

# The Moderating Effect of Market Turbulence on Innovation, Strategic Marketing, and Its Influence on Performance of the Malaysian Halal F&B Companies

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**Abstract:** *Malaysia's halal F&B companies are hampered by issues surrounding innovation and marketing such as low level of innovation, competitiveness and commercialisation. In understanding these problems, this study focused on the relationship between innovation and strategic marketing with regards to companies' performance of the Malaysia halal food and beverage (F&B) companies which will be moderated by market turbulence. In this research, the sampling consists of 386 Malaysian companies from the halal F&B industry. In order to determine the interrelation of the variables, a Pearson's bivariate correlation analysis was conducted followed by multiple regression analysis, which was used to test the level of influence of the independent variables and companies' performance. From the findings, it can be concluded that Malaysian companies especially the SMEs emphasize on technological type innovation to ensure their performance in the market. The study also highlights on the emphasis given by Malaysia halal F&B companies on operational marketing and strategic marketing drivers in ensuring the growth of their business performance. Another important finding of the study is that even though Malaysia's halal F&B companies emphasise on technological innovation, under the presence of market turbulence, the technological innovation has to be supported through non-technological innovations. Lastly, in the context of innovation, Malaysian halal F&B companies are looking at strategic marketing as important factors for business performance sustainability. Besides consolidating the existing theory on the importance of innovation and strategic marketing for explaining a variation in companies' performance and the moderating role of market turbulence in the relationship, the findings of this study also reinforce the view of the industry on the critical role of innovation and strategic marketing in companies' performance towards developing the halal F&B industry in Malaysia.*

**Keywords:** Innovation, Strategic Marketing, Market Turbulence, Halal and Malaysia Halal F&B industry.

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## Introduction

Over the last two decades, the halal sector demonstrated a vibrant and significant growth in the international front. Global halal industry continues to progress, and the industry has been identified as a new market segment by the International Trade Centre (2015). This is echoed by Elasrag (2016), defining halal as a new growth sector in the global economy and is establishing a firm footing in developed economies. The global halal market is estimated at USD 2.2 trillion in 2018 and expected to grow to USD3.2 trillion by 2024 (Dinar Standard/Thomson Reuters, 2019). Based on the

similar report, the halal F&B market accounted for USD 1.3 trillion in 2018 and is expected to grow to USD1.97 trillion by the year 2024.

In the past 40 years, the Malaysian halal industry has grown significantly which paved the way for it to become one of the global power house in the halal economy. The positive development of the global halal economy further provides Malaysia an advantage in gaining global market share (Mazlan & Hamzah, 2015). At the centre of these development is the halal F&B sector (Aziz, Abd. Aziz, Aziz, Omar, & Hassan, 2015) where Malaysian halal F&B companies have been active in exporting to over 180 countries worldwide.

Another important progress in the Malaysian economy is the innovation agenda. Malaysia is currently undergoing a transformation stage under the national agenda to become an innovation-driven country in the challenging global market setting which is highly dynamic (Bekhet & Latif, 2017). With the aim of transforming the country to become a developed economy, the government has put priority towards cultivating innovation across the industries. The policies on innovation are aimed at turning the economy from a production-based economy to a knowledge economy.

Taking cue from these two important developments, this study attempts to gauge the collective effect of both areas from strategic marketing lenses. It will contribute in understanding sources of growth patterns of these initiatives in the halal F&B industry context. Changes in the market place is factored in as market turbulence while looking at performance at the firm-level. The empirical research will examine the effect of the two-national agenda towards the development of Malaysian industry and hence, the economy.

## Literature Review

### Innovation and Performance

Innovation is regarded by many as a key instrument that marketing strategists leverage to win customers and markets, (Kanagal, 2015) aimed at gaining better outcome in terms of performance. In pursuing innovation, companies use their resources and capabilities along with the innovation processes to develop novel or different offerings to the market (Kanagal, 2015).

The classification by Organization for Economic Cooperation and Development (OECD) is widely used as an international research reference on innovation (Tajudin & Hassan, 2019). OECD divided innovation activities into four types, namely: (i) product innovation, (ii) process innovation, (iii) organizational innovation, and (iv) market innovation (OECD, 2009; Purba, Maarif, Yuliasih, & Hermawan, 2018). These are further categorised into technological innovation (products or services and process innovation) and non-technological innovation (marketing and organisational innovation) (Department of Industry and Science, 2016).

