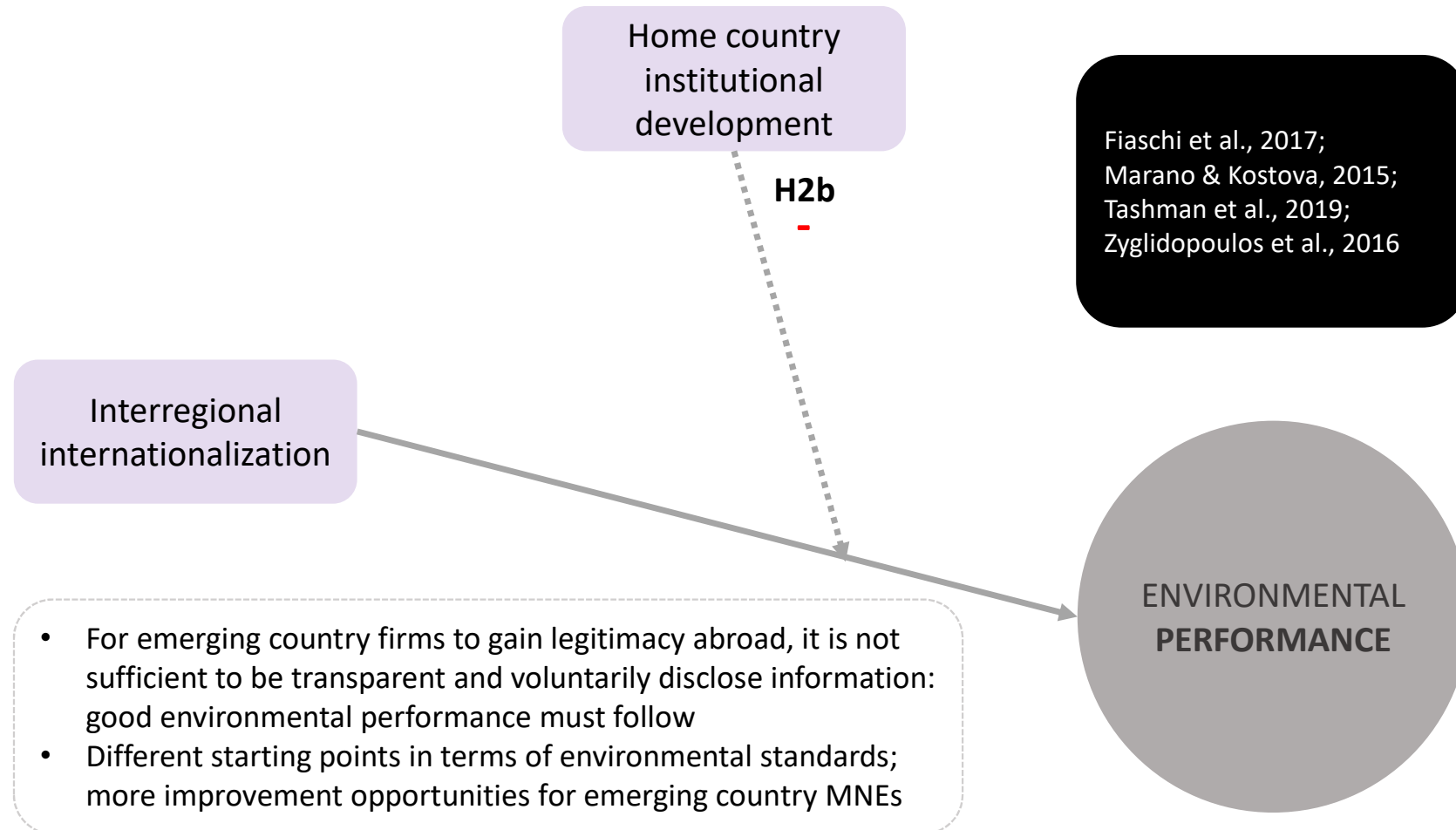
H1b -

ENVIRONMENTAL
PERFORMANCE

Hypotheses



Hypotheses



Context: Energy and utility sector MNEs

- Responsible for the majority of global GHG emissions
 - The energy sector produces 46.4% of global CO2 emissions
- Different approaches abroad: some improve their environmental performance while others escape regulatory pressure
- Shift in the focus of global growth and pollution towards emerging countries
 - Small developing countries are becoming increasingly important in the international energy sector

