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RESEARCH ARTICLE

The applicability of Porter's generic strategies in pure online firms: A case study approach*

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Abstract

The aim of this paper is to investigate the usability and applicability of Porter's generic strategies in the current e-business environment. In this paper, a review of Porter's generic strategies was conducted to recognise the limitations and weaknesses of the model, which prevent its effective application in the e-business environment. To do so, a case study approach on three pure online firms, e.g., Amazon, e-bay and Google was employed. The findings acknowledged the application of Porter's generic strategies to pure online firms in order to achieve competitive advantage and proved the positive impact of generic strategies on firms' performance. The paper suggests that although cost leadership strategy is able to generate greater performance, pursuing a differentiation strategy can be more worthwhile and sustainable for pure online firms compared to cost leadership strategy. This research contributes to existing research by suggesting Porter's generic strategies as a valid and viable model for pure online firms which operate in the current e-business environment.

1 | INTRODUCTION

The extent to which e-businesses have been effective in cutting costs, speeding up the pace of innovation (Zhu, Kraemer, & Xu, 2006), increasing productivity (Scott & Walter, 2003), flexibility, and their responsiveness to emerging markets and customers' needs (Gunasekaran & Ngai, 2005) is undeniable (see also Bharadwaj, El Sawy, Pavlou, & Venkatraman, 2013; Ramanathan, Ramanathan, & Hsiao, 2012). Taking this dynamism into account, and with respect to the increasing level of competition among firms, and the extent to which customers are using the Internet to make purchases (Liu, Xiao, Lim, & Tan, 2017), the majority of firms have been forced to adapt their e-business strategies (Bi, Davison, & Smyrnios, 2017). Previous research has confirmed that e-business has a positive impact on firm performance. For example, Karagozoglu and Lindell (2004) found that e-business leads to higher sales. Similarly, Straub and Klein (2001) identified that e-business reduces operational costs, increases productivity, and improves efficiency.

The extant literature (e.g., Rashidirad, Salimian, Soltani, & Fazeli, 2017) shows that an e-business without a clear competitive strategy is very unlikely to outperform; so in order to succeed in the increasingly competitive environment of e-business, firms would need to carefully develop and implement successful competitive strategies. Porter (1980) asserts that in order for firms to compete successfully and achieve above-average profit, they need to choose one of the three strategic positions of cost leadership, differentiation, and focus. Although there are numerous studies suggesting the positive impact of generic strategies on firm performance (Allen & Helms, 2006; Banker, Mashruwala, & Tripathy, 2014; Dess & Davis, 1984; Kinyuira, 2014; Powers & Hahn, 2004), research into e-business context is still spare. As e-business has dispersed progressively among firms, it is vital to understand how generic strategies affect firms' performance. According to Porter and Miller (1985), information technology (IT) can be applied to assist firms to adopt and implement generic strategies. Similarly, Kim, Nam, and Stimpert (2004) stated that the incorporation of the Internet into firms' overall strategy is necessary if firms are to exploit the advantages of e-business. This is particularly crucial to large multinational e-businesses due to their size, complex value chain,

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and contribution to economy. Notwithstanding the fact that the Internet has given multinational pure e-businesses a chance to compete with other firms, there exists little research to understand how pure online firms have exploited this opportunity.

This research aims to evaluate the extent to which Porter's generic strategies are useful in the context of purely online multinational firms and explores the following two questions: (a) How can pure online e-business firms implement Porter's generic strategies to achieve and sustain competitive advantage? (b) What is the impact of Porter's generic strategies on firms' performance in pure online firms? To do so, three purely online multinational firms are selected as case studies to understand the usability and applicability of Porter's generic strategies within these firms and explore how the generic strategies impact their performance. This article proposes that the cost leadership strategy is able to generate greater performance for pure online firms. However, since the Internet offers firms the possibility of cutting costs and lowering prices, a differentiation strategy can be more worthwhile and sustainable for pure online firms. The research offers significant theoretical and managerial contributions to both scholars and executives working in an e-business context, and it suggests some future research avenues to further expand the existing knowledge base in the field.

