



Four decades of research on product diversification: a literature review

Four decades
of research

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Abstract

Purpose – The purpose of this study is to gain new insight into the true nature of the relationship between product diversification and performance, as well as to explore the roles the home country environment and time can play on this relationship.

Design/methodology/approach – The study reviews a large part of the research that has addressed the relationship between product diversification and performance over the last four decades.

Findings – This study identifies the main views (models) that can help scholars to adequately understand, both theoretically and empirically, the potential effect of product diversification on performance: the premium diversification model; the discount diversification model; and the U-inverted model. The study confirms a wide diversity of results. Drawing from the institutional-based view, it is argued that a significant part of this heterogeneity stems from the effect of two factors that have often been ignored: the home country environment and time period. The review of recent empirical research seems to provide some support for the central argument that the value firms achieve through product diversification may be contingent both on the specific home country environment (environmental dependency) and time period (time dependency) under study.

Originality/value – This study yields an alternative explanation to the inconsistency in findings that goes beyond strictly theoretical and methodological reasons. It shows that the arguments related to different views (or models) need to be considered “environment-dependent” and “time-dependent”. It concludes by proposing a framework to guide future research.

Keywords Product diversification, Performance, Institutional environment, Environment-dependency, Time-dependency, Product management, Business performance

Paper type General review

1. Introduction

The product diversification-performance linkage (PD-P, hereafter) has been explored by many researchers from different disciplines, such as economics, finance or strategic management. In fact, it is considered a core subject in strategic management literature (Chatterjee and Wernerfelt, 1991; Chen and Chu, 2010; Miller, 2004; Palich *et al.*, 2000; Park and Jang, 2011). In our view, two major conclusions can be drawn from the large body of research existing on PD-P: first, the lack of consensus on the true nature of the effect of product diversification on performance. This lack of consensus is usually attributed both to the diversity of theoretical views and to methodological reasons – use of different samples, time periods, databases, operationalization of variables, or econometric techniques (Datta *et al.*, 1991; Dess *et al.*, 1995; Hoskisson and Hitt, 1990; Palich *et al.*, 2000); second, the need to explicitly consider the importance of home country environment and time period when exploring PD-P. In this sense, it is



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interesting to note that most empirical research has taken place in developed countries (mainly, the USA) from the 1960s till the end of the 1990s. However, most empirical research since the end of the 1990s has been conducted in emerging and transition countries (Lee *et al.*, 2008; Peng and Delios, 2006). In addition, most research in developed countries explores PD-P in short time periods (i.e. many studies are static) compared to most recent research in emerging and transition countries that ranges over long time periods (most studies are dynamic).

This study reviews the existing literature on PD-P over the past 40 years. Our main purpose is to shed new light on two major research questions that are high on the agenda of researchers, and on which no clear consensus yet exists in the answers:

- (1) What is the true nature of the effect of product diversification on performance?
- (2) Do home country environment and time period really play an important role in PD-P?

Our study seeks to contribute to the literature on PD-P in several ways. On the one hand, we show the main views (and their associated models) that have traditionally examined PD-P. The major assumptions of each view (model) are summarized, thereby enabling us to see when product diversification can be more beneficial (detrimental) to firms. We analyze whether these assumptions are corroborated in empirical studies performed over the last four decades. On the other hand, and more importantly, we outline the need for considering two factors when PD-P is empirically examined, namely, home country environment and time period. We maintain that this consideration can help scholars to better understand the heterogeneity in results. In light of prior research, it seems clear that the potential effect of both factors has been largely ignored. Thus, we put forward an alternative explanation for such heterogeneity. As noted in the following, this explanation goes beyond strictly theoretical and methodological reasons. Our goal, therefore, is to prove whether the arguments from different views may be simultaneously considered “environment-dependent” and “time-dependent” (i.e. “context-dependent”). This means that arguments from one specific view (model) may be more valid when explaining PD-P in any one specific home country environment and time period. Likewise, arguments from other views (models) may fit better in different home countries and/or time periods or even in the same home country environment, but in different time periods. We thus posit that arguments from different views (models) should be conceived as inclusive rather than exclusive. Lastly, we propose a framework to guide the study of PD-P in the future.

The study is organized as follows. Section 2 presents the theoretical views and a long list of empirical studies that have examined PD-P. Section 3 highlights the significance of considering home country environment and time when examining PD-P. We end with a number of conclusions, practical implications and certain directions for future research.

2. Literature review: main views and empirical evidence

2.1 Economics and finance

Generally speaking, most economists and financial researchers have focused on the diversity concept, i.e. the state of a company at a specific moment in time in terms of the breadth and variety of the business portfolio and how this diversity influences its

performance. Specifically, most of these researchers have studied the performance differences between diversified and non-diversified firms considering the diversification strategy to be an industry attribute (e.g. Bausch and Pils, 2009; Lang and Stulz, 1994). This means the studies linked to both views have examined the influence of the level of diversification on the average profitability of firms within a particular industry (e.g. Montgomery, 1985).