The term innovation capability can be defined based on the company's potential to generate and create innovative output (Neely & Hill, 1998). These potentials will be dependent upon the resources and capabilities that the firm possesses (Kafetzopoulos & Skalkos, 2019), which will permit it to explore and exploit opportunities available in the market (Saunila, 2015; Teece, 2010).

Managing innovation becomes one of the key strategic tasks facing organizations across all sectors (Tidd & Bessant, 2009). Challenges refer to factors that become obstacles for the management in carrying out innovation initiatives (Dougherty, 1992) of the company. In general, obstacles faced by Malaysian companies in undertaking innovation activities include human resources, costs, risks, financing, information and organisational stringencies (Shiang & Nagaraj, 2011).

Innovations are seen as the driving force in building competitiveness for companies. Without innovation and innovative renewal of operations and resources, the companies' survival is jeopardised in today's volatile business setting (Malinen, 2006). In their innovation study, Manley and McFallan (2006) suggested two macro drivers influencing organisations initiative namely business strategies and business environment. Thus, it is hypothesised that:

- H1. There is a significant relationship between technological innovation and company's performance.
- H2. There is a significant relationship between non-technological innovation and company's performance.
- H3. There is a significant relationship between innovation capabilities and company's performance.
- H4. There is a significant relationship between innovation challenges and company's performance.
- H5. There is a significant relationship between innovation drivers and company's performance.

### Strategic Marketing and Performance

Strategic marketing provides the expertise for environmental monitoring, for deciding what customer groups to serve, for product specifications, and for deciding which competitors to position against (Mongay, 2006). The knowledge and practice of strategic marketing are widely accepted among scholars and practitioners as instrumental in the running of business and commercialising business ideas. However, the outcome of strategic marketing on performance remains vague (Hooley, Greenley, Cadogan, & Fahy, 2005), due to the fact that the results of strategic marketing are subject to many influencing factors, thus making the cause-and-effect linkages very difficult (Bonoma & Clark, 1988).

Marketing strategies explicitly focus on developing company's long-run competitiveness and consumer advantage (Piercy & Morgan, 1993). The marketing strategies are developed based on understanding through the analysis of consumers, competitors and the marketing environment forces which then combined with other strategic input. The emphasis is on creating value for customers in order to capture customers' attraction in return. According to El-Ansary (2006), marketing strategy is the total representation of the integration of segmentation, targeting, differentiation, and positioning strategies which is crafted with the aim of creating, communicating and delivering an offer proposition to a target market.

Operational marketing or marketing management refers to the execution processes (Y. Wind & Robertson, 1983) of marketing strategy by creating the value through product and price, communicating the value via promotion, and delivering those value through the designated channels El-Ansary (2006).

Business drivers refers to the stimulus that urge businesses to accept certain ideas, approaches or strategies to achieve the company's objectives (Hoffman, 2001). Therefore, strategic marketing drivers are the forces that shape the company's marketing strategy. According to Pearce and Robinson (2011), strategic drivers are usually determined by operational factors however it is different from one another. These strategic drivers could be from both external and internal forces which are instrumental in formulating strategy and strategy execution (Finoti, Didonet, Toaldo, & Martins, 2017). Taking cognizance from the above discussion, it is therefore hypothesised that:

- H6. There is a significant relationship between marketing strategy and company's performance.
- H7. There is a significant relationship between operational marketing and company's performance.

- H8. There is a significant relationship between marketing drivers and company's performance.

### Market Turbulence and Performance

Turbulent environment has been described as having high levels of inter-period change that creates uncertainty and volatile conditions. This volatility is identified with sudden discontinuities in demand and growth rates; temporary competitive advantages that are continually created or eroded; and low barriers to either entry or exit that unceasingly change the competitive structure of the industry (Bourgeois & Eisenhardt, 1988).

Previous research have recognised how external environmental factors can potentially moderate the effects of a market orientation's on business performance (Greenley, 1993). Environmental turbulence is described as the rate of changes in a market or industry and market turbulence is defined as the degree of changes in customer preference and demand (Jaworski & Kohli, 1993), which evidently makes a company's existing market knowledge out dated and obsolete (Hung & Chou, 2013). In a dynamic market setting, where the market is with frequent change; quick reaction to the market is critical for the survival of the companies (Grewal & Tansuhaj, 2001), as reflected by the dynamic capability theory.

