BUSINESS MODEL DIVERSIFICATION, RESOURCE RELATEDNESS, AND FIRM PERFORMANCE

TIMO SOHL
IESE Business School
Strategic Management Department
Av. Pearson 21, 08034 Barcelona, Spain

GOVERT VROOM
IESE Business School

ABSTRACT

Using a unique panel dataset of multibusiness firms in the retail- and wholesale-trade sectors (1997–2010), we find that the extent to which business model diversification is related increases firm performance. Interestingly, results also show that business model relatedness is more influential in determining firm performance than industry relatedness.

INTRODUCTION

Over the last decade, the notion of the business model has received increasing attention in the literature and in practice, and has been referred to as the logic of a business, describing the way it operates and how it creates and captures value (e.g., Casadesus-Masanell and Ricart, 2010; Teece, 2007). More recently, a number of studies have observed that firms increasingly operate multiple business models at the same time (Casadesus-Masanell and Tarzijan, 2012; Casadesus-Masanell and Zhu, 2010; Markides, 2013; Markides and Charitou, 2004; Sabatier, Mangematin, and Rousselle, 2010). Based on anecdotal evidence, these studies have argued that with the emergence of discount, electronic, and sponsor-based business models in many industries, the question of which business models to combine under the corporate umbrella represents a significant challenge to an increasing number of firms. This question is important given that business models identify how firms create and capture value and therefore are directly linked to firm performance. Accordingly, the few existing studies on this topic have recognized that business model diversification may provide an important source of competitive advantage but can also be a major cause of strategic failure. Unfortunately, the literature on business models has not sufficiently explored which business models could be combined into a portfolio to create value.

Similarly, the large literature on corporate diversification has not considered the topic of business model diversification. Since the seminal work of Rumelt (1974), strategy research has focused on studying firm diversification into related and unrelated lines of business. Drawing on the resource-based view of the firm (Barney, 1991; Penrose, 1959; Peteraf, 1993; Wernerfelt, 1984), the literature has argued that portfolio relatedness (Robins and Wiersema, 1995) can enable diversified firms to exploit synergy by sharing strategic resources among their lines of business, thereby increasing firm performance (Farjoun, 1998; Markides and Williamson, 1994; Rumelt, 1974, 1982; Silverman, 1999). To capture the concept of portfolio relatedness, previous research has traditionally conceptualized cross-business relatedness based on the similarity of industries that a firm's lines of business serve (e.g., Bryce and Winter, 2009; Farjoun, 1998;

Jacquemin and Berry 1979; Montgomery, 1982; Palepu, 1985; Teece, 1980, 1982). Most of the previous studies have provided evidence that diversification into related industries creates value, whereas diversification into unrelated industries destroys value (Palich, Cardinal, and Miller, 2000).

Strategy research has recognized that lines of business consist of *industries* and *business models* (e.g., Amit and Zott, 2001; Casadesus-Masanell and Ricart, 2010; Magretta, 2002; Teece, 2010; Zott and Amit, 2007). While a business' industry identifies *what* product market is served, its business model identifies *how* factor and product markets are connected (Zott, Amit, and Massa, 2011). Consequently, lines of business can be distinguished and classified not only based on the industries they serve but also based on the business models they employ. The focus of such substantial academic attention on firm diversification into industries may be driven by the notion that the concept of industry has been established in the literature since the foundation of the strategy field, whereas the concept of business model has become an emerging focus of research only over the last few years, motivated by the increasing possibilities of adopting new ways of doing business in established industries (Zott *et al.*, 2011). Moreover, business-level data are typically classified by industries, rather than by business models, making empirical investigations of firms' business model choices more challenging.

However, because lines of business serve industries by operating business models, we argue that using the recently emerged concept of business model may provide a new step in examining the transferability of strategic resources among lines of business. Specifically, building on the few studies that examined portfolio relatedness beyond the industry level (e.g., Markides and Williamson, 1994; Prahalad and Bettis, 1986), we introduce the business model as a new concept to capture resource relatedness in business portfolios. Drawing on the resource-based view, we argue that the extent to which a firm's business model diversification is related may increase its performance.

Relying on the resource-based view, the strategy literature has suggested that classifications of related businesses should be based on the similarity of their underlying logic (Rumelt, 1974; Prahalad and Bettis, 1986). We argue that, by definition, business models reflect the logic underlying businesses better than industries, implying that corporate headquarters can leverage strategic resources across similar business models more effectively than across similar industries. Moreover, in reviewing the literature on business models, Zott *et al.* (2011) have stated that business models provide a more holistic perspective on how businesses 'do business' (i.e. how they connect with factor and product markets), whereas industries provide a more particularistic and functional perspective on what businesses do (i.e. what products they offer to serve addressable market segments). Accordingly, examining lines of business from a business model perspective, rather than an industry perspective, may capture to a larger extent the potential to effectively exchange strategic resources among lines of business. As a consequence, we expect that the concept of business model relatedness may be better able to explain superior firm performance than the concept of industry relatedness.