Theoretical arguments developed by many economists and financial researchers during the 1960s and 1970s were highly optimistic about product diversification. This was consistent with massive diversification programs undertaken by most companies during this period. Framed within this optimistic view is the so-called linear premium model (Palich *et al.*, 2000). The core premise of this model is that the level of diversification is linearly and positively related to performance. This means the benefits of high levels of diversification outweigh the costs and, hence, the most diversified firms outperform their more focused counterparts. The main arguments used to justify the superiority of more diversified firms are drawn from industrial organization economics (IOE), transaction cost economics (TCE) or traditional financial theory (TFT). First, more diversified firms may use different mechanisms that enable them to create and exploit several market power advantages, such as predatory pricing behavior or the establishment of reciprocal arrangements with firms that are simultaneously suppliers and customers (Caves, 1981; Palich *et al.*, 2000; Scherer, 1980). Second, these firms can also obtain important financial advantages from using internal markets for capital and other resources (Berger and Ofek, 1995; Myers, 1977; Palich *et al.*, 2000; Stein, 1997; Williamson, 1975). Another potential advantage is a reduced bankruptcy (or overall) risk due to imperfectly correlated earnings streams across different businesses. This “coinsurance effect” can give these firms greater debt capacity (Berger and Ofek, 1995; Lewellen, 1971; Palich *et al.*, 2000; Schmid and Walter, 2009). Finally, more diversified firms may also have lower tax burdens as a result of tax-efficient intra-firm transactions (Berger and Ofek, 1995; Palich *et al.*, 2000; Schmid and Walter, 2009; Servaes, 1996).

By contrast, the 1980s and 1990s gave way to a more pessimistic view of diversification; in fact, the 1980s witnessed a trend towards greater focus or specialization: more diversified firms divested unrelated businesses, and then restructured around fewer and more closely related businesses (see Comment and Jarrell, 1995; Grant, 2002; Johnson, 1996; Markides, 1995). Accordingly, during this period many economists and financial researchers (especially agency theorists) analyzed the superior performance of the more diversified firms over the more focused ones. Within this context, a new model was empirically validated: the so-called linear discount model (Berger and Ofek, 1995; Denis *et al.*, 1997; Servaes, 1996). The core assumption behind this model is that the level of diversification is linearly and negatively related to firm value. This means the costs of high levels of diversification outweigh the benefits, whereby focused firms outperform their more diversified counterparts. Some of the main arguments explaining the value loss of more diversified firms include:

- cross-subsidization among businesses, which may result in an inefficient allocation of capital – or other resources – and reduced performance incentives in profitable businesses (Berger and Ofek, 1995; Meyer *et al.*, 1992; Palich *et al.*, 2000; Schmid and Walter, 2009);

- higher coordination, control and, thus, management costs as a consequence of information asymmetries (Harris *et al.*, 1982; Markides, 1992; Myerson, 1982; Palich *et al.*, 2000); and
- higher agency costs caused by frequent conflicts of interest between managers and shareholders (Amihud and Lev, 1981; Jensen, 1986; Wan *et al.*, 2011).

2.2 Strategic management

It is important to note that most researchers in this field of study are primarily concerned with the diversification concept, i.e. specific corporate strategy. In other words, most researchers are especially interested in exploring the effect the type of product diversification – in terms of single-business or specialized, related and/or unrelated diversifier firms (Ansoff, 1965; Rumelt, 1974; Wrigley, 1970) – has on performance.

Over the past two decades, the study of PD-P is being strongly influenced by the resource-based view (RBV). This view suggests the specific type of diversification strategy a firm can adopt and its performance are conditional on its pool of resources and capabilities. Unlike economics and finance, the RBV provides an internal perspective that underscores firms' motivation to maximize their pool of resources and capabilities by primarily diversifying into related businesses (Wan *et al.*, 2011). Specifically, the RBV posits that related diversification should lead to superior firm performance compared to unrelated diversification and single-business strategy (Barney, 1991; Rumelt, 1982; Wan *et al.*, 2011; Wernerfelt, 1984). This premise gives rise to the so-called inverted-U model (Palich *et al.*, 2000). Actually, this model is formulated in terms of levels of diversification. The core assumption is that product diversification is positively related to performance across low to moderate levels of diversification – i.e. when firms change from single-business to related diversification – and is negatively related to performance across moderate to high levels of diversification – i.e. when firms shift from related to unrelated diversification (Palich *et al.*, 2000).