2 | THEORETICAL BACKGROUND

2.1 | The choice of Porter's (1980) generic strategy framework as a theoretical lens

As a multifaceted and extensive concept, strategy is the formation of a distinct and valuable position that comprises diverse set of activities (Porter, 1996). A further conceptualization of strategy is constructed upon competitive advantage, as stated by Porter (1985, page 3):

> *Competitive advantage grows fundamentally out of value a firm is able to create for its buyers that exceeds the firm's cost of creating it. Value is what customers are willing to pay, and superior value stems from offering lower prices than competitors for equivalent benefits or providing unique benefits that more than offset a higher price.*

As referred above, Porter's (1980) proposed the generic strategy framework initiated on the understanding that for firms to compete successfully in the long run, they must choose a suitable strategic position. He suggests three generic methods to gain or strengthen competitive advantage, which are cost leadership, differentiation, and focus.

Cost leadership strategy considers the means by which a firm delivers products and services at a lower cost compared to competitors within their industry (Banker et al., 2014). It necessitates that firms create resourceful scales that assist cost reduction, for example, through tight operating costs, years of experience, cost minimizing in marketing and advertising, sales force, and research and development (R&D) (Porter, 2001). Porter (1985) termed the cost leadership strategy as selling standardized products and services with competitive pricing. A cost leadership strategy may generate greater profitability as advocated by Porter (1985), where a strategic position of low cost offers a firm protection against its competitors, as its low costs mean that it can still earn profits even after its competitors have competed away their profits through rivalry. Hence, the key focus of the cost leadership strategy is on a firm's effectiveness, which is an approach to achieving sustainable competitive advantage by reducing and controlling costs (Baack & Boggs, 2008).

Differentiation strategy signifies the development of distinct products or services (Porter, 1985). Its focus is on differentiating the product or service offered by a firm, or in other words, producing products or services that are perceived as unique industrywide (Animesh, Viswanathan, & Agarwal, 2011). Firms may attain differentiation strategies in several ways, including design, dealer networks, features, brand image, technology, and customer service by which they can differentiate themselves from their competitors (Thompson, Strickland, Gamble, & Gamble, 2010). The firms that can differentiate successfully usually set higher prices than their competitors to support the high costs of being different or unique. A differentiation strategy generates profitability as suggested by Porter (1980), as it offers defense against competition; this is because of brand loyalty by customer that may lead toward lower price sensitivity, which consequently raises margins and evades the necessity of adopting for a low cost position.

A focus strategy targets serving a specific segment or target market of the industry well through cost leadership or differentiation (Davidson, 2001; Hlavacka, Ljuba, Viera, & Robert, 2001; Porter, 1980). According to Thompson et al. (2010), a focus strategy is intended at safeguarding a competitive advantage gained through from either cost leadership or differentiation, which can become increasingly attractive if more of the following positions are convened. (a) The niche target market is adequately large to be profitable and proposes potential for growth. (b) It is expensive or challenging for mass segment rivals to put capabilities in place to meet the specific needs of customers including the niche target market as well as meeting their usual customers' expectations. (c) The industry has several different niches and segments, thus through adopting a focus strategy, a firm can create a competitively appealing niche that is appropriate to its resources and capabilities. The use of this strategy can offer a firm a combination of actions that are linked with cost leadership as well as differentiation in a niche target market from which high profits can be generated (Porter, 1985).

2.2 | The effect of generic strategies on online firms' performance

There is a general stream of strategy research that assesses strategy and firm performance (Dess & Davis, 1984; Fahey & Christensen, 1986; Miller & Cardinal, 1994; Kim & Lim, 1988). Numerous studies have focused on financial performance that are reflected by ratios, such as return on assets (ROAs) and return on equity (ROE), total profit, and operating margin (e.g., Ross, Westerfield, & Bradford, 2003; Yamin, Gunasekaran, & Mavondo, 1999). Several prior studies (e.g., Banker et al., 2014; Kinyuira, 2014) prove the positive link between generic strategies and firm's financial performance. Notwithstanding the significance of Porter's generic strategies framework in the traditional business environment, there is a lack of understanding on its usability and applicability to the e-business environment. To further investigate this question, this article suggests a literature review to briefly explain the key characteristics of pure online firms and how they vary from traditionally brick-and-mortar firms (Dess & Davis, 1984; Miller, 1988). The result of the literature review will then postulate an approach to further evaluate the relevance of Porter's generic strategies framework to the current e-business environment.