According to Hurley, Hult, and Knight (2004), market turbulence can be seen as the pushing factor for innovation where a high degree of market turbulence requires companies to be more innovative and engage in more innovative activities. Changes in customer demand require firms to depend on creativity to continuously modify their products and business operations (Cui, Griffith, & Cavusgil, 2005). Luo, Tan, and Shenkar (1998) claimed, in order to achieve superior performance, competitive strategies in such volatile environment are more complex and diversified which require more creativity and greater proactiveness. In a rapid changing market condition, nevertheless, a firm that does not react accordingly and pays less attention to exploring alternative solutions through innovation and marketing in addressing the emerging customer preference, will eventually affect its business performance. Therefore, based on the deliberations above, it is hypothesised that:

- H9. Market turbulence as a moderating variable has a significant role in influencing the relationship between innovation & strategic marketing and company's performance

### Methodology and Data

The study aims at understanding the moderating effect of market turbulence in influencing the relationship between innovation and strategic marketing with companies' performance. In order to determine the interrelation of the variables in this study, a Pearson's bivariate correlation analysis was conducted followed by multiple regression analysis, which was used to test the level of influence of the independent variables and companies' performance. There are four variables chosen for this study. Innovation and strategic marketing are the independent variables; market turbulence is the moderating variable and company's performance is the dependent variable. Innovation was operationalised in this study into a five-dimensional construct namely technological innovation, non-technological innovation, innovation capability, innovation challenge and innovation driver. Strategic marketing in this study, is divided into three dimensions namely marketing strategy, operational marketing and strategic marketing drivers. In this study, performance refers to the financial and non-financial performance of the Malaysia halal F&B companies

### Data Collection

The data collection for this study was conducted through the distribution of the questionnaire to 386 halal F&B companies which participated in the Malaysia International Halal Showcase (MIHAS) 2018 at the MITEC, Kuala Lumpur. This is based on the rationale that the pool of potential respondents which are available during the MIHAS 2018 either as trade visitors or trade exhibitors who are directly

involved (Situma & Branch, 2012) in Malaysia’s halal F&B industry. According to MATRADE, during MIHAS 2018, the number of business visitors reached 21,000 while 400 Malaysia halal F&B companies exhibited in this event(N. Haziqah, 2018).

**Sampling Technique**

This study used convenience sampling (non-probability sampling) which refers to the gathering of information from members of the population who are conveniently available to provide it (Sekaran & Bougie, 2016). Even though probability sampling is preferred over non probability sampling for generalisation purposes(O’Leary, 2004), the list of halal companies was unavailable at the time of this study. According to Reynolds et al. (2003) for a theoretical test purposes, the non-probability sampling is considered sufficient and acceptable.

**Data Analysis and Results**

Table 1: Frequency Analysis on the background of the halal F&B companies participated in the study

Variables	Quota	Frequency	%	Variables	Quota	Frequency	%
Years of establishment	≤ 3 years	98	25.4	Number of Employees	<10	77	19.9
	4 -5 years	91	23.6		11-30	160	41.5
	6-10 years	98	25.4		31-50	75	19.4
	11-15 years	48	12.4		>51	74	19.2
	≥16 years	51	13.2		Market type	Domestic	171
Product category	Food	268	69.4	International		41	10.6
	Beverage	89	23.1	Domestic & International		173	44.8
	Food & Beverage	19	4.9	Number of product type /SKUs	≤ 10	147	38.2
	Others	10	2.6		11 – 30	139	36.1
			31 – 50		57	14.8	
			≥51		42	10.9	

Frequency analysis consists of counting the number of cases that fall into the various response categories. These statistics give a feel for the data (Sekaran & Bougie, 2016) before proceeding to the next level of the analysis.

**Correlation Analysis**

From the result shown below, the correlation between the variables has shown a mixed outcome. The strategic marketing drivers and market turbulence have the highest correlation at  $r = .686$  ( $p < 0.1$ ). Other variables that show a moderate correlation with technological innovation are innovation capability, marketing strategy and performance with  $r = .510$ ,  $r = .482$  and  $r = .417$ , respectively.