Sample:



292 energy and utility sector MNEs

2011-2018

1484 observations

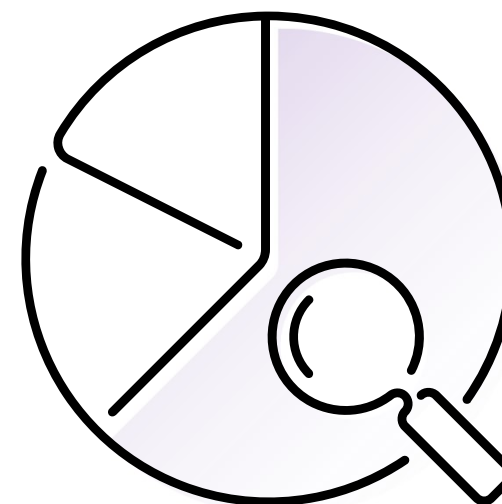
Methodology

– Data sources:

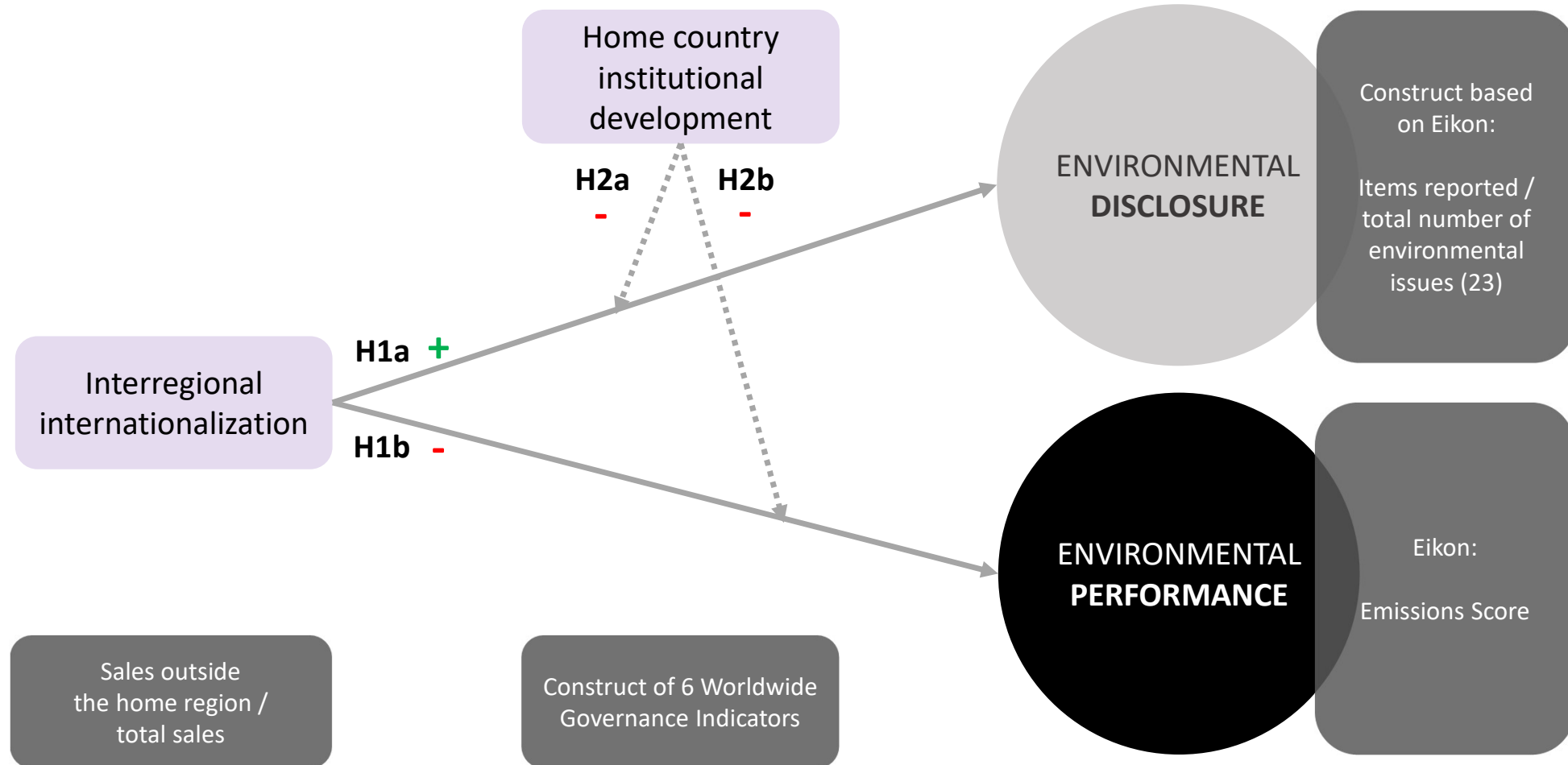
- Refinitiv Eikon database
- The World Bank