In essence, the RBV holds that related diversifiers (i.e. firms with moderate levels of product diversification) can exploit economies of scope that derive from the ability to share resources and capabilities among business units that are mutually reinforcing (Barney, 1997; Lubatkin and Chatterjee, 1994; Palich *et al.*, 2000; Wan *et al.*, 2011). Other potential advantages these firms may obtain are derived from learning curve efficiencies, intra-firm process/product technology diffusion and restricted access to factors of production that are necessary for activities stemming from a specific industry (Barney, 1997; Palich *et al.*, 2000). Obviously, most of these advantages are unavailable to single-business firms (i.e. firms with no level of diversification). On the other hand, unrelated diversifiers may obtain some unique advantages derived primarily from financial synergies, but these advantages are usually neutralized by the high costs for firms of the top executives required to manage an increasingly diverse business portfolio (Grant *et al.*, 1988; Hill and Hoskisson, 1987; Markides, 1992; Wan *et al.*, 2011).

2.3 Empirical evidence

Table I reports a long list of empirical studies that have been primarily interested in exploring PD-P over the last 40 years. Table I allows checking whether the arguments

Positive and significant linear effects	<i>Miller (1969); Weston and Mansinghka (1971); Rhoades (1973); Miller (1973); Levitt (1975); Carter (1977); Hassid (1977); Bass et al. (1977); Nathanson and Cassano (1982); Scott (1982); Jose et al. (1986); Grant et al. (1988); Keats and Hitt (1988); Page et al. (1988); Robins and Wiersema (1995); Wan (1998); Campa and Kedia (2002); Chang and Hong (2000, 2002); Morck and Yeung (2003); Villalonga (2004a, b); Xiao and Greenwood (2004); Miller (2006); Miguel and Rios (2007); Zhao (2008); Elsas et al. (2010); Kuppuswamy and Villalonga (2010)</i>
Negative and significant linear effects	<i>Imel and Helmberger (1971); Markham (1973); Rhoades (1974); Grinyer et al. (1980); Jacquemin et al. (1980); Bühner (1987); Amit and Livnat (1988b); Hill and Snell (1988); Wernerfelt and Montgomery (1988); Montgomery and Wernerfelt (1988); Hoskisson et al. (1993); Lang and Stulz (1994); Berger and Ofek (1995); Comment and Jarrell (1995); Hitt et al. (1996); Servaes (1996); Denis et al. (1997); Lins and Servaes (1999); Rajan et al. (2000); Martín and Sayrak (2003); Lu and Beamish (2004); Fukui and Ushijima (2007); Tongli et al. (2005); Stowe and Xing (2006) > ; Chakrabarti et al. (2007); Laeven and Levine (2007) > ; Vilas-Boas and Suárez (2007); Bausch and Pils (2009); Hoechele et al. (2009); Schmid and Walter (2009); Grass (2010); Klein and Saldenberg (2010); Braakmann and Wagner (2011)</i>
Related diversified firms overcoming unrelated diversified firms	<i>Berry (1971); Rumelt (1974); Hassid (1977); Channon (1978); Bettis (1981); Rumelt (1982); Lecraw (1984); Montgomery and Singh (1984); Palepu (1985); Bettis and Mahajan (1985); Varadarajan (1986); Wernerfelt and Montgomery (1986); Hoskisson (1987); Varadarajan and Ramanujam (1987); Amit and Livnat (1988a); Capon et al. (1988); Amit and Livnat (1989); Hill and Snell (1989); Lubatkin and Rogers (1989); Geringer et al. (1989); Simmonds (1990); Nguyen et al. (1990); Lubatkin and Chatterjee (1994); Hill et al. (1992); Hamilton and Shergill (1993); Markides and Williamson (1996); Suárez (1994); Berger and Ofek (1995); Chang (1996); Markides and Williamson (1996); Tallman and Li (1996); Mayer and Whittington (2003); Park (2003); Tanriverdi and Venkatraman (2005); Miller (2006); Colpan (2008); Bausch and Pils (2009); Becerra (2009)</i>
Unrelated diversified firms overcoming related diversified firms	<i>Elgers and Clark (1980); Dundas and Richardson (1982); Michel and Shaked (1984); Little (1984); Luffman and Reed (1984); Hitt and Ireland (1986); Varadarajan (1986); Dubofsky and Varadajan (1987); Lubatkin (1987); Doukas and Travlos (1988); Elsas et al. (2010); Kuppuswamy and Villalonga (2010); Lahovnick (2011)</i>
Significant curvilinear effects	<i>Grant et al. (1988); Tallman and Li (1996); Khanna and Palepu (2000a); Ramirez and Espitia (2002); Nachum (2004); Galván et al. (2007); Li and Yue (2008); Kistruck et al. (2011)</i>
Not significant effects	<i>Gort (1962); Arnould (1969); Weston and Mansinghka (1971); Melicher and Rush (1973); Vernon and Nourse (1973); Jones et al. (1977); Jacquemin and Berry (1979); Christensen and Montgomery (1981); Bettis and Hall (1982); Hill (1983); Geroski (1982); Ravenscraft (1983); McDougall and Round (1984); Montgomery (1985); Johnson and Thomas (1987); Amit and Livnat (1988b); Chang and Thomas (1989); Kim et al. (1989, 1993); Sambharya (2000); Isobe et al. (2006); Çolak (2010); Ravichandran et al. (2009)</i>

Note: Studies of this table in italics are cited in prior reviews by Ramanujam and Varadarajan (1989), Datta *et al.* (1991) or Palich *et al.* (2000), so they are omitted from the References section here

Sources: Ramanujam and Varadarajan (1989), Datta *et al.* (1991), Palich *et al.* (2000) and own elaboration.

