CSR-Based Positioning Strategies, National Competitiveness, and the Role of Innovation*

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ABSTRACT

The link between Corporate Social Responsibility (CSR) and competitiveness has been examined mainly at the business level. The purpose of this paper is to improve theoretical understanding and provide empirical evidence on the link between CSR and competitiveness at the national level. We take a step in this direction by first examining the link between CSR and national competitiveness conceptually, drawing and building upon extant literature in international economics, strategic management and CSR. In this context, we also discuss the issue of the competitive positioning of countries, and the interactions between CSR and countries’ strength in innovation. We draw on an eclectic-synthetic framework of international business economics, strategic management and CSR literatures to explore conceptually whether and how CSR can impact on the competitiveness of nations and test our hypotheses empirically with a sample of 19 developed countries over a 6 year period. Our evidence suggests that CSR can make a significant contribution to national competitiveness, as measured by national living standards. We also find that countries with a relative low innovative standing can benefit even more, as compared to highly innovative countries, by implementing nation-wide CSR-based positioning strategies.

KEYWORDS: Competitiveness, Corporate Social Responsibility, CSR strategies, Innovation, National Living Standards.

JEL CLASSIFICATION CODES: M14, O31, M16, O16, O19
1. INTRODUCTION

The business world today faces increasing pressure from governments and international organizations to adopt, or improve, corporate social responsibility (CSR) practices. This pressure has both a moral and a strategic imperative. The moral imperative has been widely discussed in the literature and is mainly based on the argument that businesses should address some of the ‘ills of globalization’ (Dunning 2003; Logsdon and Wood 2002). The strategic imperative has not been adequately discussed. To date, the implicit assumption appears to be that CSR affects positively the competitiveness of nations. However, this assumption has remained largely unexamined both conceptually and empirically although it seems that CSR has been a priority issue on many governments’ agendas (Albareda et al. 2007).

With few notable exceptions (e.g., MacGillivray et al. 2003; MacGillivray et al. 2007; Zadek 2006; Zadek et al. 2005), the arguments linking CSR and national competitiveness draw mostly on the ‘business case’ for CSR. This is problematic, not only because of the skepticism that remains around the said case, but also because the micro-level case may not be scalable to the national level (Swift and Zadek 2002). In addition, most national competitiveness literature emphasizes the importance of macro rather than micro-level factors to explain national competitiveness (Aiginger 2006; Schwab 2009). Accordingly, we lack an agreed-upon comprehensive conceptual framework within which to examine the impact of CSR beyond the firm level, in particular on national competitiveness.

Unless we appreciate better the strategic role of CSR and amass adequate empirical evidence of its impact, the potential of CSR to deliver real positive social change may fail to realize. Accordingly, in addition to the moral imperatives for promoting CSR, the success and diffusion of the CSR concept also depends on its contribution to the wider competitiveness goals of nations.

The aim of this paper is to improve our understanding on the impact of CSR, at the broader nation-wide environment. In particular, we try to answer the following questions: Does CSR affect national competitiveness at all, and if so, how? How can nations benefit more from adopting CSR?
We take a step in this direction by first examining the link between CSR and national competitiveness conceptually, drawing and building upon extant literature in international economics, strategic management and CSR. In this context, we also discuss the issue of the competitive positioning of countries, and the interactions between CSR and countries’ strength in innovation. We then proceed with an empirical analysis, by focusing on a sample of developed countries. This is because the literature on the determinants of competitiveness suggests different factors affecting competitiveness at different stages of development (Aiginger 2006; Schwab 2009), as well as for data availability reasons. Our empirical analysis adds value on extant literature examining the impact of CSR (e.g. Porter and Kramer 2006; Mc Willimas and Siegel 2001; Margolis and Walsh 2003; Garcia-Castro et al. 2010) by focusing on measuring the impact of CSR behavior at the national level and by using longitudinal data (19 countries over a period of 6 years), which improves confidence in causal inference compared to cross-sectional analysis. Our findings support the idea that CSR has a positive impact on national competitiveness. Also, we focus on the moderating role of a country’s innovation record-standing and find that through appropriate competitive positioning strategies, countries with low innovative standing may benefit even more from CSR-based strategies than countries with a stronger innovation record.

2. THE MEANINGS OF CSR AND COMPETITIVENESS

2.1 What is CSR?

Both the concepts of competitiveness and CSR when applied at the macro level, are elusive and controversial (see, for example, Krugman 1994; Porter 1990, for criticisms of national competitiveness, and Carroll 1999; Frynas 2008; Lantos 2001; Schwartz and Carroll 2003, for criticisms of CSR). This leads to the challenge of empirical work since it is difficult to operationalize a concept when a clear definition does not exist. Consistent with McWilliams et al. we define CSR as “situations where the firm goes beyond compliance and engages in actions that appear to further some social good, beyond the interests of the firm and that which is required by law” (2006, p.1). Since in this study we also focus on the impact of CSR at the macro level, we also draw on Hopkins’ definition who has specified the aim of CSR at the macro level as “to create higher and higher standards of living” (2003, p.1).
2.2 What is Competitiveness?

The concept of competitiveness and its use at the national level, has been regarded as meaningless or even dangerous (Krugman 1994). Nevertheless, more recently, authors such as Aiginger after reviewing a number of diverse approaches to the concept, notices a convergence towards a definition as “the ability of a country or location to create welfare” (2006, p.161). This broad definition of competitiveness contains an ‘outcome evaluation’ of competitiveness (e.g. welfare) which can be measured by a number of indicators (e.g. per capita income, Human Development Index, happiness, etc.), and a ‘process evaluation’ of competitiveness which relates to the analysis of the factors that produce the outcome (e.g. welfare). It is arguable that a definition of competitiveness as superior performance vis-à-vis a peer group that shares a common objective (Pitelis 2009), is not restricted to ‘welfare’, but also incorporates a required benchmark, against which to compare performance. In this context, a country can be defined as being more ‘competitive’, if it outperforms other countries, on the basis of its capability to improve over time the shared indicator(s).