The e-business environment is characterized via its dynamics, uncertainty, and complexity together with intense global rivalry which is largely due to the availability of the Internet (Wu & Brynjolfsson, 2015). According to Peng, Quan, and Zhang (2013), the Internet offers firms with unrestrained geographical coverage and borderless links, suggesting that firms should focus on high levels of invention and innovation (Teece, 2012; Zhu et al., 2006). It also enables firms to improve their flexibility, responsiveness, and reforming their practices and relations at both internal and external levels (Bak & Stair, 2011). The e-business setting further indicates the necessity for implementing latest technologies as well as employing different quality or productivity edges, thus reengineering practices to achieve cost-effectiveness and flexibility on the growing customers' demands (Dyer & Ericksen, 2010). In such dynamism, where e-business models can be imitated and not be viewed as enduring for long-run sustainability (Porter, 2001), there is a necessity for sustainable competitiveness through appropriate strategic positioning which would provide managers with value-added gain (Banker et al., 2014).

There are various e-business models that have emerged over the years, that is, pure online firms and click-and-mortar firms. Pure online firms aim to only function in the online marketplace and use it as an alternative for serving conventional markets (Koo, Koh, & Nam, 2004). Therefore, pure online firms do not have a physical existence for the business relation with its customers, whereby the absence of physical stores lowers the costs of these firms (Kim et al., 2004). In contrast, click and mortar firms participate in the e-business environment in a balancing way and develop their actions in conventional markets letting customers to purchase from physical and/or online stores (Koo et al., 2004). The two types of e-businesses have different approaches to develop and implement their competitive strategies, as they have divergent resources and motivations and they compete on different strategic forces (Porter, 2001). The pure online firms incline to exploit the use of the Internet and online technologies as their only business channel, whereas click-and-mortar firms control their current resources to increase profit from e-business as well as avoiding channel conflicts (Ghemawat & Baird, 1998).

There are several studies that considered the importance of generic strategies in an e-business context, while few scholars focused on pure online firms to investigate the relationship between generic strategies and performance. For instance, Kim et al. (2004) conceptually propose that there is a positive association between generic strategies and performance in pure online firms; however, this relationship is not as strong as in click-and-brick firms, indicating that pure online firms are disadvantaged in terms of intense rivalry, pressure to lower prices, difficulty of establishing brand name recognition, and without having an opportunity to operate with offline assets as click-and-brick players do. They also propose that in pure online players, the generic strategy of differentiation is associated with higher performance compared to cost leadership. Nevertheless, the review of the literature relevant to the usability and applicability of Porter's (1980) framework shows a lack of sufficient exploratory research in pure online firms, which, in turn, necessitates an evaluation of Porter's framework in the current e-business environment and its link to firm performance. This research aims to narrow this research gap by carefully exploring the competitive strategy of three pure online firms and assessing how their strategies contribute to financial performance.

3 | METHODOLOGY

3.1 | Research method and data sample

Suitable to the exploratory type of research, this article has adopted a qualitative methodology (Eisenhardt, 1989) and selected a multiple case study method as the research design (Yin, 2003). A case study approach allows the integration of diverse sources of evidence to build a deep understanding of the cases (Stake, 2008). The qualitative method of study supports us to obtain a comprehensive understanding of how Porter's generic strategies can be implemented in pure online firms. The conjecture is that the Porter's generic strategies are viable in the e-business environment, which enables pure online firms to attain and sustain competitive advantage and improve their performance. To find out how the generic strategies have been implemented in pure online firms, a careful evaluation of each generic strategy is conducted through case study analysis.

As stated by Yin (2009), there is no best sum of cases, while a number among 3 and 10 appears to be the most ideal one. Subsequently, the study relies on a qualitative analysis, it principally focuses on pure online firms. For the purpose of this research, three key performing firms are selected based on the following criteria: (a) the e-business firm is a purely large online firm; (b) the e-business firm has to have been established and operated in the market for over 10 years; and (c) the e-business firm has to be renowned as a significant player in the market. To minimize the bias in the qualitative investigation, data with supplementary secondary sources of each case were used. The secondary research was conducted based on the information from the firms' financial and annual reports, reliable business databases, and articles and figures from public accounts.