– Method:

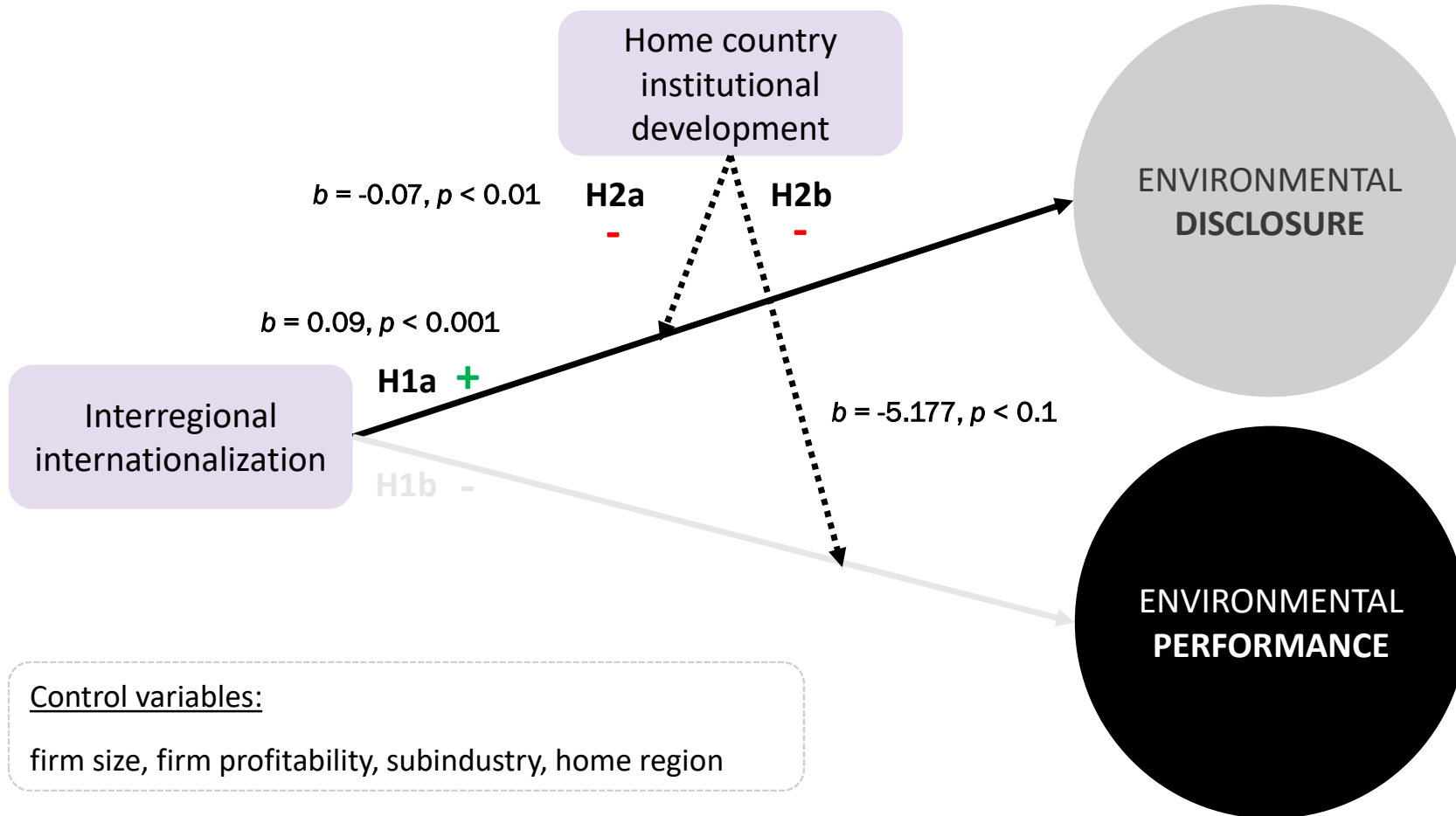
- Generalized least squares (GLS) regressions
- Random effect estimators
- Robust standard errors