In this paper, we focus on outcome competitiveness approximated with national living standards and measured by per capita GDP at purchasing power parities. While this is not the only, or best, measure of outcome competitiveness, it seems to be closely correlated with many other indicators (see, Porter and Schwab 2008; Ram 1992) and the data on GDP per capita is more readily available and arguably more reliable.

3. LITERATURE REVIEW

3.1 CSR at the national level

The bulk of the empirical literature has focused on the impact of CSR on firm-level competitiveness (for an overview, see, Margolis and Walsh 2001; 2003). Beside this literature being inconclusive [1], grounding national competitiveness on the business competitiveness case can be problematic. The benefits of CSR at the micro level do not necessarily scale up to the macro level. This has been emphasized by Swift and Zadek (2002), who investigated a number of factors that prevent micro-level CSR having an impact on the national economy. Examples are
the possibility of CSR benefiting one company but harming the economy, or the possibility of CSR being good for large companies but detrimental to small and medium sized enterprises (SMEs) (Pitelis 2009). Another dimension is the possibility of CSR harming the trading potential of some countries that are not able to meet the market’s CSR standards, by creating ‘non tariff’ barriers to trade (Swift and Zadek 2002).

These tensions can only be addressed by aligning CSR with national competitiveness goals, hence embedding it into the wider economy (MacGillivray et al. 2003). This is also what the concept of ‘responsible competitiveness’, defined as “an economy’s productivity being enhanced by businesses taking explicit account of their social, economic, and environmental performance” (MacGillivray et al. 2003, p. 13), aims to achieve. The view of embedding CSR into the wider economy has also been supported by the European Union (EU). The EU has examined theoretically the impact of CSR on national competitiveness and has suggested a positive link, mainly through its indirect impact on factors of competitiveness such as social capital, innovation and human capital (European Commission 2008a, b).

Despite the plausibility of these theoretical arguments, there has been very little empirical research on whether the aggregate CSR practices of individual companies do actually have a measurable effect on national competitiveness. An exception along these lines is the work by the AccountAbility organization and its partner organizations, focusing on the development of a ‘National Corporate Responsibility Index’ (NCRI), which captures “the extent to which there is an enabling national environment for corporate responsibility, and the resulting outcomes of corporate responsibility practice” (MacGillivray et al. 2003, p.6). After plotting this index against the World Economic Forum’s Growth Competitiveness Index (GCI) and against per capita Gross National Income (GNI), they found a positive correlation. However, this index attempts to “measure the overall ecology of responsibility not merely what business do, or do not do” (Zadek et al. 2005, p.104). Hence, it does not focus on actual CSR performance, per se. Despite several data weaknesses and other difficulties in the calculation of these indices, that can prohibit causal inference, we believe this line of research to have been a major step forward towards the empirical investigation in the area of CSR at the macro level (see Peng and Beamish 2008). However, the fact that this index combines the actual socially responsible activities of corporations with the enabling environment for such activities does not help to decipher whether
it is the actual business social performance or the enabling environment for such activities, that contributes to national competitiveness.

Therefore, definitional and data measurement problems of CSR performance at the national level have forced some researchers to focus only on specific areas/dimensions of CSR e.g. environmental performance and its impact on national competitiveness (Esty et al. 2005; Porter and Van der Linde 1995), or the impact of the gender gap on national competitiveness (Hausman et al. 2008). Although these studies have found a positive link to national competitiveness, they do not address the multidimensionality of the concept of CSR performance, as defined by Wood (1991). Hence, they do not adequately answer the question on whether the overall CSR activities of individual companies have an impact on national competitiveness.

To summarize, current literature so far has not yet explicitly examined the impact of national CSR performance on outcome competitiveness. In addition, current theoretical frameworks in this line of research do not adequately examine other major factors of competitiveness and their interactions. As a result, questions on whether some important institutional/macro-economic factors (e.g. innovative culture) moderate the impact of CSR on national competitiveness cannot be addressed. Finally, potential competitive positioning strategies by nations through CSR are still not adequately examined in current literature. These are an important limitation.

4. A CONCEPTUAL FRAMEWORK
4.1 Determinants of national competitiveness
In extant literature, there are four main approaches to national competitiveness: the economic theory-based ‘Washington Consensus’, the more pragmatic East-Asian approach, the national innovation systems approach-varieties of capitalism, and the ‘Diamond’ approach of Michael Porter (Porter, 1990; Pitelis, 2009). The first three approaches mainly emphasize macro-level factors of competitiveness while Porter’s ‘Diamond’ approach is distinct for its emphasis on the role of micro-level factors of competitiveness such as firm strategy (Snowdon and Stonehouse 2006). Within this literature there is a long list of potential factors/causes of national
competitiveness, and very little consensus on what factors matter most for each country at each time.

In fact, during the last few decades the issue of national competitiveness has been highly contentious. Since the 1980s the global economy has been largely transformed by the fall of international barriers to the flow of goods, services, capital, labour, and rapid technological progress. Under such rapid changes and growing empirical data, there have been many shifts in the importance of critical factors to competitiveness and the key policies that underpin it. Nevertheless, what seems to be reaching an agreement between scholars and policy makers is that competitiveness should aim at increasing welfare (e.g. national standards of living) (Aiginger 2006) but the means to reach this goal should be context/country specific (Rodrik 2004).