Table I.
The effect of product
diversification on
performance: empirical
studies

from the previous views are empirically supported. There are many studies providing empirical support for the linear premium model, as they find that the levels of product diversification and performance are significantly and positively related. Thus, the initial arguments from the fields of IOE, TCE and TFT have empirical backing. Alternatively, there is a significant group of studies providing empirical support for the linear discount model, as they report a significant negative and linear effect of the level of diversification on firm value. Table I also shows there are numerous studies that empirically confirm the superiority of related diversified firms over unrelated diversified ones. Hence, the arguments from the RBV are also empirically backed. Surprisingly, Table I shows there are still few studies providing empirical support for the inverted-U model. Contrary to the arguments from the RBV, other researchers find that unrelated diversifiers (or, equally, firms with extensive levels of diversification) can achieve a higher performance than related ones. It is interesting to note that one study (see Khanna and Palepu, 2000a) finds a U-shaped relationship between firm performance and the extent of unrelated diversification. Finally, there are also studies that do not find any significant effect of product diversification level (or differences between related and unrelated diversifiers) on performance.

In light of Table I, it is clear there is still no unequivocal conclusion regarding the superior performance of one strategy over another. In our view, there are three reasons for this inconsistency in findings:

- (1) A substantial variety of theoretical views.
- (2) A huge diversity of methods used by researchers.
- (3) The lack of explicit consideration for home country (i.e. institutional environment) and time in the empirical analysis.

Theoretically, we understand that the arguments used by prior views (and, thus, behind each model considered) to explain the potential benefits and costs linked to different strategies seem reasonable and, hence, can be equally valid. As argued by Palich *et al.* (2000, p. 161) and others (e.g. Seth, 1990) it is obvious that “on the basis of theory alone, it is difficult to come to a definitive conclusion regarding the performance superiority of one strategy or the other”. On the other hand, results can also be affected by the research methods used in each study – in terms of study samples, databases, time periods, ways of operationalizing the dependent (performance) and independent (diversification) variables or econometric techniques used for estimating different models. This fact is precisely in consonance with findings by Palich *et al.* (2000). Using meta-analytic data drawn from 55 studies that synthesize more than three decades of research (from the early 1970s to the late 1990s), these authors find major effects from the variation in research methods (especially with certain issues related to product diversification and performance operationalizations). Most importantly, this study finds significant support for the inverted-U model. Thus, these authors conclude that their study gives a potential answer to the unresolved research question: “How exactly does product diversification relate to performance?” (p. 169). Nevertheless, this conclusion is somewhat debatable if one looks at Table I, as most empirical studies performed from the late 1990 onwards continue to provide mixed results. Another of this study’s significant findings is that *post hoc* analysis does not suggest time period is a key factor, but the authors call for more detailed studies to discover potential time effects (p. 169). Indeed, we believe the latter conclusion should be qualified, since this

study does not control for the specific home country environment where the study is performed. Consequently, we suggest the need for explicitly considering two new interrelated factors to adequately explain and understand traditional inconsistency in findings: the specific home country environment and time period.

3. The relevancy of home country environment and time period

Almost all the studies featured in Table I have been performed in developed countries (mainly the USA). With a few exceptions, most of these studies have assumed the different home country environments in which product diversification strategies are adopted. Moreover, these studies are chiefly cross-sectional (i.e. static) or consider short time periods. At first glance, these limitations prevent researchers from seeing the precise role that both home country environments and time can play in PD-P. In other words, it does not allow discovering whether the type of relationship between product diversification (i.e. linear positive/negative or curvilinear) and performance is similar and holds constant in the same and/or different home country environments over time.

3.1 *The role of home country environment*

Recent empirical research around the world, but especially in emerging and transition countries (Asia and Latin America), is contributing to foster a new perspective in the study of PD-P: the so-called institution-based view (IBV) (North, 1990; Hoskisson *et al.*, 2000a, b; Peng, 2003; Peng and Delios, 2006; Scott, 1995). A basic premise is that national institutional environments may significantly influence a firm's strategic choices, such as diversification strategies. It is assumed that different home country environments may have substantial differences in their levels of institutional development (Hoskisson *et al.*, 2000; Khanna and Palepu, 1997; Lee *et al.*, 2008; Peng, 2003; Peng and Delios, 2006; Peng *et al.*, 2005; Wan and Hoskisson, 2003). Thus, it seems reasonable to wonder whether the effect of product diversification on performance is dependent on the specific home country environment in which a firm is situated.