Table 2 : Results of Correlation analysis

Independent Variables	Mean	SD	IT1	IT2	IC	Ich	ID	SM1	SM2	SM3	MT1	CP1
Innovation type	3.90	.782	1									

- technological Innovation type -Non- technological Innovation Capability (IT1)												
Innovation type -Non- technological Innovation Capability (IT2)	4.02	.758	.679 **	1								
Innovation Capability (IC)	5.1 6	.736	.510 **	.572 **	1							
Innovation Challenges (ICh)	3.6 7	.704	.231 **	.297 **	.352 **	1						
Innovation Drivers (ID)	3.80	.671	.374 **	.427 **	.427 **	.283 **	1					
Mktg strategy (SM1)	4.03	.627	.482 **	.574 **	.530 **	.270 **	.528 **	1				
Operational Mktg (SM2)	4.05	.618	.377 **	.426 **	.538 **	.295 **	.563 **	.568 **	1			
Mktg drivers (SM3)	4.00	.586	.282 **	.314 **	.450 **	.310 **	.509 **	.481 **	.562 **	1		
Mkt turbulence (MT1)	3.91	.552	.340 **	.346 **	.417 **	.253 **	.538 **	.483 **	.562 **	.686 **	1	
Performanc e (CP1)	4.01	.633	.417 **	.423 **	.524 **	.288 **	.490 **	.493 **	.555 **	.494 **	.522 **	1

\*\*Correlation is significant at 0.01 (2- tailed)

### Multiple Regression Analysis

A series of multiple regression analysis were conducted to examine the relationship between independent variables, moderating variables and dependent variable. From the result (refer Table 3; model 1), it was found that 44% of the dependent variable companies' performance is explained by the eight dimensions under the independent variables ( $R^2 = 44.1$ ).

The item under innovation dimension, technological innovation, was positive and significant in contributing to performance with  $p = .036$  however non-technological innovation is not significant with  $p = .965$ . Therefore, H1 is supported while H2 is not supported.

As for the other dimensions under innovation namely innovation capability and innovation drivers, reveal positive and significant results with  $p = .001$  and  $p = .013$  respectively. Therefore, H3 and H5 are supported. However, from the result, innovation challenges with  $p = .423$  is not significant in explaining the dependent variable variance. This result shows that H4 is not supported.

The findings also reveal that two out of the three items of strategic marketing dimensions were found to be positive and significant to performance, with operational marketing  $p = .000$  and strategic marketing drivers  $p = .002$ , while marketing strategy in this study was found to be not

significant to company's performance  $p = .161$ . Therefore, H7 and H8 are supported while H6 are not supported throughout this study.

In order to test the moderating effects of market turbulence on the relationship of strategic marketing and performance, model 2 and 3 of a hierarchical multiple regression analysis was referred.

Table 3: The moderating effects of Market Turbulence on the relationship between Innovation, Strategic Marketing and Performance

Dependent Variable	Independent Variable	Std Beta & Sig.						
		Model 1		Model 2		Model 3		
		$\beta$	Sig.	$\beta$	Sig.	$\beta$	Sig.	
Companies Performance	Innovation Type – Technological	.114	.036	.101	.059	.085	.808	
	Innovation Type – Non-Technological	-.003	.965	.000	.993	-.641	.093	
	Innovation Capability	.182	.001	.183	.001	.570	.075	
	Innovation Challenges	.034	.423	.036	.392	.221	.403	
	Innovation Drivers	.127	.013	.101	.049	-.158	.624	
	Marketing Strategy	.077	.161	.067	.218	.023	.948	
	Operational marketing	.204	.000	.179	.001	-.533	.129	
	Marketing Drivers	.154	.002	.077	.174	.709	.031	
	<i>Moderating Variable</i>							
		Market Turbulence (MT)			.161	.005	-.158	.645
	<i>Interaction Terms</i>							
		Innovation Type – Technological x Market Turbulence					.013	.980
		Innovation Type – Non-Technological x Market Turbulence					1.001	<b>.081</b>
		Innovation Capability x Market Turbulence					-.693	.227
	Innovation Challenges x Market Turbulence					-.277	.463	
	Innovation Drivers x Market Turbulence					.457	.394	
	Marketing Strategy x Market Turbulence					.1161	.850	
	Operational marketing x Market Turbulence					.280	<b>.040</b>	
	Marketing Drivers x Market Turbulence					-1.258	<b>.047</b>	
	<b>R</b>	.664		.673		.688		
	<b>R<sup>2</sup></b>	.441		.453		.474		
	<b>Adjusted R<sup>2</sup></b>	.429		.440		.450		
	<b>F Change</b>	37.188		8.140		1.836		
	<b>Sig F Change</b>	.000		.005		.069		

\*P-value < 0.1

From the result, it is evident that there is a significant change in the F value in model 2 and model 3. This shows that market turbulence, as a moderator, significantly influence the relationship between the independent variables and dependent variable. Therefore, H9 is supported.