From the various perspectives on nationwide competitiveness mentioned, four major factors seem to enjoy very wide acceptability. These are innovation (Schumpeter 1942; Penrose 1959; Hall and Soskice 2001), human resources, notably entrepreneurial managers (Penrose 1959; Teece 2011), unit cost economics, such as economies of scale and scope (Chandler 1962)[2], and firm-level strategy and structure (Porter 1990). Demand factors and agglomeration effects (Porter 1990), as well as the institutional macroeconomic and policy environments can also play an important role. While we do not aim to contribute to this extensive literature here, we submit that firm, region and country level CRS-based strategy can impact on all aforementioned factors, thereby fostering nationwide competitiveness. CSR-based strategies can improve the quality of human resources (for example through diversity, improved relationships and worker satisfaction), and they can foster CSR-promoting innovations. They can also engender unit costs economies, through learning, pluralism and diversity. In addition, CSR can function as a firm-region-nation-wide (positioning) strategy, see below. Our aim in this paper is to focus on the direct impact of CSR-based positioning strategy on national competitiveness holding other major determinants (which are potentially affected by CSR) constant. We therefore explore the impact of CSR-based strategies on national competitiveness. Following on from this, we explore the potentially moderating role of a country’s innovation record-standing.

4.2 CSR-based Competitiveness Strategies: from micro to macro level
It is important to note that all other major determinants of competitiveness, except business strategy, can foster productivity (or value creation), but not necessarily ‘outcome competitiveness’. Only when appropriate strategies for value-capture are used at the national level to capture the value created from productivity improvements, can these factors lead to ‘outcome competitiveness’. Hence, within this framework it is important to examine how CSR, as a process embedded into the value-capturing strategies of firms and nations, can be used to capture value at the national level and hence contribute to national competitiveness.

To date, there has been very limited discussion about value-capturing strategies at the national level that may lead to competitiveness and consequently very little discussion on CSR-based strategies (McWilliams et al 2006). Therefore, we aim to make a contribution to the national competitiveness and CSR literatures by discussing CSR-based value-capturing strategies which may lead to national competitiveness. Porter (1980, 1985) has examined numerous strategies employed by firms to appropriate value, such as ‘positioning’ strategies (cost-leadership, differentiation, niche strategies) and ‘entry deterrence’ strategies (barriers to entry strategies). Such ideas are relevant for nations too, but have not yet been leveraged towards this purpose in extant literature. Here we do so, by focusing in particular on CSR-based strategies.

4.2.1 CSR-based positioning strategies

Cost leadership strategies. CSR embedded in a cost leadership strategy can be used at the national level in ways that lead to cost reductions, and thus directly affect national productivity. For example, many CSR practices related to the environment contribute to a more efficient and effective utilization of resources such as raw materials and energy, or even more productive use of labor, and hence contribute directly to cost reductions (see for example, Esty et al. 2005; Porter and van der Linde 1995). Moreover, CSR practices that promote open communications with stakeholders and transparency can help society improve trust in business and increase social capital; hence facilitate the self-regulation of the industry. Self-regulation significantly reduces the costs of state-enforced regulation (European Comission 2008b; Zadek 2006). The link between trust/social capital and competitiveness has been discussed extensively in the competitiveness literature (see Pollitt 2002). Finally, CSR policies can promote a more flexible macroeconomic and institutional structure through partnerships with stakeholders or new forms of joint governance (e.g. the UN Global Compact), or by contributing to the wider societal
education and learning by fostering economies of learning and growth (Zadek 2006). All these policies directly impact on ‘unit cost economies’, hence reducing costs and improving competitiveness. The contribution of CSR policies to innovation in regulatory practices, shareholder activism and social dialogue has also been supported by Deakin and Whittaker (2007).

*Differentiation strategies.* Another positioning strategy is differentiation strategy. CSR embedded in a national differentiation strategy can be used to enhance the reputation of the country, boost exports and attract investments. In particular, countries that use CSR as a differentiation strategy can strengthen and promote a responsible reputation and hence engender and promote a comparative or competitive advantage. For example, countries like Denmark have already started building their competitiveness along these lines in order to increase the perceived value of their products and services and boost exports. This view is reinforced by Boehe and Cruz (2010) who have found that CSR product differentiation can improve export performance. In addition, Dowell et al. (2000), have found that developing countries that use lax environmental regulations to attract FDI may end up attracting poorer quality and perhaps less competitive firms. Hence, national strategies who support higher CSR standards and aim at developing a reputation as being ‘responsible’, at the country level, can positively affect trade and investment opportunities (Peng and Beamish 2008; Boehe and Cruz 2010).

*Niche Strategies.* Like firms, nations can employ a niche strategy and focus on increasing their market share in specific market segments. For example, low carbon technologies alone will be worth US$ 500 billion by 2050, according to the Stern Report (Zenghelis and Stern 2007). However, McWilliams and Siegel (2001) have argued that the level of CSR depends on the demand for it. Therefore, companies and countries who manage to increase the level of demand and supply for such products faster than other countries may benefit even more from such niche strategies.

Towards this purpose can assist a number of factors. For example, government policies who promote CSR or even support the exceptional performance of a few companies. As has been argued by Zadek (2006), even the CSR leadership of a few companies can change the nature of demand to more sophisticated and ‘responsible’, by creating consumers who learn to demand more ‘responsible’ products and services. Therefore, such CSR leadership by a few companies
and promoted by governments can increase faster the level of sophisticated demand and benefit the nations that focus on becoming leaders in certain responsible industries through niche strategies.

The potential of some multinational companies becoming agents of change for local institutions or structures has been widely discussed in the international business literature (see Westney 1993; Dacin et al. 1999; Kwok and Tadesse 2006). Hence, along the same lines, a few leading CSR companies in one country can change the institutional environment for CSR and increase the demand for more responsible products and processes at a national or at a more global level.