According to this view, firms will incur in higher transaction costs in institutionally weaker home country environments than in institutionally stronger ones. This is because of the greater imperfections found in the external capital, labor and product markets of the former group of countries (Lee *et al.*, 2008; Peng and Delios, 2006; Wan and Hoskisson, 2003). These imperfections – called by some authors “institutional voids” (e.g. Khanna and Palepu, 1997, 2000b; Lee *et al.*, 2008; Ma *et al.*, 2006) – encourage firms to opt for a product diversification strategy as a way of creating internal markets – to replace external ones – and, thus, of successfully dealing with the challenges posed by their environments (Kedia *et al.*, 2006; Khanna and Palepu, 1997; Lee *et al.*, 2008; Peng and Delios, 2006; Peng *et al.*, 2005; Wan and Hoskisson, 2003). A significant increase in the scope of the firm (i.e. high levels of diversification) is precisely seen as the most suitable strategy for facing up to market imperfections in institutionally weaker home country environments (Lee *et al.*, 2008; Nachum, 2004; Peng *et al.*, 2005; Wan and Hoskisson, 2003). Specifically, the economic benefits that can be obtained in this type of environment from internal markets by increasing the scope of the firm are expected to be greater than the costs (Fauver *et al.*, 2003; Kogut *et al.*, 2002; Lee *et al.*, 2008; Leibeskind, 2000; Peng *et al.*, 2005; Wan and Hoskisson,

2003). Therefore, it is reasonable to think that arguments based on IOE, TCE and TFT are better at explaining the effect of product diversification on performance in institutionally weaker home country environments. The linear premium model can provide a better explanation in these countries. On the other hand, external markets tend to be more sophisticated (i.e. more efficient when allocating different resources) in institutionally stronger home country environments. In these countries, the advantages associated with extensive product diversification are likely to disappear quickly. Thus, firms should opt for a strategy with low (or moderate) levels of product diversification (Lee *et al.*, 2008; Peng *et al.*, 2005; Wan and Hoskisson, 2003). This is in line with the arguments put forward by agency theorists and RBV; hence, the models that better explain the potential effect of product diversification on performance in these home country environments are either the linear discount model and/or the inverted-U model. In the end, this means that PD-P can be “environment-dependent”.

Recent empirical research in emerging and transition countries (i.e. home country environments with weak institutional development) is highly consistent with prior arguments. Based on data between the 1970s and the early 1990s, studies in China (see Keister, 2000; Li and Wong, 2003 or Yiu *et al.*, 2005), India (see Khanna and Palepu, 2000a or Ramaswamy *et al.*, 2004), South Korea (see Chang and Choi, 1988; Chang and Hong, 2000, 2002 or Lee *et al.*, 2008), Turkey (see Gunduz and Tatoglu, 2003) and a variety of emerging countries (see Guillén, 2000; Khanna and Rivkin, 2001 or Nachum, 2004) provide sound evidence in favor of the linear premium model. Overall, these studies report that some (but not all) business group-affiliated firms (i.e. conglomerates) enjoy higher profitability than non-affiliated, independent firms (i.e. focused firms). In a comparative study of the USA, Japan and eight East Asian countries, Claessens *et al.* (2000) observe that product diversification tends to have a lower impact on the valuation of East Asian firms (i.e. countries with a weak institutional framework) than of firms in the USA and Japan (i.e. countries with a strong institutional framework). Likewise, Fauver *et al.* (2003) and Shackman (2007) have used databases from 35 and 39 developed and developing countries, respectively, to find that weak capital markets (prevalent in developing countries) increase the value of diversification.

In any case, it is interesting to note that although there are significant similarities in the institutional frameworks of the group of emerging countries, on the one hand, and of the group of more developed countries, on the other, substantial differences can be also detected within each group of countries. For example, compared to developed common law countries (e.g. the USA and the UK), developed civil law countries (e.g. France and Italy) tend to provide relatively poor investor and creditor protection, weak law enforcement, financial markets that are more focused on banks or rigid labor markets (Hoskisson *et al.*, 2004; La Porta *et al.*, 1997). In line with this, Kogut *et al.* (2002) observe important differences in the diversification patterns of large firms in five developed countries: France, the UK, the USA, Germany and Japan. Fauver *et al.* (2003) also find that, in countries with legal systems of French, German and Scandinavian origins, diversification provides greater benefits/lower costs relative to firms operating in a country with a legal system based on common law. Using a sample of firms from six Western European countries, Wan and Hoskisson (2003) also find that product diversification is negatively related to performance in more munificent home country environments and positively so in less munificent ones.