3.2 | Data analysis

To operationalize competitive strategies, the definitions specified by Porter (1980) and the tools applied in former studies (e.g., Parnell, 2011; Pelham & Wilson, 1996; Spanos & Lioukas, 2001) were applied.

TABLE 1 Key characteristics of the case studies in 2017

	Geographical base/parent	Sales (million USD)	Number of years in e-business	Number of worldwide employees	Global net revenue (billion USD)	References
Amazon	Washington	135,987	24	566,000	136	Statista (2018a); Amazon.com (2018)
eBay	California	8,979	23	11,600	9.6	Statista (2018b); Ebayinc.com (2018)
Google	California	90,272	20	72,053	109.7	Statista (2018c); Google.com (2018)

In so doing, a cost leadership strategy was measured by using three main items—operation cost advantage, production, and price leadership. A differentiation strategy was measured by four items—breadth of products and services, quality of customer service, design, and quality of products and services. To assess a focus strategy, four items, that is, the price competitiveness in the target market, the innovative process for the target market, the geographic segmentation of the market, and the level of effort for the target market (Kotha & Vadlamani, 1995) were employed. The secondary data were the main source of collecting data to determine the firms' strategy types. The data sources included were the firms' websites, their annual reports for the years 2012–2016, and other reliable online and offline sources, for example, relevant business reports and journal articles. The authors then indicated a high/medium/low scale based on secondary research and observations (see Table 2).

Similar to competitive strategies, firms' performance was operationalized through four key ratios, that is, ROA, ROE, total profit, and operating margin for the last five operating years from 2012 to 2016 (Ramanujam & Venkatraman, 1986). The use of robust and well-tested instruments to assess each research construct largely assured the construct validity of the research.

4 | RESEARCH FINDINGS

To analyze the firms' competitive strategies and their impact on performance, a brief overview of three selected cases, that is, Amazon.com Inc., eBay Inc., and Google Inc. is presented, which is then followed by a careful investigation of the firms' strategies and financial performance.

Founded in 1994, with over 24 years of operation, Amazon is one of the world's leading firms in online retail industry (Amazon.com, 2018). It also offers computing services, consumer electronics, and digital content, as well as other local services, such as daily deals and groceries (Statista, 2018a). Through its websites, Amazon.com Inc. (2018) offers products and services that are unique and low cost, so they provide value to customers while sustaining a prominent image surrounded by innovation.

eBay Inc. was established in 1995; it operates from its StubHub, Marketplace, and classifieds platforms where it links buyers and sellers across the world (Ebayinc.com, 2018). eBay's core business is its auction platform and shopping website through which both people and businesses can buy and sell a large variety, that is, one billion (Ebayinc.com, 2018), of products and services worldwide (Statista, 2018b). Indeed, its platforms allow sellers from everywhere to offer their products, so the global buyers, that is, 170 million, can search and purchase them.

Google Inc. started in 1998 as a global technology firm that serves customers worldwide through designing and providing various technology-based products and services, such as hardware products, desktop systems, web-based search and display advertising tools, cloud computing, consumer content, and enterprise solutions (Google.com, 2018). Google is the leading firm with over 60% of the market share among search engine providers (Statista, 2018c). An overview on the key facts of these firms is presented in Table 1.

4.1 | An evaluation of the firms' competitive strategy

4.1.1 | Amazon

As a top 10 global retail brand (Amazon.com, 2018), Amazon has successfully implemented a cost leadership strategy to achieve the competitive advantage. As mentioned earlier, the main objective of this generic strategy is the minimization of operational costs (Porter, 2001). To achieve this, Amazon has substantial warehousing facilities and handling capabilities that give its physical economies of scale and in turn yield cost advantages for the firm (Bogue, 2016). Through reflection on the nature of e-business, the automation process gives benefits to the firm as it is being utilized in the processes of planning, purchasing, and other operational processes; consequently, these benefits allow Amazon to cut the costs of its online retailing and other services (Amazon.com, 2018). Besides, Amazon utilizes advanced computing and networking technologies for the maximum operational efficiency, which result in decreased costs. According to Siebrecht (2016), Amazon has more than 90 distribution centers across the United States that facilitate efficient access to their customers by reducing the interval between warehouse and customers; this undoubtedly cuts shipping costs and it minimizes delivery times. This massive distribution network enables Amazon to offer low price next-day delivery service.