The results of the interaction effects between moderating variable and the independent variables are not significant as shown in Table 3. Results for centred values of market turbulence and independent variables under the innovation dimension (technological innovation) ( $\rho = .98, p < 0.1$ ),

innovation capability ( $\rho = .227, p < 0.1$ ), innovation challenges ( $\rho = .463, p < 0.1$ ) and innovation drivers ( $\rho = .394, p < 0.1$ ) are not significant. Similarly, the result between market turbulence and marketing strategy is not significant ( $\rho = .850, p < 0.1$ ).

However, the interaction effects between market turbulence and two other items under strategic marketing dimension i.e operational marketing ( $\rho = .040, p < 0.1$ ) and marketing drivers ( $\rho = .047, p < 0.1$ ) are significant. Only one item under innovation dimension, namely non-technological innovation ( $\rho = .081, p < 0.1$ ) is significant.

## Discussion

The results from innovation typology (H1 and H2) indicate that Malaysian companies in the halal F&B sectors still perceive technological innovation as main contributor to company's performance as compared to the non-technological innovations. The result contradicted the findings by Mamun (2018) and Ngah & Ibrahim (2009), which emphasised on equal importance of non-technological innovation to support the technological innovation activities. Besides technical capabilities, innovation initiatives should include market knowledge - components that translate into making products as well as knowledge of the linkages between them, complementary assets and the ability to protect innovation. Thus, it is apparent that innovation should be aligned with the marketing in the creation of new products, the implementation of new strategies etc stem from the company's marketing activities (Vila & Kuster, 2007).

Based on the finding in this study, it can be concluded that innovation drivers such as competition, technology and costs are critical in supporting a company's performance which is in line with the studies by Hauser, Tellis, & Griffin (2006) and Kanagal (2015).

As for challenges faced by companies in implementing their innovation initiatives, the results of the study highlighted that there is no significant relationship with the company's performance. This shows that market dynamics act as the pulling factor that could undermine the challenges in implementing innovation initiatives. Challenges within the company such as one associated with risk, financial resources and corporate culture (Ayupp & Tudin, 2013), would not be critical as compared to the market pressure which arise from competitors, technology or demand from the consumers.

Analysis done on the data collected in this study also shows that the respondents agreed that operational marketing is significant in determining a company's performance. This indicates that Malaysian companies in this industry are giving emphasis on operational and tactical marketing capabilities in ensuring its performance growth. However, Keyvani (2011) in his article argues that the operational marketing, must emphasize on strategic perspectives as compared to being merely an operational element in the company. The combination of marketing strategies and implementation of these strategies through operational marketing are essential in determining marketing success.

It is apparent from the findings of this study that the Malaysian halal F&B companies are of the common view that marketing strategies do not have an immediate impact on a company's performance. This indicates that the majority of respondents of the study which represent SMEs place more emphasis on operational marketing aspects of business activities, as compared to factors such as branding, market segmentation, and positioning. Marketing strategies which are normally associated with long range business outcome are not given priority especially amongst the SMEs. This finding is similar with many earlier studies such as by Cravens (2006) and Greenley (1984), which reported that the marketing emphasis in companies have been more orientated towards short-term gains in revenue and profits.

From the results of the hierarchical multiple regression analysis, there were significant influence of market turbulence as the moderating variable on the relationship between innovation, strategic marketing and performance. This finding is consistent with a study by Lau and Zhang (2006) and Hung and Chou (2013) on the moderating role of market turbulence effect on innovation and performance. Market turbulence represents the instability of consumer preferences and expectations.



In a high turbulence market, disruptive innovations are most likely to occur (Zhou, Yim, & Tse, 2005) in coping with the fast-changing consumer preferences (Wind & Mahajan, 1997). In order to sustain their presence and performance, companies in a high market turbulence environment need or are pressured to seek and develop new and better business solutions to their customers.

The results of the study also suggest that the respondents placed operational marketing as an important tool influencing customer perception towards purchasing halal F&B products. Factors under the marketing mix are used as tactical tools in marketing at the operational level. This is regarded as having a higher importance compared to strategic factors such as branding, positioning, segmenting etc which are perceived to bring long-ranged results.