4.2.2 CSR-based entry deterrence strategies
MacGillivray et al. (2003) argue that CSR might be used as a strategic trade policy and create non-tariff barriers to trade, as in Bain (1956), Krugman (1992). For example, countries promoting a responsible reputation might raise their CSR levels so high that they act as non-tariff barriers to trade with other less responsible countries, while boosting their exports within equally responsible countries. Moreover, McWilliams et al. (2002) have demonstrated how political strategies based on CSR can raise regulatory barriers and impose additional costs to foreign firms by preventing foreign competitors from using substitute (e.g. low cost) technology.

However, it is important to note here that the effectiveness of strategic trade policies driving national competitiveness have been largely debated in both academic and political circles. In this study we do not wish to enter this debate but to highlight the possibility of countries using such CSR-based strategies within their overall national competitiveness strategy.

On the basis of our discussion so far, we propose that nationwide CSR-based strategies serving as national positioning strategies can have a positive impact on national competitiveness, once we control for the major direct and indirect factors of competitiveness, as identified in the previous section. Therefore, our first hypothesis is:

**Hypothesis 1:** CSR positioning strategies impact positively on national competitiveness

4.3 The Moderating Role of a Country’s Innovation Record-Standing
Although CSR can help countries capture value at the national level and positively impact on national competitiveness, each strategy and its impact can be different for each country,
depending on factors such as the stage of development. This is because the factors defining ‘process competitiveness’ differ for low and high wage countries and can change over time (Aiginger 2006). However, for the most developed countries that are the focus of this study, their innovation system is critical for defining their competitive edge (Aiginger 2006; Schwab 2009). Countries at the ‘technology frontier’ can keep ahead of ‘rivals’ through innovations at all levels (Porter 1990). Accordingly, differentiation strategies, through innovation and/or CSR practices, are particularly important for developed/high income countries.

It is arguable that CSR-based national value capturing strategies will have a weaker effect on the competitiveness of highly innovative countries. This is because countries with high differentiation/ innovation record may not benefit as much by further differentiating through CSR since the image of their products/services and their country is already of a very high standard. CSR may still have a positive impact for them, mainly to the extent that it helps to avoid negative criticism from NGOs or deter regulation. However, less innovative countries that lack the ability to differentiate through a high innovative culture/capability, may gain competitive advantage by boosting their country’s image through CSR differentiation. This is because CSR-based differentiation doesn’t necessarily require a strong innovation infrastructure with associated costs. For example, CSR-based differentiation may increase the appeal of products/services through compliance with CSR principles. For example, compliance with ‘Fair-Trade’ doesn’t necessarily require costly product or process innovation, since it only requires to increase the proportion of revenue that goes to poor farmers. Hence, ‘Fair Trade’ compliance means paying farmers higher prices for the same crops. Therefore, ‘Fair-Trade’ differentiation can boost exports in countries that cannot differentiate by adding value to their products/services through innovation. Similarly, ‘One Water’ achieves differentiation not through the product, but by donating profits to charity.

Along the same lines, some low innovative countries may also be in a good position to exploit cultural or historical factors to publicize compliance with CSR principles and add a premium in their products/services. For example, a country with a culture that is characterised by high gender inequalities, or has managed to overcome historical conditions such as the apartheid in South Africa, may extract a premium in foreign markets for products/services that promote the empowerment of women or minorities in local communities.
Finally, countries may use CSR-based differentiation and develop a responsible reputation by simply banning ‘irresponsible’ products. For example a country which bans genetically modified crops may boost its responsible image for its own products. Its policy can be perceived as a signal of higher quality national food standards or as one which cares for the balance of the eco-system and hence may stimulate demand for its own ‘responsible’ products as well as being able to charge a premium for ‘safer’ non genetically modified food products despite the lack of any additional value in such products.

Therefore, less innovative countries using CSR-based differentiation may gain a competitive edge which wouldn’t be possible otherwise. Therefore, we can argue that in the absence of a strong innovation record, CSR-based differentiation strategies can have a stronger impact on increasing the national standards of living of less innovative countries.

Our arguments regarding positioning strategies are summarized in Figures 1 and 2. In Figure 1, countries found in box 1 (competitors) are those with strong national innovation systems but relatively low national CSR, such as Japan or the USA (see CSR rankings in Figure 1). These countries may not need CSR as a differentiation strategy to extract a premium for their products in current markets, but CSR can still have a (weaker) positive impact on their competitiveness through safeguarding their reputation from adverse criticisms. Higher levels of CSR can ensure their longer-term competitiveness in future markets. Countries in box 3 (stars) are countries like Denmark, with strong innovation culture but also strong CSR culture. CSR in these countries is positively impacting on their competitiveness, through safeguarding their longer-term competitiveness. Countries in box 2 (laggards) are likely to be less competitive, producing low differentiation products and have very low levels of CSR (see Figure 2). These countries, although developed, need to differentiate more to sustain their high standard of living. Countries in this box include many South European countries. These countries need to decide how to differentiate: through enhanced national innovation systems, and/or through compliance with CSR. Countries in box 4 (Question marks) are countries like the UK, which fail to appropriate the benefits from their competitive advantages but have good standards of CSR. In such cases the requisite strategy is more complex (as it may involve a plethora of possible factors), thus the question mark. It follows that CSR as a differentiation strategy embedded in the national competitiveness strategies is likely to bring greatest benefit to countries in box 2, which
have relatively low differentiation/innovation record and are in need of differentiation in order to compete in the international arena. Therefore, our second hypothesis is:

**Hypothesis 2:** CSR has a stronger positive impact on the competitiveness of countries with lower differentiation/innovation standings.