3.2 The role of time period

The institutional environments of home countries and product diversification strategies change over time. From the 1950s onwards, significant shifts have taken place in the institutional environments of the most developed countries. Institutional environments in today's emerging countries have also been undergoing significant changes since the end of the 1980s and early 1990s. As opposed to a more recent period (since the early 1980s in the most developed countries and the early 1990s in emerging countries) external capital, labor and product markets before the 1970s and mid 1980s, respectively, were less sophisticated (i.e. less transparent, open and competitive).

On the other hand, the product diversification strategies of large companies around the world have changed over the past 50 years. For example, Rumelt (1982) documented relevant changes in the diversification strategies of the *Fortune* 500 during the period 1949-1974 – primarily composed of US firms: the proportion of single-business firms declined steadily – from 42 per cent in 1949 to 14.4 per cent in 1974 – whereas the proportion of the most diversified firms (both related and unrelated businesses) significantly increased – from 29.8 per cent in 1949 to 63 per cent in 1974. A similar trend was recorded in Europe and Japan, but with a certain time lag in several countries (see Mayer and Whittington, 2003, 2004; or Whittington and Mayer, 2000 for several European countries, and Itami *et al.*, 1982 for Japan). In emerging countries, large diversified business groups also dominated private sector activity until the early and/or mid-1990s (see Guillén, 2000; Kedia *et al.*, 2006 or Khanna and Palepu, 2000a, b). In marked contrast, as noted previously, the 1980s and 1990s saw a sharp reversal in the trend toward product diversification in the most developed countries. The average index of diversification for *Fortune* 500 firms decreased from 1.00 to 0.67 between 1980 and 1990 (see Davis *et al.*, 1993). In a recent study, Basu (2010) used a sample of 12,508 firms drawn from the Compustat database to report that the proportion of multi-segment firms (i.e. highly diversified firms) declined from 40 per cent in 1981 to 17 per cent in 1997, whereas the proportion of single-segment firms (i.e. focused firms) increased from 59.6 per cent in 1981 to 83.3 per cent in 1997. Overall, the trend depicted for these data are quite similar to other author's findings for the same time period using different databases (see Comment and Jarrell, 1995; Davis *et al.*, 1993; Markides, 1995). Basu's study also reports a smooth trend toward more diversification for a more recent period (1999-2007), since the proportion of multi-segment firms increases from 35.5 per cent in 1999 to 38.3 per cent in 2007.

A major assumption of IBV is that changes in the institutional frameworks of home countries can alter the benefits and cost of product diversification strategies (Peng, 2003; Peng and Delios, 2006; Peng *et al.*, 2005). Specifically, this view posits that when home countries have external capital, then labor and product markets are less developed and it is more likely that firms will achieve a diversification premium. This is because the economic benefits related to diversification are expected to outweigh costs (Fauver *et al.*, 2003; Kogut *et al.*, 2002; Lee *et al.*, 2008; Leibeskind, 2000; Peng *et al.*, 2005; Wan and Hoskisson, 2003). Thus, in home countries with this institutional framework the model that can better explain the relationship between product diversification and performance is the linear premium model. Yet the government of a home country may make fundamental changes (or reforms) to institutional frameworks over time – deregulation and liberalization of different markets. Such changes (reforms) tend, in general, to increase the transparency, openness and

competition of their external capital, labor and product markets. When this occurs, local firms may choose to reduce the level of product diversification. Based on a sample of French civil law countries, Hoskisson *et al.* (2004) confirm that a change in a country's institutional development is positively associated with a more focused strategy. A plausible explanation is that excessive diversification in the new institutional environment may constitute a liability rather than a strength – costs might outweigh the economic benefits (Fauver *et al.*, 2003; Kogut *et al.*, 2002; Lee *et al.*, 2008; Leibeskind, 2000; Peng *et al.*, 2005; Wan and Hoskisson, 2003). Hence, it is highly likely that the most diversified firms will undergo a value loss in relation to firms with low (or moderate) levels of diversification. This ultimately means that in a home country in which external capital, labor and product markets become more transparent, open and competitive the models that better explain the product diversification-performance linkage are the linear discount model or the U-inverted model. In the end, all this means that PD-P is also “time-dependent”.

Nowadays, there are few empirical studies exploring whether the product diversification-performance linkage remains constant over time when the institutional environment of a specific home country undergoes significant transformations. In line with the previous arguments, Hubbard and Palia (1999), using a sample of US firms during the conglomerate wave of the 1960s, discover that the value of diversification declined over time as the country's capital markets became more sophisticated. Similarly, Fauver *et al.* (2003) find that the value of diversification within a given country significantly declines over time as the country's capital markets become more developed and internationally integrated. Lee *et al.* (2008), drawing on a dataset from South Korea between 1984 and 1996, document how a diversification premium becomes a diversification discount during a process of institutional transition. Khanna and Palepu (2000b), using a sample of Chilean firms over the 1988-1996 period, find that the linear term of the proxy variable of product diversification is negatively and significantly related to returns. This is precisely a period in which financial labor and product markets become more transparent, open and competitive. Ferris *et al.* (2003), using a sample of Korean nonfinancial firms over the 1990-1995 period – a time of transition in the institutional environment – find that chaebol-affiliated firms (i.e. more diversified firms) consistently underperform relative to non-affiliated firms (i.e. more focused firms) except for the first two years – but they fail to observe a significant chaebol premium in these two years. In the remaining three years, chaebol firms suffer from a lower valuation relative to non-chaebol firms. Based on data collected from 125 Taiwanese business groups between 2004 and 2007 (a period of relative calm after the storm), the study by Chen and Chu (2010) reveals that diversification negatively influences group performance.