A strategic aim of Amazon, which is aligned to their cost leadership strategy, is building competitive advantage with constant enhancement of the infrastructure of information technology (Amazon.com, 2018). To achieve this aim, the firm heavily spends on R&D in order to advance its performance of IT resources. As a result, Amazon has been able to lower customer search costs, stimulate trust, and offer products and services through a user-friendly online experience that is tailored to the end customers' needs, thus encouraging them to repeat their transactions. The strategy of cost leadership enables Amazon to offer competitive prices compared to its

TABLE 2 Strategic positioning and financial performance of the case studies

		AmazonAmazon.com (2018)	eBayEbayinc.com (2018)	GoogleGoogle.com (2018)
Competitive strategies				
Cost leadership	Price leadership	High	Medium	Medium
	Production and service cost advantage	High	Medium	Medium
	Operation cost advantage	High	Medium	Medium
Differentiation	Spending on design of products/services	Medium	High	High
	Quality of products/service	Medium	High	High
	Quality of customer service	Medium	High	High
	Breath of products and services	Medium	High	High
Cost leadership focus/differentiation focus	Cost reduction effort for the target market	Medium	Low	Medium
	Price competitiveness in the target market	Medium	Low	Medium
	Innovative processes for the target market	Medium	Low	High
	Unique technology for product/service differentiation	Medium	Low	High
Performance (average value 2012–2016)				
Return on assets (ROA)		85.80%	11.20%	12.24%
Return on equity (ROE)		3.94%	34.89%	15.39%
Total profit (million USD)		592.2	2,900.4	14,686.4
Operating margin		1.5%	25.98%	26.96%

competitors. According to Forbes (2017), Amazon reviews over 40 million products every day to provide their customers with the lowest prices and the best value across their huge range of products. These low prices are significant in attracting customers (Kim & Kim, 2000); thus, through pursing the generic strategy of cost leadership, Amazon has gained competitive advantage to fulfill its mission and vision that can be characterized as global reach, customer prioritization, and wide selection of products (Amazon.com, 2018).

4.1.2 | eBay

eBay has implemented differentiation as its generic strategy to achieve competitive advantage. The firm attempts to differentiate itself from competitors by creating a user-friendly and reliable website with a combination of customized products and services, and tailored online experience to bring convenience for a wide customer base all over the world (Ebayinc.com, 2018). Mobile commerce has brought a significant advantage to eBay, which allows customers to place orders via eBay mobile application. eBay's simple and user-friendly website allows it to stay on top of its competition.

eBay has been known for its innovation as it has recently developed a technology known as “Connected Glass,” which assists with the development of shopping windows or digital shopfronts where the screens feature the products, so that a shopper or passer on the street could order from and pay through their PayPal mobile express checkout (Ebayinc.com, 2018). As a result, eBay has gained competitive advantage as it has found additional ways to distinguish itself by offering differentiated products and services. As suggested by Kim and Lim (1988), finding additional ways of providing value through differentiated features is one of the key necessities of firms operating in the e-business environment. In so doing, eBay has differentiated the firm by incorporating the PayPal payment system, which is prominent for its security, discounted rates, and network utility where eBay offers low-priced transaction fee rates. Furthermore, the facility of online verification against fraud and counterfeit products makes eBay one of the highly secured online retailers for both buyers and sellers to remain loyal (Hui, Saeedi, Shen, & Sundaresan, 2016). Therefore, in addition to the usual differentiating aspects, such as product features, customer service, and brand image, eBay has also differentiated its distribution channel by focusing on convenience, security of transactions, and speed of delivery (Statista, 2018b). As Amit and Zott (2001) pointed out, trust and security are significant in customers' lock in, which would increase their loyalty. eBay has designed its website to differentiate its offerings through an enhanced quality of communication and service level, collective feedback on products, and the level of customization that it offers to its individual customers. Also, the playfulness of eBay’s website has promoted customers' excitement and concentration, as the website's design features offer customized search functions, well-structured hyperlinks, and a high-speed access; it also provides facilities to fix server errors and monitor service to its customers (see Ebayinc.com, 2018).