5. DATA AND METHODS

We used a new macro level dataset that allows estimation through panel data techniques. Panel estimation has not been used before in this line of research. It makes it possible to control for omitted variable bias and other sources of endogeneity (Halaby 2004), thereby producing superior results than cross sectional analysis (Baltagi 2008). There are a variety of techniques that can be used to estimate a panel data model. The two standard methods are ‘fixed-effects’ or ‘random-effects’. However, the appropriate method depends on the nature of observational data and its potential biases. Although fixed/random effects estimators can control for one common type of bias/endogeneity, such as the omitted variable bias, they cannot control for other sources of endogeneity such as simultaneity, self-selection or measurement error biases. One has to use Instrumental Variables (IV) estimation techniques to control for such sources of bias/endogeneity (Halaby 2004). This is the approach followed in this study.

The problem of omitted variable/unobserved heterogeneity is quite common in the macroeconomic competitiveness literature, since the number of potential determinants of competitiveness can be very large. Also, the macroeconomic environment, or the institutional environment, covers a wide range of factors, many of which cannot be accurately measured or observed. Panel data analysis can control for potential country specific unobservable effects, such as ‘culture’ which differ between countries but are fairly constant over time. In fact, many variables are time-invariant because of researchers’ deliberate choice to limit the observational data in a small number of periods. For example, data on political institutions usually includes
constitutional variables that rarely and slowly change. Similar cases are cultural variables or macroeconomic policies such as the level of the openness of an economy. Hence, in our 6-year study period, we treat such variables as time-invariant.

Also, self-selection and simultaneity/reverse causality issues are additional sources of endogeneity bias. For example, our sample of developed countries may be self-selecting to use CSR strategically and increase the social performance of their companies because they are already developed economies with high living standards. Finally, a last source of endogeneity is due to the fact that our sample is drawn from international datasets, suggesting the inclusion of a number of variables whose measurement is prone to errors, due to differing national standards and conventions. By employing IV estimation techniques that use at least one instrument that correlates highly with the variable but not with the error term, one can control for such endogeneity biases. Overall, with panel data, if all sources of endogeneity are appropriately accounted for, it is possible to identify the causal effect, even in the presence of all the above bias (Halaby 2004).

5.1 Sample
Our sample consists of 19 countries (all developed)\textsuperscript{[3]} over a 6-year period (2001-2006). We obtained data from online macroeconomic databases as well as from the Zurich-based fund management firm Sustainable Asset Management (SAM), which is responsible for administering the Dow Jones Sustainability Index (DJSI) selection criteria. Panel data is currently very hard to find for most countries, so our sample is further reduced due to data availability to 108 observations and is the first macro-panel in this line of research.

For a list of countries and the number of firms evaluated in each country as well as corresponding percentage coverage of publicly traded firms, see Tables 1 and 2.

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5.2 Variables

5.2.2 Dependent Variable

GDP per capita. GDP per capita is a widely accepted measure for use in national economic performance, welfare, productivity and growth analyses (Baumol 1986; Barro 1991, 1997; Barro and Sala-i-Martin 2003; Jones 2006) and, as discussed at the beginning of this paper, an appropriate measure of ‘outcome competitiveness’ in the context of CSR research at the macro level. Since we are making comparisons between nations, we used per capita GDP measured at purchasing power parities.

5.2.3 Independent variable

National Corporate Social Performance (NCSP). One means of operationalizing the concept of CSR at the business level has been to measure the performance of firms across three dimensions: economic, social and environmental. This is the path followed by various organizations such as Sustainable Asset Management (SAM), a Zurich-based fund management firm which is responsible for issuing the Dow Jones Sustainability Index (DJSI). The criteria [4] SAM selects to measure CSR performance of many companies operating around the world are similar to those proposed by the most frequently used guidelines such as the Global Reporting Initiative (GRI) and the screenings used by fund managers in their Socially Responsible Investment (SRI) decisions. We used this metric due to its early availability (1999), its widespread adoption in the market and the credibility of the Dow Jones brand, as well as its global reach. Moreover, these ratings have been examined by academics and have been found to demonstrate the desirable traits of consistency, verifiability, logicality and predictability (Fowler and Hope 2007).

However, SAM does not issue an aggregate-level measure of CSR performance at the national level. Therefore, our independent variable is not directly observed but constructed as the aggregate social performance of a sample of firms per country. This treatment is justified since the variance within a country is less than the variance across countries, for most countries in our sample. However, the sample of firms is not random; it includes only large firms that have been evaluated by SAM for potential inclusion in the Dow Jones Sustainability Index (DJSI). All
firms rated by SAM are included in our sample whether or not they qualified for inclusion. However, SAM selects firms from the largest 3000 companies (by free float market capitalization) included in the Dow Jones Global Index (DJGI). This index covers 95% of the underlying free float market capitalization at the country level and includes only companies with easily traded stocks (based on liquidity and share class). Based on the above selection criteria, our measure of aggregate social performance is the average social performance of ‘CSR leaders’ in the country. Hence, it reflects the best possible CSR performance per country, assuming only the most socially responsible companies in the country would be willing to reply to SAM’s surveys.

Our NCSP variable covers 19 countries and focuses on developed countries only, where good quality economic data exist since 2001. NCSP averages were calculated from a sample of a minimum of 25 firms per country (see Table 2). Multinational firms with operations in many countries are evaluated separately in each country. For example, Coca-Cola in the United States is contributing to the United States aggregate social performance while Coca-Cola in Greece is contributing to the Greek aggregate social performance. No weights were applied as all firms are at comparable size by selection. Industry weights are already applied by SAM when calculating CSR performance at business level.

Unfortunately, there are no other appropriate indices available to measure CSR performance at the national level. Even the most promising one, developed by AccountAbility (NCRI) and covering a wide range of countries around the world, does not measure actual business CSR performance, but a mixture of CSR performance as well as the enabling environment for such performance. Besides, this index is not available for panel analysis because it exists for two years only with varying content in each year.