There are other empirical studies that contradict the previous arguments. Nevertheless, they also find that the effect of product diversification on performance does not hold constant over time. For example, based on samples of firms drawn from Compustat over the period 1961-1976 – in three-year intervals, Servaes (1996) observes a large and significant diversification discount over the 1961-1970 period, but this discount becomes small and insignificant in 1973-1976. Pettit *et al.* (2005), using a sample of Indian manufacturing firms, reveal that in the pre-reform era model – 1988 – the diversification approach seems to exert a significant and negative influence on performance. In contrast, the level of diversification did not appear to have any

significant impact on performance in the post-reform model – 1999. Finally, most of the empirical studies in Table I are static or do not explicitly consider that a home country's institutional environment changes over time. Even so, there are studies conducted by different researchers in the same home country but in a different time period that show a different effect of product diversification on performance.

4. Conclusions

The product diversification-performance linkage has been a topic of intense scholarly debate for decades. Our study has reviewed a voluminous body of research that has been carried out over the past 40 years. We identify three models that have been traditionally used by researchers to understand how the potential effect of product diversification on performance can be theoretically and empirically addressed:

- (1) The premium diversification model.
- (2) The discount diversification model.
- (3) The U-inverted model.

After reviewing a raft of empirical studies, in line with many other authors, we can confirm the results are extremely heterogeneous. This leads us to conclude that it is initially difficult to decide which view (model) better explains the true impact of product diversification on performance. In other words, given the ahistorical and environment-free logic of each model considered in this study, it seems reasonable to infer an equifinality. This means that all the models may be equally valid for explaining PD-P. Thus, any inconsistency in results may be due to the extant variety of views (models). We are also aware that divergence in research methods can significantly help to explain such inconsistency. Nonetheless, we note a further limitation related to most studies examining PD-P, specifically that they have traditionally relied on either cross-sectional or pooled data, thereby ignoring the potential effects of home country environment (i.e. institutional framework) and time period. Accordingly, following the recommendations of many researchers (e.g. Peng, 2003; Peng and Delios, 2006; Peng *et al.*, 2005), we rely on a new perspective, the IBV, that explicitly consider such factors. When more recent and older empirical research is examined in the light of this new approach, it is clear that this new view can help researchers to better understand the true nature of the effect of product diversification on performance.

Our review provides some support for the notion that the value firms achieve through product diversification is contingent both on the specific home country environment (i.e. "environment-dependent") and the time period under study (i.e. "time-dependent"). This means that during a period when external capital, labor and product markets in one specific home country are less transparent, open, and competitive, the premium diversification model is the one that can better explain the potential effect of product diversification on performance. Alternatively, when external capital, labor and product markets are more transparent, open and competitive in the same country, the discount diversification and U-inverted models are the ones that can better explain this impact. Finally, this means that different views traditionally exploring PD-P (such as IOE, TCE, TFT, MFT and RBV) should be considered complementary from an environmental and time perspective. With this in mind,

we consider the IBV to be a suitable framework for explaining part of the current inconsistency in results.

4.1 Some practical implications

Several practical implications for managers and policy-makers might be derived from this study. For managers, appropriate strategic actions in any one specific home country and specific time period may not necessarily be appropriate in other countries or different time periods in the same home country. An important corollary of this observation is, for instance, of significance to the restructuring in which highly diversified firms are engaging around the world. Often advised by consultants from the most developed home countries – whose experiences lead them to see highly diversified firms as “unalloyed evils” (Khanna and Rivkin, 2001, p. 69) – many managers from emerging or less developed countries can mistakenly narrow the scope of their operations. Thus, managers from these countries should take such advice with a fair amount of caution as it might not apply well to the firms they are managing. For policy-makers, highly diversified firms as a prevalent organizational form in a specific home country could be considered, to some extent, as a signal that the business environment lacks well-established market-supporting institutions (Chen and Chu, 2010). Therefore, policy-makers should adopt the necessary policies (reforms) that permit increasing the transparency, openness and competitiveness of markets. As a result, firms might achieve significant benefits by reducing the transaction costs within different markets. Ultimately, these policies might well lead to an increase in the level of social welfare in the country concerned.