The strategic marketing drivers which include competition, technology changes and governmental support, also has a significant connection with market turbulence. In a competitive environment, these external factors play an important role in influencing customers' perceptions and decisions, hence a key determinant in charting companies' strategic orientation. In achieving their marketing objectives, companies have to be alert and responsive to market dynamics (Jaworski & Kohli, 1993) such as competitive pressure, rapid technological change, deregulation, and increasing emphasis on quality adaptation to market dynamics (Day & Wensley, 1983).

Based on the findings, non-technological innovation is perceived by the halal F&B companies to be significant in addressing consumer market changes. Even though the earlier findings in this study show that non-technological innovation as not significant in terms of its relationship with company's performance however in high market turbulence, Malaysian halal F&B companies are looking beyond products and process innovation i.e. non-technological innovation, in crafting business strategies to undertake changes in the market place. This can be seen through the commercialisation of technological product innovations which often require the development of new marketing methods, hence the need for companies to innovate its marketing initiatives (Li, Varua, Komarek, Shankar, & Bellotti, 2017).

The intensity of innovation activities of the company depends among others on the level of environmental turbulence as discussed by Hult, Snow and Kandemir (2003). The Malaysian halal F&B companies are innovating in term of their marketing activities especially in terms of branding and market profiling. Largely, these efforts are aimed at differentiating their market propositions, having stronger shari'ah compliance appeals and also reinforcing presence and market visibility. These innovations may not be totally new or radical however, it facilitates the value proposition and most importantly it fulfils the customers' needs in relation to strengthening confidence.

## Conclusion

The F&B sector is highly associated with Halal relevance, and continues to be the highest value-generator for Malaysia's halal industry. Many emerging areas of development in food technology and ingredients will continue to make the science of halal highly pertinent, from increasing food security as well as to capturing global opportunities for growth. The changes and trend in the industry necessitates marketers of halal F&B products to adapt and adopt various strategies in pursuing business growth.

Innovation and strategic marketing are important strategic tools for companies to stay relevant in the market and to sustain or improve their business performance. With the increasing changes brought by market turbulence especially the changing demographic and rising affluence of Muslim consumers, halal F&B companies are turning to innovation and strategic marketing to build their competitiveness.

One of the most discussed market dynamics in the global halal industry is the factors related to market turbulence, which include changing demographics, rising affluence and shifting market preference of the Muslim market apart from the growing acceptance of non-Muslim consumers towards halal F&B products. These changes represent both as opportunities and threats to the global

halal players. This study demonstrates the influence of market turbulence in two business functions and performance. The Malaysian halal F&B companies must be constantly alert and adaptive to these changes in order to remain relevant in the industry thus gaining superior commercial performance.

The findings in this study provide renewed strategic perspectives to the Malaysian halal F&B companies, especially when the industry has now begun to perceive halal as instrumental in improving competitiveness especially in positioning their products as a definitive choice for users.

#### *Implication of the study*

By analysing the relationship of other internal and external factors of the companies, the study provides representation in terms of the relatedness of these variables towards performance. By including market turbulence as moderator to the model, the study provides an understanding of how these variables correlate with each other and the intensity of the relationships. This study claims to be among the first to explore the effects of market turbulence on the relationship between innovation and strategic marketing in the Malaysian halal F&B industry.

The study reaffirms the role of innovation and strategic marketing as vital components of business performance. However, this requires the support of strategic marketing as a business function, to facilitate the marketability of the innovation and achieve higher business performance. Managers should appreciate long-term sustainable business performance against short-term high investment in executing innovation and marketing strategy initiatives. This will create further value to customers and finally lead to better achievement in business performance.

#### *Future Study*

There are several limitations of the study which offer several directions for future studies especially in innovation and strategic marketing.

The study adopts the cross-sectional research design as opposed to a longitudinal approach. These will not take into account several aspects such as changes in economic environment, company's long-range planning, tracking of outcome of innovation initiatives, changes in the government policy and impact of the marketing strategies. A longitudinal study will better trail companies' development by tracking its performance over several years and better reflect the dynamic nature of innovation.

Lastly, the study focuses on market turbulence to understand its moderating effect towards innovation and strategic marketing and business performance. However, to better understand the overall effect of innovation and strategic marketing towards companies' performance, it would be interesting to include other factors in the economy such as technological turbulence, economic turbulence and competition intensity.

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