5.2.4 Control variables

Innovation. Innovation was measured as the number of patents granted to each country by the United States Patent and Trademark Office (USPTO). Other measures of innovation such as average national company expenditures on Research and Development were also used for sensitivity tests.
**Unit cost economies.** We use the Real Unit Labor Costs (RULC) as a proxy for unit cost economies. RULC represents price competitiveness and we hypothesize that the presence of unit cost economies would result in reduced unit costs. Data was taken from the European Commission’s Annual Macroeconomic database (AMECO).

**Human capital.** The most common measure of human capital has been the Barro and Lee (2001) database, which covers school enrolment rates up to 2000. Since our panel covers a different period, it was not possible to use it in our analysis. Therefore, we used two different variables as a measure of human capital: tertiary education enrolment rates and company expenditures on staff training.

A description of all variables and sources of information is shown in Table 3.

5.3 **Data Analysis and Testing**
Prior to testing, we visually analyzed the data to test for anomalies and transformed all our variables into standardized form (z-scores). Table 4 reports the descriptive statistics for all variables.

Our econometric analysis draws on the empirical literature on economic growth, where there is increasing use of relatively sophisticated panel data methods to control for endogeneity. One common IV-estimation method involves the generalized method of moments (GMM). The GMM approach was initially introduced into the growth literature by Caselli et al. (1996) but since then, similar techniques have been applied by many other scholars such as Benhabib and Spiegel (2000), and Banerjee and Duflo (2003). The GMM estimation usually produces more reasonable results in the growth literature compared to Ordinary Least Square (OLS) estimation and has the potential to obtain consistent parameter estimates, even in the presence of measurement error and endogenous right-hand-side variables.
There are two available GMM panel estimators, both based on the use of lagged observations of the explanatory variables as instruments. The first is the ‘difference GMM’ estimator developed by Arellano and Bond (1991) and the second is the ‘system GMM’ estimator developed by Arellano and Bover (1995). The second estimator ‘system GMM’ improves upon the difference estimator insofar as the quality of the instruments is concerned and hence has been shown to produce better results in the context of empirical growth research (Bond et al., 2001). We therefore used this one in our analysis.

We estimated the following dynamic panel data model based on Hsiao (2003, p. 69):

\[
Y_{it} = \gamma Y_{i,t-1} + \beta X_{i,t} + \alpha_i + \lambda_t + u_{it}, \quad i=1,\ldots,N, \quad t=1,\ldots,T
\]  

(1)

Where \( Y_{it} \) is the dependent variable, measured in per capita GDP, \( Y_{i,t-1} \) is the lagged dependent variable, \( X_{it} \) is a vector of all observable regressors, \( \beta \) is a vector of constants, \( \alpha_i, \lambda_t \) are unobserved individual and time specific effects that are assumed constant for given \( i \) over \( t \) and for given \( t \) over \( i \) respectively, \( u_{it} \) represents the effects of those variables that vary over \( i \) and \( t \). Time dummies were also included in the model in order to control for global shocks, which might affect GDP per capita in all countries in any time but are not otherwise captured by the explanatory variables. Also, we corrected the estimated errors for heteroskedasticity as described in Roodman (2009).

6. RESULTS

For estimation, we used the statistical software STATA10, following Roodman’s (2009) GMM estimation approach. Table 5 shows the two models used for testing both our hypotheses and our results. We found a positive and significant correlation between NCSP and competitiveness (Model 1: \( b = 0.16, p = 0.07 \)), so our results confirmed Hypothesis 1. From the control variables, only Unit Cost Economies (e.g. Real Unit Labor Costs) were found significant (\( b = -0.05, p = 0.05 \)). The rest of the right hand side control variables, were found to be insignificant. Various empirical reasons could explain this, ranging from measurement errors in the proxies used or small sample size to model specification issues. For example, the inclusion of the lagged
dependent variable can sometimes dominate the rest of the regressors and suppress the explanatory power of other independent variables (Achen 2001). To test this, we estimated a static panel model; i.e. excluding the lagged dependent variable (Model 3, Table 6). The results confirmed the significance of innovation in addition to the significance of NCSP. We also estimated a model without the variable NCSP, just with the control variables (Model 4, Table 6). The results showed that innovation was significant, confirming its critical importance for high wage countries, as already discussed in previous sections. All our models have a good F-statistic value (p= 0.000).

In order to test Hypothesis 2, we added the interaction term of NCSP with innovation (Model 2, Table 5), following Aiken and West (1991) suggestions on the appropriate use and interpretation of interaction terms. We found the interaction term to be significant and negative (b= -0.02, p= 0.07). The coefficient of NCSP remained significant and positive (b= 0.15, p= 0.08), but both its value and significance levels are reduced with the inclusion of the interaction term, indicating that the impact of NCSP on competitiveness is less for highly innovative countries, supporting Hypothesis 2.

For the regression models reported above, we checked the validity of the instruments by using the Sargan (1958) and Hansen (1982) tests of over-identifying restrictions, as well as the autocorrelation tests described in Arellano and Bond (1991) and Roodman (2009). These are standard tests after GMM estimation. All, the test results were satisfactory, accepting the validity of our instruments. For robustness, we also tested our models with a different number of instruments, and different measures for control variables. While Model 1 generated virtually the same results confirming Hypothesis 1, Model 2 could not always confirm Hypothesis 2, hence producing partial support for Hypothesis 2.

7. DISCUSSION, LIMITATIONS, AND CONCLUSIONS
Our results suggest that CSR-based positioning strategies can be an important contributor to improved national competitiveness, approximated at first instance with GDP per capita. Moreover, its impact seems to be stronger in countries with relatively low innovative record- standing. This may be because these countries can compensate for the absence of a strong national innovation record, through CSR-based differentiation strategies.