4.1.3 | Google

Through offering its unique products and services to different segments of customers, Google has attempted to pursue a differentiation strategy to gain competitive advantage. Indeed, Google's huge technology infrastructure, a wide variety of innovative products, and its high market share enabled the firm to achieve a competitive advantage (Google.com, 2018). Likewise, as the generic strategy of differentiation includes developing capabilities that make the firm competitive (Acquaah & Agyapong, 2017), Google has been able to set itself apart from its competitors through the uniqueness of its product and service offerings (Argenton & Prüfer, 2012). The increasing variety of its products and services, including Google Search, Google Fiber, and the Google Glass, and, more recently, its innovative projects such as Google self-driving car (see Teoh & Kidd, 2017) and Mobile-First Index, are demonstrations of its product/service differentiation strategy (Fernandez, 2018). Through adopting this strategy, Google has been able to sustain its competitive advantage founded on its uniqueness where it is of critical significance for the firm to remain innovative. A corresponding strategic purpose of Google is to develop new products and services and continue to improve the existing ones (Google.com, 2018). By this way, Google is able to sustain its competitive advantage and keep itself ahead of competition from other online technology firms. As a result of pursuing this strategy, Google has the ability to charge higher prices by matching customers' needs with specific products and services (see Porter, 1985).

4.2 | The performance evaluation of the firms

According to the literature (e.g., Allen & Helms, 2006; Dess & Davis, 1984; Kinyuira, 2014; Powers & Hahn, 2004), the generic strategies positively affect the financial performance of the firms. The average ROA is one of the financial performance indicators to investigate the extent to what the capital investment upon implementing the firm's competitive strategies is returned (Banker et al., 2014). This evaluation enables researchers to assess the strategic success of a firm to see how efficiently a firm has managed its assets and resources to generate earnings.

The performance assessment of Amazon shows that the firm is successful at implementing the cost leadership strategy due to a high ROA (see Table 2). Amazon's increasing operating efficiency has resulted in rising ROA, which proves the success of the firm's cost leadership strategy. In the case of eBay and Google, high and rising ROA indicate the success of the firms in pursuing their adopted differentiation strategy, which consequently resulted in increasing profit margin. The firms are able to charge high prices for their products and services, but at the same time control costs, and discard/alter the less/non-profitable operations. Apart from ROA, ROE indicates the degree of a firm's strategic prospect in terms of value generation for shareholders (Banker et al., 2014). The results show that the strategy of cost leadership of Amazon has positively affected the firm's financial performance where the firm has lower profit margin (compared to other two firms) and high asset turnover. However, in the case of eBay and Google, their differentiation strategy has positively affected the financial performance of the firms as they have higher profit margins and lower asset turnover (see Table 2). In sum, the results indicate that competitive strategies are positively associated with financial performance in the studying pure online firms.

5 | DISCUSSION AND CONTRIBUTIONS

Our investigation indicates that cost leadership strategy can be a valid strategic focus for pure online firms. This strategy relies on a firm's value chain resulting in low-costs of producing products and/or offering services. This is particularly essential in the intense hyper-competition environment of e-business, where online firms are more likely to attract customers and gain competitive advantage if they effectively compete on prices (Lee & Gosain, 2002). The use of the Internet and IT can offer substantial opportunities to e-businesses for lower operational and transactional costs (Bakos, 1998). As suggested by Booth, Roberts, and Sikes (2011), there are numerous ways an online firm can reduce costs by means of the Internet, that is, (a) concentrating on a broad market to realize economies of scale, (b) building a pool of buyers to realize network economies, (c) reducing the cost of gaining new customers, (d) reducing the cost of customer service, (e) maximizing the likelihood of first-time purchase through ensuring secured transactions, and (f) reducing staff levels and investing in technology that could further assist the firm to reduce costs such advertising and distribution. For instance, firms can increase efficiency in communications internally and externally by automating day-to-day and recurring processes, which in turn reduce the need for administration staff and consequently bring about cost efficiency (Booth et al., 2011).