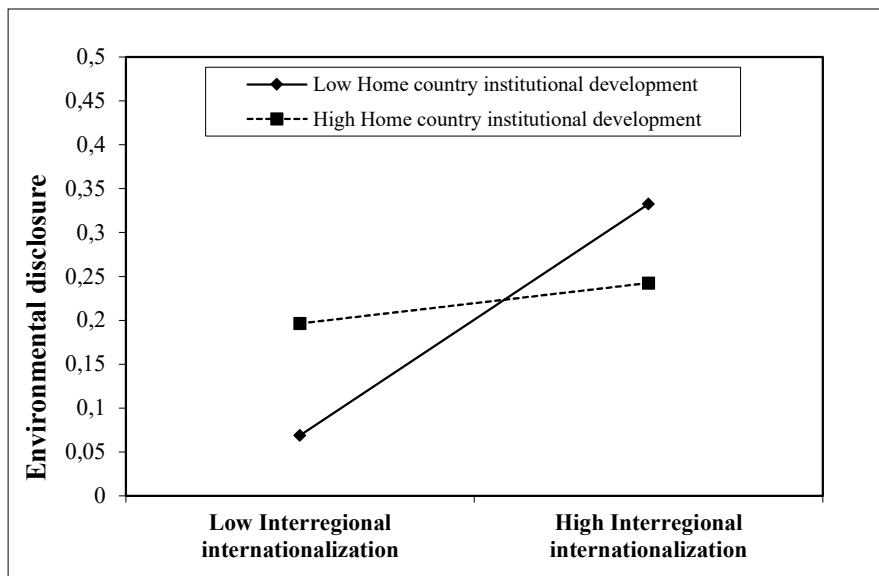
Measures



Results



Results



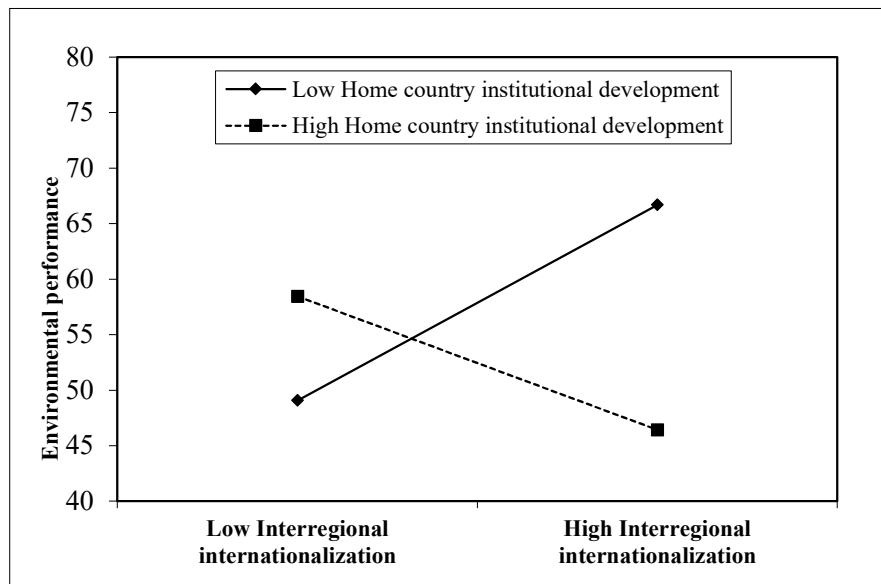
The positive impact of global internationalization on environmental disclosure is stronger for firms from *less* institutionally developed countries

H2a.

A **lower** level of institutional development in a firm's home country **reinforces the positive relationship** between the firm's level of interregional internationalization and environmental disclosure.

A **higher** level of institutional development in a firm's home country **reduces this relationship**.

Results



Positive impact for firms from less institutionally developed countries



Negative impact for firms from more institutionally developed countries

H2b.