Our findings are important for public policy and managerial practice, as they suggest that positioning strategies through CSR can be important for countries’ competitiveness. However, our study focused only on a sample of developed countries with government policies already in place to safeguard the competitiveness of SMEs, to protect market dynamism from bureaucracy, and to thwart CSR synergies turning to anticompetitive behavior and harming the wider economy. These potential negative impacts of CSR, which have been previously identified in the literature (see, Swift and Zadek 2002). In this context, our findings can be taken to imply that for as long as appropriate government policies are in place to minimize any potential negative impacts of CSR-based strategy, CSR-based positioning strategies by firms and nations can be beneficial to a nation’s competitiveness goals.

Selecting appropriate CSR-based positioning strategies depends on each country’s desired place in the international arena. As with any other value-capture strategies, CSR-based ones should not be used to increase market share in the short term and at a level hurting the competitiveness of other nations. Ultimately CSR-based strategies, as other value-capture strategies, should be further evaluated; for example, according to wider criteria, such as the ‘global sustainable value creation’ (Mahoney et al. 2009).

Granted the qualifications above, our results seem to confirm previous work in this area (e.g., MacGillivray et al. 2003, 2007; Zadek 2006; Zadek et al. 2005), that CSR at the national level is positively associated with competitiveness. However, our work expands and improves on previous work in a number of ways. First, we have used a new data set and a more advanced statistical analysis through the use of panel data and Instrumental Variable techniques which can control for many sources of endogeneity bias. Also, our results, focusing on actual business performance on CSR, can better answer the question of whether CSR-based strategies can have an impact on the competitiveness of a nation and also examine policies or factors that affect this
relationship. In this context, we examined the impact of one critical such factor, namely innovative standing.

Other limitations of our study, that call for cautious applicability of our results and further future research to improve generalizability and validity, are as follows. First, data availability constraints required us to focus on the performance of a small sample of relatively big and profitable firms that are already using CSR strategically. Hence a broader sample of firms might assist generalizability of results. Also, the lack of macroeconomic data for many countries, especially for developing ones, constrained larger samples for cross-country comparisons. Therefore, it would be useful in the future to examine a bigger sample of countries including countries at different stages of development. Besides, a larger sample of firms and countries would enhance causal inference.

Moreover, based on the current sample, our measure of national CSR does not trace the diffusion of CSR practices across the country. Our results account for the impact of a few ‘CSR leaders’ on national competitiveness. Hence, we can argue that the impact of CSR-based strategies on national competitiveness can manifest itself through the leadership of some companies driving up societal expectations, as theorized by Zadek (2006). In competitiveness literature, the impact even of single large companies on the economy as a whole can be significant, e.g. Nokia in Finland. Besides, the potential of multinational enterprises acting as agents of change and altering the institutional environment of host countries has also been supported in the international business literature (see, Westney 1993; Dacin et al. 1999; Kwok and Tadesse 2006).

On the basis of the above, additional research in future should focus on the following. First, gathering a bigger sample of firms per country including SMEs as well as firms from developing countries and second, testing more factors from the macroeconomic and institutional environment that can moderate the impact of CSR on competitiveness. Work along these lines can provide managers and policy makers with better advice on how to use CSR strategically at the firm, national and international levels.

Despite limitations, our work contributes towards the critical question of measuring the wider impact of CSR in the economy and strengthens the strategic view of CSR towards delivering shared value for business and society; as envisioned by Porter and Kramer (2006,
We hope the path of empirical inquiry initiated in this study will stimulate more research along the lines indicated in the previous section to understand the important relationship between CSR and national competitiveness.

NOTES
[1] Despite meta-analytic studies confirming a weak positive link (e.g., Orlitzky et al. 2003) many scholars (e.g., Garcia-Castro et al. 2010) still remain sceptical based on serious methodological limitations in this line of research.
[2] Unit cost economies refers to all the different types of economies that lead to reductions in unit costs such as economies of scale and scope (see, Chandler 1962), transaction cost economies (see, Coase 1937), economies of learning (see, Arrow 1962), economies of growth (see Penrose 1959), economies of joint governance (see, Williamson 2005), external and agglomeration economies (see, Henderson 2005) and economies of pluralism and diversity (see, Mahoney et al. 2009).
[3] Countries classified as developed following the OECD classification, widely known as the ‘developed countries club’.

REFERENCES


<table>
<thead>
<tr>
<th>Relative CSR performance</th>
<th>High</th>
<th>Low</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>1. Competitors</td>
<td>2. Laggards</td>
</tr>
<tr>
<td>High</td>
<td>3. Stars</td>
<td>4. Question Marks</td>
</tr>
</tbody>
</table>

Figure 1. The Relative CSR Differentiation/Innovation Positioning Matrix
Figure 2. Relative CSR Rankings Based on Current Sample \(^{a,b}\)

Notes: \(^a\) Countries’ names follow the ISO two letter codes (see Table 1)