Once an online firm gains competitive advantage through a cost leadership strategy, it has to be able to sustain its competitive advantage. Porter (2001) contends that firms pursuing a cost leadership strategy usually offer similar products and services to other firms, which would rescind the uniqueness of the firm and increasing price competition. However, one of the most imposing threats of sustaining competitive advantage is imitation by competitors, whereby the easy access of the Internet means that most of the pure online firms' activities that help toward building a competitive advantage are evident to competitors (Porter, 2001). The threat of imitation is always present, and it is particularly prevalent among firms that implement a cost leadership strategy. It is less expensive to copy new processes, ideas, and products than to research, develop, and implement from scratch.

There are other pitfalls and risks associated with the cost leadership strategy, whereby positioning a firm as a low-cost provider can place problems for the firm. A cost leadership firm can be exposed to threats such as (a) technological changes that can erase past investments and outdate past experience; (b) there may be a lack of/poor consideration to the needs of customers due to heavy emphasis on cost minimization; and (c) unforeseen inflation in costs that could reduce the firm's capacity to balance product differentiation through cost leadership. Moreover, Bakos (1998) postulated that the Internet has enabled customers to scan and compare prices easily; this means there is a very small customer's switching costs, which may lead a pure online firm with cost leadership strategy, for example, Amazon in a vicious phase of price cutting. This is due to the Internet being an accessible system where a pure online cost leader can have difficulty in maintaining its proprietary offerings. Thus, to sustain competitive advantage driven from cost leadership strategy, pure online firms should substantially invest on quality, improve their relationships with partners, customer feedback, promotions, and delivery times that are less evident, so more difficult for competitors to replicate.

Our research shows that a differentiation strategy tends to be pursued by pure online firms based on customized products and/or services, which are regarded as exclusive and highly valued by customers. Firms can attain differentiation benefits when the price premiums exceed the additional costs that are encountered in being unique (Booth et al., 2011). A differentiator online firm should seek methods of distinguishing itself from other competitors alike to defend price premiums at a level higher than the cost encountered by differentiating. The Internet and online technologies enable the differentiator firms to network with customers through mass customization, which improves the way that firms react and respond to the customers' demands. It should be noted that mass customization has become increasingly popular with the advance of flexible manufacturing systems (Mourtzis, 2016). The Internet has considerably improved the process of mass customization as it brings customers close to the firm and facilitated the direct communication between them (Pine, 1993; Goldman, Nagel & Preiss (1995); Anderson, 1997). Thus, mass customization enables online firms to improve their product offerings, sustain their reputation for quality, uphold their brand image, and decrease costs at the same time (Mourtzis, 2016). The power of the Internet technologies has facilitated mass customization and provided firms with ways to offer unique products and exceptional service. However, a differentiator online firm can be at risk when there is increased cost differential between the low cost and the differentiator firm; this is due to the fact that a low-cost online player can easily motivate customers to switch brands, so customers may be willing to sacrifice the additional features that the differentiator firm offers for a huge cost saving. Furthermore, there is a risk of competition whereby other online firms imitate products and services, which in turn would narrow down the perceived differences.

Similar to cost leadership and differentiation strategies, a focus strategy is likely to be pursued by an e-business to seek competitive advantage through differentiation or cost leadership in a well-defined market segment. Pure online firms that pursue a focus strategy are able to target market segments carefully and offer personalized products and services to customers by using the Internet-based technologies (Sumer & Bayraktar, 2012). Firms can gain competitive advantage by implementing a focus strategy through deploying resources across the value chain to gain maximum returns. This would suggest that online firms should direct their marketing activities to particular customers and provide added value to the core products or services (Bakos, 1998). Moreover, a focus strategy enables an online firm to minimize the response time to customers' requests and improve customers' service built on personalized interactions by using online information technologies (Kim et al., 2004).

Our investigation shows that there are certain market segments that are attractive to pure online firms than other firms; the certain market segments displace distinctive features that are more valued than others in relation to their buying power and their usage of the Internet. Indeed, by using the Internet, online firms can take a constant practise of acquiring information of their customers and their online behavior, which is vital for gaining competitive advantage (Prajogo, 2007). A firm that is able to gain superior data about the market can react faster and be more flexible to the fluctuations in the market environment and, therefore, better fulfill the needs of customers and build brand loyalty (Teece, 2012). Nevertheless, a firm pursing focus strategy can be at risk when it has a significant cost difference with its broad targeted rivals, as this could lead customers to switch to rival firms that offer a wide range of products and services.