This study develops and tests these ideas using a unique panel dataset that allows us to identify the business models employed by 84 multibusiness firms within and across the industries that comprise the retail- and wholesale-trade sectors of the economy (SIC 50–59) over the period from 1997 to 2010. In summary, the focus of this study is to improve the understanding of when and how operating a portfolio of business models may increase firm performance, and to contribute to a more complete conceptual and empirical understanding of portfolio relatedness.

THEORY AND HYPOTHESES

Business Model Relatedness

By integrating the concept of business model with the concept of relatedness, we propose the construct of business model relatedness. Similar to the logic of the SIC system, which classifies product markets as being related or unrelated depending on whether or not they belong to the same industry group, we propose to classify business models as being related or unrelated depending on whether or not they belong to the same business model type.

Business Model Relatedness and Firm Performance

To shed some light on the strategic resources that firms may develop by operating a business model, we follow Teece (2007: 1330) who suggests that "designing, implementing, and validating business models" is difficult to codify and routinize, involving a significant amount of tacit knowledge that businesses may develop over time. Because the knowledge of business model design, implementation, and validation involves a considerable tacit component, it is not readily available in factor markets, which implies that lines of business develop this knowledge internally in idiosyncratic ways. As a result, the resource-based approach suggests that this specialized knowledge can constitute a highly valuable bundle of resources for a line of business, which may ultimately determine sustained business success.

Having identified strategic resources that a line of business may develop in operating its business model, we next establish when multibusiness firms may be able to leverage these unique resources among their lines of business. We argue that these strategic resource bundles are similar among business models that belong to the same business model type, but dissimilar among business models that belong to different business model types. The resource-based view of diversification suggests that firms may only create value by sharing similar resources across lines of business, not dissimilar resources. Consequently, firms may only be able to achieve performance advantages by sharing strategic resources across business models that belong to the same business model type.

However, firms that diversify into unrelated business models (i.e. business model of different business model types) may experience major difficulties in leveraging their strategic resource base, need more time to understand the complexity of new business models, and experience higher coordination and control costs in operating business portfolios. This is because the underlying configuration of key resources and processes that support one particular business model are fundamentally different from the resource configuration required to operate another, unrelated business model. Thus, diversification into unrelated business models can lead to inconsistencies in the information and expertise required to operate the models. Such inconsistencies, in turn, may increase the risk of inappropriate inference and mismanagement from corporate headquarters (Markides and Charitou, 2004).

In summary, these arguments suggest that business model relatedness will increase firm performance. This reasoning leads to our first hypothesis:

Hypothesis 1. Business model relatedness will be positively associated with firm performance.

The Relative Importance of Business Model and Industry Relatedness

Since previous diversification research has traditionally used industry relatedness to conceptualize portfolio relatedness, the question now arises of whether business model or industry relatedness has greater influence on firms' potential to create and capture value. We expect the similarity of business models to be more influential because business model relatedness may capture the extent of strategic resources that firms can effectively share among lines of business better than industry relatedness. We will justify this argument below.

First, pioneering strategy research on corporate diversification has argued that classifications of related businesses should be based on the similarity of the "underlying logic" between businesses (Rumelt, 1974: 54). Similarly, Prahalad and Bettis (1986) have argued that businesses should be considered as related to one another if they can be characterized by a single dominant logic. They suggest that the extent of diversity in business portfolios may not arise from the variety of products, technologies, markets, or the number of distinct businesses, but rather from the variety of dominant logics that underlie the businesses in corporate portfolios. Studies building on this argument propose that corporate headquarters can better understand the unique resource requirements of businesses if their underlying logic is similar, leading to a more effective identification and exchange of strategic resources among a firm's business portfolio.

Since the business model, by definition, describes the logic of a business, while the industry could be served using multiple business models, therefore involving different logics, we expect that the similarity of business models should lead to a more effective deployment and redeployment of strategic resources among businesses than the similarity of industries. Consequently, business model relatedness will have a stronger positive relationship with firm performance than industry relatedness.

Second, business models and industries may capture strategic resources in different ways and to different extents. Specifically, strategic resources with potential application in multiple related industries mainly encompass specialized product and customer knowledge. Typically, such organizational expertise is shared across specific functional areas, such as R&D (Robins and Wiersema, 1995), manufacturing (John and Harrison, 1999), or marketing (Capron and Hulland, 1999). Conversely, as the business model more generally encompasses the full activity system and identifies how a business 'does business', strategic resources may be developed in all functional areas (e.g., procurement, logistics, human resource, finance, and marketing) and their interrelations to the external environment (e.g., suppliers, partners, and customers). In conclusion, business models provide a more holistic perspective on entire activity systems that bridge factor and product markets, whereas industries provide a more particularistic perspective on specific functional areas of a business (Zott *et al.*, 2011).