4.2 Some avenues for future research

All in all, taking the IBV as a benchmark, Figure 1 outlines a general framework for the future agenda of scholars when studying PD-P. We emphasize the need for more longitudinal empirical studies to confirm the validity of the arguments presented in this study and, simultaneously, discover whether there may be other new models explaining PD-P. Accordingly, we present two additional models in Figure 1: the intermediate model and U-shaped model. The major premise of the first model is that “performance levels for related and unrelated diversification are somewhat equal” (Palich *et al.*, 2000, p. 160). This model has not been empirically validated yet. The core assumption of the second model is that firm performance will decline with an increase in unrelated diversification until product diversification reaches a threshold. Beyond this threshold, marginal increases in product diversification should yield marginal increases in performance (Khanna and Palepu, 2000b).

On the other hand, we consider it advisable to design more robust methodologies to effectively test whether the effect of product diversification on performance can vary over time in any one specific home country. In this sense, the study by Vicente-Lorente and Zúñiga-Vicente (2006) could be considered a benchmark. By testing the structural stability of empirical models, these authors find that the effect of determinants of strategic change varies over time. Finally, it would also be very interesting to explore how geographic diversification might affect all the models considered in this study.

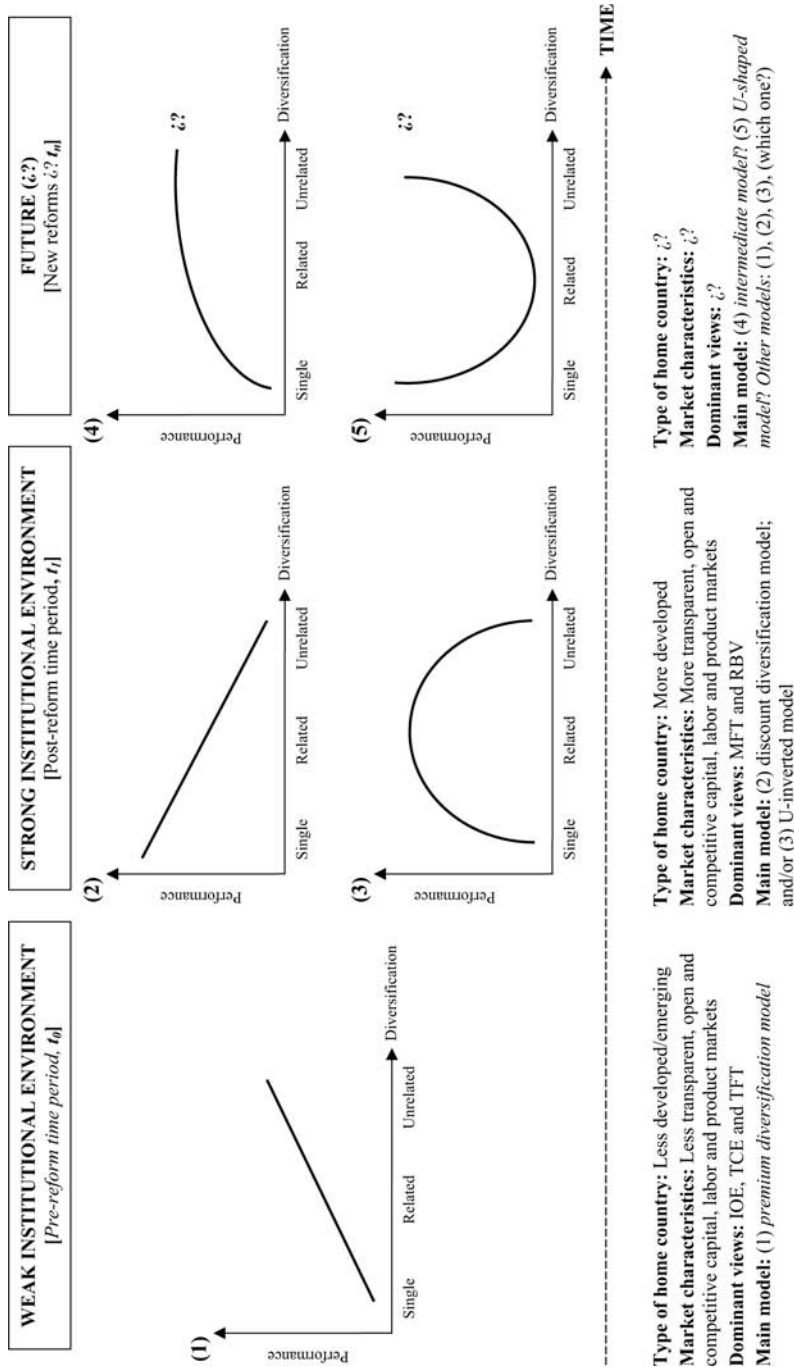


Figure 1.
A general framework to study the product diversification-performance linkage

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