In sum, achieving competitive advantage is critical to any of the online firms to improve firm performance and obtain long-term success (Evans & Smith, 2004). Slater and Oslon (2001) and Barlett and Ghodhsl (2002) stated that a firm's sustainable competitive advantage can be established through a proper selection and implementation of its competitive strategies. Online firms should take the full advantages of the Internet and other IT and web-based technologies as powerful means to establish their strategic positioning, generate economic value, and therefore, gain competitive advantages (Porter, 2001).

6 | CONCLUSION

This study explored the usability and applicability of Porter's generic strategies in e-business firms. To do so, a sample of three pure online firms was selected to assess their competitive strategies and its impact on their performance and explore the extent to what their competitive strategy has enabled them to achieve competitive advantage. The findings showed that pure online firms such as Amazon, eBay, and Google have flourished by the successful implementation of Porter's generic strategies, which has provided them with competitive advantage. The firms have successful cost structures, profit from economies of scale, and have a solid customer base. The studied firms consider innovation, production efficiency, and customer orientation as the foundations of their competitive advantages, which are shown through their financial performance, for example, ROA, ROE, total profit, and operating margin. The results strongly suggest that without a well-defined competitive strategy, a pure online firm may not be able to compete effectively in the current e-business environment and gain competitive advantage. The findings suggest that for online firms such as eBay and Google, maintaining a distinctive and differentiated strategic position is very challenging as it requires a high level of innovative skills and capabilities (see Porter, 2001). In this respect, Merrilees (2001) highlighted that differentiation strategy involves a complicated integration of tactics and capabilities to achieve and sustain competitive advantage in the long run, and although it is difficult to fully implement this strategy, once it has been done, it offers numerous possibilities of continued high performance.

This article proposes that a cost leadership strategy is able to generate greater performance for pure online firms. However, since the Internet offers online firms the possibility of cutting costs down as well as prices, a differentiation strategy can be more worthwhile and sustainable for pure online firms. This finding is consistent with previous research (e.g., Banker et al., 2014), which suggests that pursuing a differentiation strategy leads to more sustainable financial performance compared to a cost leadership strategy. Baack and Boggs (2008) suggested that following a differentiation strategy, rather than cost leadership, is particularly significant to the multinational firms that operate in different environments (such as studying the purely online firms) to gain competitive advantage. One reason could be that implementing a cost leadership strategy involves a fairly direct set of tasks, such as intensely exhibiting the low prices and managing the firm's operations on a basic basis. However, by adopting a strategic position of differentiation, firms can develop and maintain their distinctiveness by offering a greater customer value and at the same time charge higher prices. Instead of underlining price competition, online firms could take the advantages of the Internet to improve speed, convenience, and communication services as well as customization. The brand names recognition, trust, and credibility, which are at the core of the differentiation strategy, are found to be more important in the current e-business environment, especially to pure online firms, which have no physical contact with their customers. Pure online firms can differentiate their products and services through various ways, for example, marketing and advertisement, website design, customer reviews, loyalty programs, newsletters, convenience, customized recommendations, and gift services (Clay, Krishnan, Wolff, & Fernandes, 2002). Taking all this into account, this research acknowledges that Porter's generic strategies are highly applicable to pure online firms and that they indeed explain financial performance across e-businesses.

Nevertheless, as the study has been based on a limited set of case studies where pieces of information were collected mainly from online sources, the reliability of the sources is questionable. In order to achieve a very sound analysis, a large sample of pure online firms is required to be studied by collecting primary data from the firms to carefully understand the extent to what the generic strategies have been practiced. To do so, it is suggested that future studies should conduct more comprehensive research in the firms through involving firms' management and conducting some interviews to collect primary data that will generate more detailed analysis on the firms' strategies and their operational excellence. Furthermore, future research may incorporate some nonfinancial performance measures, for example, customer satisfaction, brand loyalty in online firms to add further insight into the current research findings.

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