In summary, we expect that business model relatedness enables firms to share strategic resources both more effectively and to a larger extent among business lines than industry relatedness, leading to our second hypothesis:

Hypothesis 2. Business model relatedness will be more influential in determining superior firm performance than industry relatedness.

METHOD

Sample and Measures

To test these hypotheses, we obtained panel data on 84 leading firms from the retail- and wholesale-trade sectors from the Planet Retail database. We used return on sales (ROS) as dependent variable. To operationalize business model relatedness, we reviewed the business model literature and conducted interviews with six senior managers of leading retail firms. As a result, we considered four business model types that appeared to be prevalent in our empirical setting: non-store selling, discount, traditional small-store, and traditional large-store business models. For example, the non-store selling business model type includes retail models such as e-commerce, mail order, and delivered wholesale and the discount business model type includes retail models such as discount stores, discount superstores, and fixed price-point stores. We calculated unrelated business model diversification by applying the entropy index (Palepu, 1985) on a firm's sales distribution across these four business model types. We then calculated related business model diversification as the difference between a firm's total and unrelated business model diversification. Similarly, we computed unrelated industry diversification by capturing a firm's diversification across two-digit SIC groups and related industry diversification by calculating the difference between total and unrelated industry diversification. Finally, to examine the extent to which a firm's business model and industry diversification is related, we calculated the ratio of related-to-total diversification (Farjoun, 1998).

Model

To address potential problems of endogeneity, we chose the difference generalized method-of-moments (GMM) estimator derived by Arellano and Bond (1991). The equation explaining the effect of business model and industry relatedness on firm profitability is expressed as follows:

$$Y_{it} = \alpha Y_{i,t-1} + \beta X_{it} + \gamma Z_{it} + \nu_i + \varepsilon_{it} \qquad (1)$$

RESULTS

Table 1 presents the results of our analysis.

Table 1 about here

DISCUSSION

Although several studies on business models provide anecdotal evidence suggesting that business model diversification is pursued by an increasing number of firms, the understanding of which business models could be combined to achieve superior performance is limited. Moreover, despite the recognition that lines of business serve industries by employing business models, no study has examined the coherence of business portfolios by integrating the industry and business model perspectives on portfolio relatedness.

Our study seeks to address these research gaps. Specifically, the first purpose of this study was to develop the construct of business model relatedness and examine its relationship with firm performance. We drew on the resource-based view of diversification to hypothesize that business model relatedness will be positively associated with firm performance. The second purpose of this study was to explore the relative importance of business model and industry relatedness in explaining superior firm performance. We integrated and compared the business model and industry perspectives on portfolio relatedness and hypothesized that business model relatedness will be more influential in determining superior firm performance than industry relatedness. Our empirical results provide support for both hypotheses. Collectively, our findings can be interpreted as evidence showing that business model relatedness plays a critical role in determining a firm's potential for synergy creation among its lines of business.

REFERENCES AVAILABLE FROM THE AUTHORS

Table 1. Results of dynamic panel-data regression analysis for return on sales (ROS)

Variables	Model 1	Model 2	Model 3	Model 4a	Model 4b (std. coeff.)
Lag ROS_{t-1}	0.26***	0.19**	0.31***	0.27***	0.28***
	(0.06)	(0.05)	(0.05)	(0.05)	(0.05)
Business model relatedness		4.41***		2.80***	1.14***
		(0.70)		(0.64)	(0.21)
Industry relatedness			2.57*	0.56	0.30
			(1.25)	(1.01)	(0.31)
Firm size	-1.03**	-0.80*	-1.17**	-0.77*	-1.11**
	(0.37)	(0.33)	(0.35)	(0.31)	(0.35)
Firm efficiency	0.90†	0.56	0.83†	0.80†	1.22**
	(0.49)	(0.44)	(0.47)	(0.43)	(0.46)
Firm growth	-0.00	-0.17	0.00	-0.12	-0.06
	(0.36)	(0.33)	(0.35)	(0.33)	(0.33)
International diversification	0.30	0.11	0.45	0.10	0.83
	(0.74)	(0.68)	(0.72)	(0.66)	(0.68)
Industry size in home region	1.79†	1.01	2.23*	1.52†	1.77†
	(1.03)	(0.93)	(0.96)	(0.88)	(0.93)
Year dummies	YES	YES	YES	YES	YES
Constant	4.34	6.15	3.11	-0.46	3.46
	(8.55)	(8.16)	(8.09)	(7.88)	(7.84)
Wald Chi^2	50.24***	100.63***	76.87***	99.90***	128.04***
Number of instruments	105	183	182	260	215
Observations	559	554	554	554	554
Number of firms	76	76	76	76	76

$^{\dagger}p<0.1$, *$p<0.05$, **$p<0.01$, ***$p<0.001$. Standard errors are in parentheses.