\(^{b}\) Source: Authors’ calculations based on SAM’s data

Table 1. List of developed countries included in current sample

<table>
<thead>
<tr>
<th>Country</th>
<th>ISO code</th>
<th>Country</th>
<th>ISO code</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Austria</td>
<td>AT</td>
<td>12. Netherlands</td>
<td>NL</td>
</tr>
<tr>
<td>5. Denmark</td>
<td>DK</td>
<td>15. Spain</td>
<td>ES</td>
</tr>
<tr>
<td>Country</td>
<td>Number of publicly traded firms analyzed in this study</td>
<td>Total number of publicly traded firms (source: OSIRIS)</td>
<td>% of publicly traded firms in this study</td>
</tr>
<tr>
<td>-------------</td>
<td>--------------------------------------------------------</td>
<td>-------------------------------------------------------</td>
<td>----------------------------------------</td>
</tr>
<tr>
<td>Australia</td>
<td>260</td>
<td>2574</td>
<td>10.10%</td>
</tr>
<tr>
<td>Austria</td>
<td>25</td>
<td>178</td>
<td>14.04%</td>
</tr>
<tr>
<td>Belgium</td>
<td>42</td>
<td>287</td>
<td>14.63%</td>
</tr>
<tr>
<td>Canada</td>
<td>167</td>
<td>4725</td>
<td>3.53%</td>
</tr>
<tr>
<td>Denmark</td>
<td>54</td>
<td>315</td>
<td>17.14%</td>
</tr>
<tr>
<td>Finland</td>
<td>72</td>
<td>202</td>
<td>35.64%</td>
</tr>
<tr>
<td>France</td>
<td>232</td>
<td>1598</td>
<td>14.52%</td>
</tr>
<tr>
<td>Germany</td>
<td>238</td>
<td>1382</td>
<td>17.22%</td>
</tr>
<tr>
<td>Greece</td>
<td>28</td>
<td>373</td>
<td>7.51%</td>
</tr>
<tr>
<td>Italy</td>
<td>198</td>
<td>472</td>
<td>41.95%</td>
</tr>
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<td>Japan</td>
<td>502</td>
<td>4501</td>
<td>11.15%</td>
</tr>
<tr>
<td>Netherlands</td>
<td>121</td>
<td>393</td>
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<tr>
<td>Norway</td>
<td>48</td>
<td>368</td>
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</tr>
<tr>
<td>Portugal</td>
<td>28</td>
<td>129</td>
<td>21.71%</td>
</tr>
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<td>Spain</td>
<td>137</td>
<td>340</td>
<td>40.29%</td>
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<td>Sweden</td>
<td>124</td>
<td>728</td>
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<td>Switzerland</td>
<td>154</td>
<td>413</td>
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</tr>
<tr>
<td>UK</td>
<td>549</td>
<td>4884</td>
<td>11.24%</td>
</tr>
<tr>
<td>USA</td>
<td>755</td>
<td>13929</td>
<td>5.42%</td>
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Notes: *Source: Authors’ calculations based on SAM’s data*

Table 3. Variables: names, measures and sources of data

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<th>Source</th>
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<td>Dependent variable</td>
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<td></td>
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<tr>
<td>(GDP per capita: GDPC)</td>
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<td></td>
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<tr>
<td>Independent variable</td>
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<tr>
<td>National Corporate Social Performance (NCSP)</td>
<td>The country average on social performance calculated from a sample of listed firms at each country for each year.</td>
<td>Sustainable Asset Management (SAM)</td>
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<tr>
<td>Control variables</td>
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<tr>
<td>Innovation (INN)</td>
<td>1. The number of patents granted to each country by the USPTO</td>
<td>World Development Indicators database, World Bank (2008)</td>
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<td></td>
<td>2. Company spending on RandD</td>
<td>Competitiveness Reports, World Economic Forum</td>
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<tr>
<td>Unit Cost Economies (UCE)</td>
<td>Real Unit Labor Costs: total economy (Ratio of compensation per</td>
<td>AMECO</td>
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</table>
employee to nominal GDP per person employed. Base year =2000)

<table>
<thead>
<tr>
<th>Human Capital (HC)</th>
<th>1. % of gross population enrolled in tertiary education</th>
<th>World Development Indicators database, World Bank (2008)</th>
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<tbody>
<tr>
<td>2. Expenditure by firms on staff training</td>
<td>Global Competitiveness Reports, World Economic Forum</td>
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Table 4. Descriptive statistics and correlation matrix \(^{a,b}\)

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<th>Obs</th>
<th>Mean</th>
<th>SD</th>
<th>Min</th>
<th>Max</th>
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<th>3</th>
<th>4</th>
<th>5</th>
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<td>30641</td>
<td>5315</td>
<td>17810</td>
<td>51862</td>
<td>1.00</td>
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<tr>
<td>2.NCSP</td>
<td>114</td>
<td>48.69</td>
<td>12.46</td>
<td>5.433</td>
<td>68.10</td>
<td>0.52</td>
<td>1.00</td>
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<td>3.Human Capital</td>
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<td>5.22</td>
<td>0.74</td>
<td>3.50</td>
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<td>0.26</td>
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<td>4.Innovation</td>
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<td>8715</td>
<td>22113</td>
<td>12</td>
<td>102169</td>
<td>0.32</td>
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<td>5.Unit Cost Economies</td>
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Notes: \(^a\) Descriptive statistics based on their original values, correlation results based on their z-score transformations as used in the analysis
Significance levels: $p<0.01^{***}$, $p <0.05^{**}$, $p<0.01^*$

<table>
<thead>
<tr>
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<td>variable=GDPC</td>
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<tr>
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<td>1.09^{***} (0.03)</td>
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<td>0.15^{*} (0.08)</td>
</tr>
<tr>
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<td>-0.03 (0.04)</td>
<td>-0.04 (0.03)</td>
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<tr>
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<td>-0.01 (0.10)</td>
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<td>-0.05 (0.04)</td>
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<td></td>
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<td>(0.20)</td>
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<td></td>
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<td>(0.09)</td>
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<tr>
<td></td>
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<td>(0.09)</td>
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<tr>
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<td>yes</td>
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<td>Observations</td>
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<td>108</td>
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<tr>
<td>Model F value</td>
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<td>24.34 ***</td>
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*Notes:*  

a Model 1 was used to test Hypothesis 1 and model 2 to test Hypothesis 2.  
b Models are based on ‘system GMM’ estimation (two-step estimator with robust errors), standard errors shown in parentheses.  
c Significance levels: p<0.01***, p <0.05**, p<0.10*
Notes: * Significance levels: p<0.01***, p <0.05**, p<0.10 *