A **higher** level of institutional development of a firm's home country **increases the negative relationship** between the firm's level of interregional internationalization and environmental performance.

A **lower** level of institutional development of a firm's home country **reduces this negative relationship**.

The background of the slide features a silhouette of two wind turbines against a vibrant sunset sky. The sky transitions from a deep purple at the top to a bright orange and yellow near the horizon, with some light clouds visible. The turbines are dark against this colorful backdrop.

Key conclusion

- Strong relevance of the liabilities of home to the influence of globalization on environmental approaches
- MNEs from less developed countries must make additional efforts to attenuate their legitimacy deficit
- A strong institutional home context reduces MNEs' interest in environmental sources of legitimation



4.

The impact of
home and host
country institutional
development on
multinationals'
R&D intensity

Research questions

- How does the institutional development of an MNEs' home country impact its research and development (R&D) intensity?
- What is the impact of the institutional level in the host countries in which the MNE is embedded?



Hypotheses

- MNEs face distinct challenges and opportunities depending on a host country's institutional development
- Developed countries have greater market entry requirements that drive MNEs to increase R&D, and better-quality institutions and innovation systems that help foster innovation

Internationalization
toward developed
countries

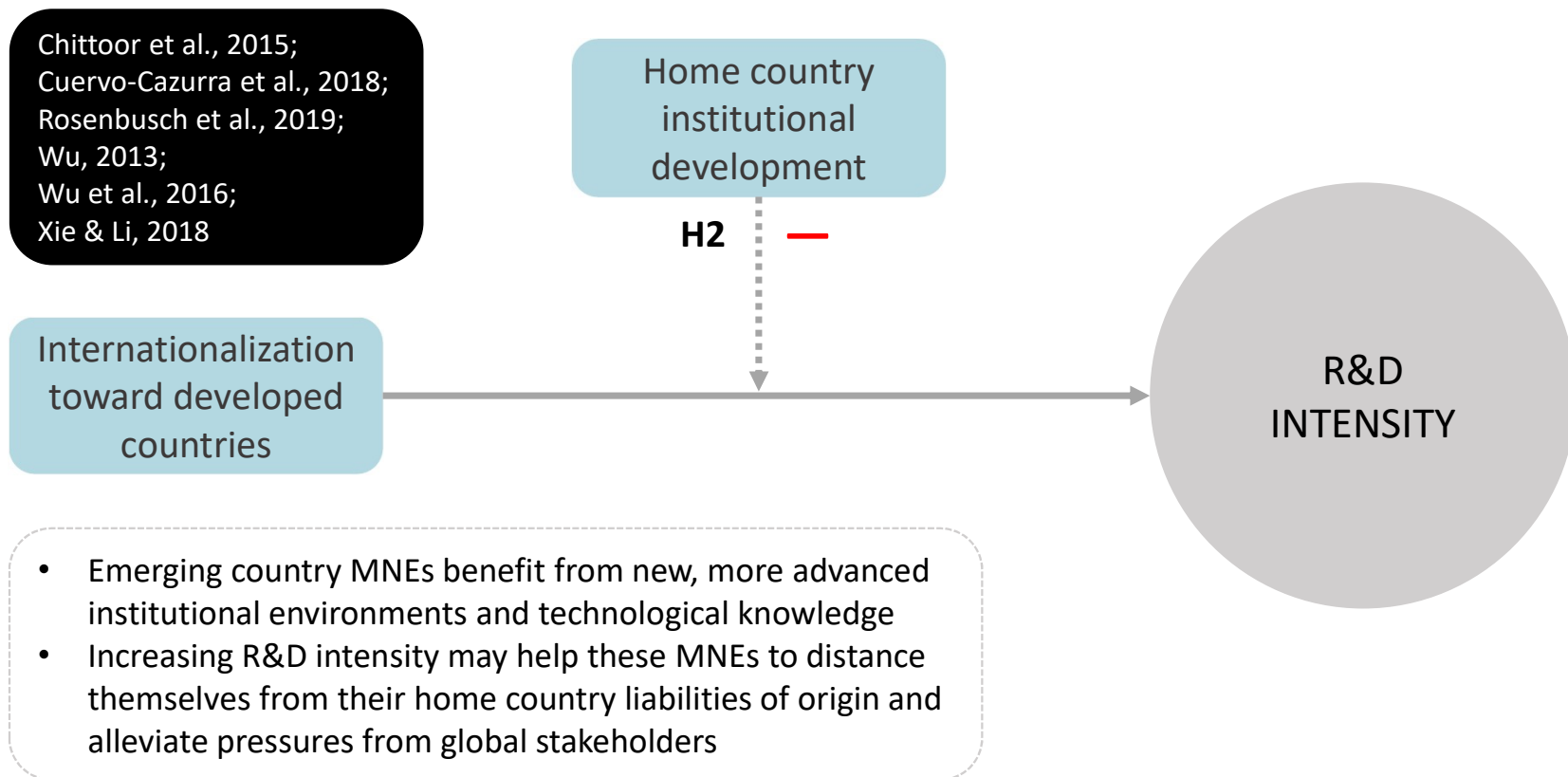
H1

+

R&D
INTENSITY

Cuervo-Cazurra, 2011;
Cuervo-Cazurra & Ramamurti, 2017;
Dunning & Lundan, 2008;
Piperopoulos et al., 2018;
Wu & Park, 2019

Hypotheses



Context: Pharmaceutical MNEs

- The industry plays an important role across the globe
 - The industry's global aggregate sales reach \$1.2 trillion
 - It employs over 1.2 million people in OECD countries
- Research-intensive, yet risky industry with declining productivity
 - Most of the risks of R&D are borne by the firms themselves, as opposed to governments and the public sector
 - It takes on average 10-15 years to develop a new medicine
 - Only a small percentage of medicines entering clinical trials continue to gain approval
 - Only a minority results in commercial success
- Internationalization can be important in fostering new ideas and innovation

Sample:



234 pharmaceutical MNEs

2010-2017

967 observations

30 countries

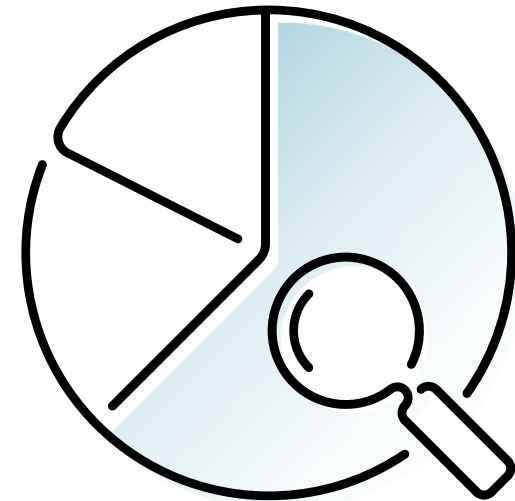
Methodology

– Data sources:

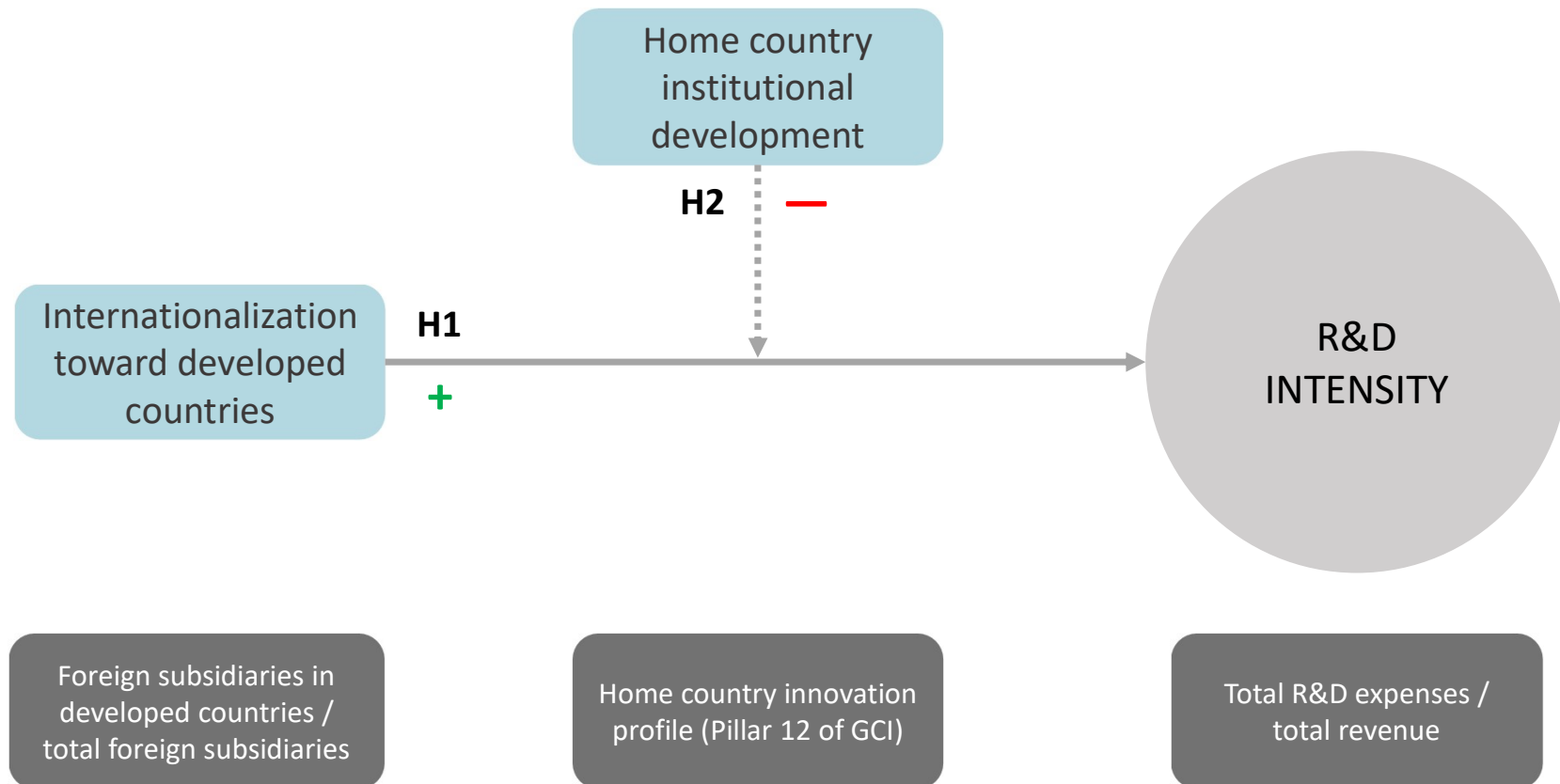
- Refinitiv Eikon database
- Bureau van Dijk's Orbis database
- World Economic Forum

– Method:

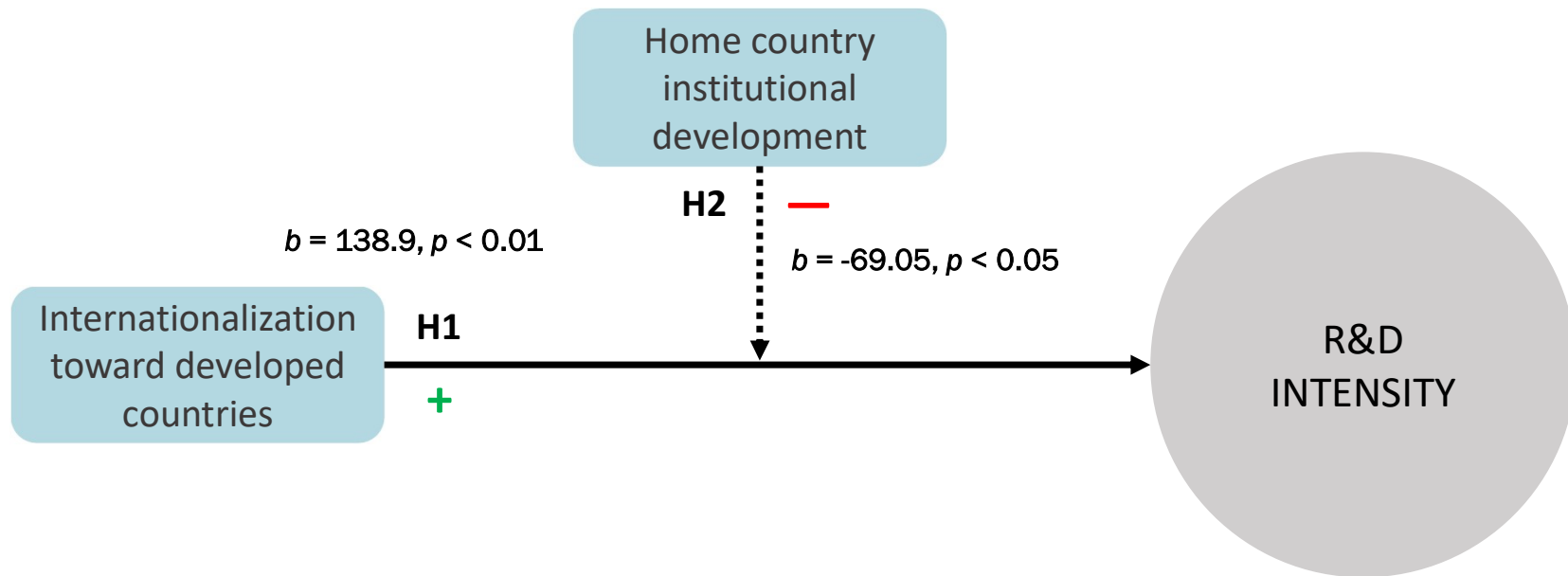
- Driscoll and Kraay standard errors for coefficients estimated by fixed-effects (within) regression



Measures



Results



Control variables:

firm size, firm age, firm profitability, organizational slack, firm ownership, level of internationalization



Key conclusion

- MNEs do not make decisions based on the characteristics of the home country alone
- Important to consider the “home base” (vs “home country”) as a determinant of firm-level innovation
- MNEs from less developed countries benefit more from internationalizing in developed countries



5.

Conclusiones e
implicaciones

Principales conclusiones e implicaciones teóricas

Foreign institutional owners & environmental approaches

- Una mayor presencia de estos propietarios puede **mejorar el desempeño** pero **no necesariamente la innovación** medioambiental
- Importancia de considerar la **diversificación internacional**

Interregional internationalization & environmental approaches

- **Relevancia fuerte del país origen**
- MNEs de países desarrollados **empeoran**, mientras que MNEs de países emergentes **mejoran**, su **desempeño medioambiental** cuando expanden fuera de su región

Home and host country institutions & R&D intensity

- **Internacionalización por sí solo no afecta** la intensidad de I+D; solo cuando se considera el **destino**, los resultados vuelven significativos
- Importancia de considerar las características de **todos los países** en los que operan las MNEs

Contribución a la literatura al comprobar cómo diferentes aspectos del **entorno de las MNEs**, tanto a nivel **micro** (las características de sus propietarios y sus estrategias de internacionalización) como **macro** (las características de los países en que opera, país origen y mercados internacionales) juegan un rol en el desarrollo de sus **estrategias de sostenibilidad e innovación**

Implicaciones para empresas y reguladores

Desarrollar enfoques medioambientales que se **alineen con los intereses** de distintos tipos de propietarios

La **urgencia en mejorar** los planteamientos medioambientales después de globalizarse dependen bastante de **donde viene la empresa**

Ayudar a las empresas locales en los **procesos de internacionalización** puede ser **bueno para el medioambiente** también

Incentivar a empresas multinacionales a **expandir a países desarrollados** puede producir efectos de **“spillover”** en el país de origen

Limitaciones y futuras líneas de investigación

Limitaciones

- Contexto industrial
- Tamaño elevado de las empresas
- Medidas de internacionalización

Futuras líneas de investigación

- Comprobar resultados en otras industrias
- Datos primarios de empresas privadas
- Análisis del país origen de los propietarios y de las MNEs
- Perspectiva micro-institucional (directivos, composición del consejo de administración)

Conclusión final

– Importante para las MNEs planificar bien sus estrategias de sostenibilidad e innovación teniendo en cuenta:

1. **de donde vienen** (países origen con un entorno institucional más o menos desarrollado)
2. **hacia donde orientan su internacionalización** (nivel más regional o más global o hacia países con entornos institucionales más o menos desarrollados)

TESIS DOCTORAL

Understanding the links between firms' international and business strategies:
Studies on innovation and sustainability

Facultad de Ciencias Económicas y
Empresariales

Programa de Doctorado en Ciencias
Económicas y Empresariales

Granada, 18 de mayo 2023

PRESENTADA POR:

Pia Ellimäki

DIRIGIDA POR:

Prof. Nuria Esther Hurtado Torres
Prof. J. Alberto Aragón Correa



**UNIVERSIDAD
DE GRANADA**