

Investigating the Link between Supply Chain Performance and Brand Performance

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Abstract

Supply Chain Management has in today's world become irreplaceable in business. The performance of a firm's supply chain greatly affects availability of goods and services and can either push up or bring down a firm as a whole. This paper looks at trying to understand whether supply chain and brand performance can be linked and whether the information gained could be used to enhance perceived value. This was carried out through the analysis of the brand rankings and supply chain rankings as a measure of the brand performance and supply chain performance respectively of fourteen global brands. Secondary research was used to co-relate deviations or parallels between the rankings which were taken from AMR/Gartner Research Top 25 Supply Chains reports and the Milward Brown Optimor reports from 2007 to 2013. Other sources from publications, EBSCO, corporate websites, industry publications etc were extensively studied to understand reasons for changes in performance. It was found that eight of the fourteen organizations had both the rankings moving in tandem. In the rest, the rankings were either divergent or didn't show any relationship.

Keywords: Supply Chain, Performance, Brand, Ranking

A product or a company is known by its brand. A brand is a promise of satisfaction (Healey, 2008). This satisfaction may stem out of product quality, availability, service or utility it provides to the consumers. Brands add value by differentiating the firm's product and providing consumers with confidence in the rational or emotional benefits it offers (Aaker, & Joachimsthaler, 2000). In the search for superior customer value, managers are realizing that their organization has to touch customers in a myriad of ways, which go far beyond marketing communications about products and services (Mitchell, 1999).

In a fiercely competitive market, where the companies are vying for consumer's attention, supply chain management (SCM) is emerging as an important tool to ensure competitive advantage. SCM extends the concept of functional integration beyond a firm to all the firms in the supply chains and, thus, each member of a supply chain helps each other improve the competitiveness of the chain (Ellram, & Cooper, 1990). An ancient proverb says that 'seeing is believing'. Unless the consumer sees the product he wants, on the store shelf in the quantity he desires, at the time he needs it the most, he does not believe any of the promises the brand owner is making. If the product is 'out of stock', the customer goes elsewhere looking for an alternative. This in turn hurts the brand image of the product and the company. Millions of dollars spent on advertisement to build the brand are thus wasted, just because of ineffective management of supply chain, which is a permanent loss. Supply chain management should not be seen as something separate from marketing. Indeed in the new competitive paradigm supply chain effectiveness becomes an essential prerequisite for marketplace success (Christopher, 1996).

1. Research Problem

The value a supply chain generates is the difference between what the final product is worth to the customer and the costs the supply chain incurs in filling the customer's request (Chopra et al., 2009). On one hand, supply chain management enables an organization to cut costs and improve competitiveness and on the other; a well-managed brand attracts a premium which the customer is more than willing to pay.

The question is; can supply chain management be leveraged to increase a brand's value? Hence following research problem:

- Is there a relationship between supply chain performance and brand performance?

2. Objectives of the Research

The objectives of the research are:

- To study supply chain performance of the top international brands through their global rankings.
- To study the brand performance of global brands through their global rankings.
- To find out the relationship between supply chain performance and brand performance of the global brands.

3. Scope of the Study

Supply chain management is used as a tool to improve the competitive advantage of an organization. It has evolved over a period of time from the simple order execution function in a small geographic area to logistics function which encompassed transportation and warehousing and to its modern day version of linking and managing globally distributed suppliers and customers. This study focuses on the contemporary global brands and their ability to identify the customer demands and effectively meeting these demands through an effective supply chain strategy.

4. Literature Review

Li, Raghunathan, Raghunathan, & Rao (2006) conceptualized and developed five dimensions of SCM practice (strategic supplier partnership, customer relationship, level of information sharing, quality of information sharing, and postponement) and tested the relationships between SCM practices, competitive advantage, and organizational performance. The results indicated that higher levels of SCM practice can lead to enhanced competitive advantage and improved organizational performance. Also, competitive advantage can have a direct, positive impact on organizational performance. This study deeply analyzed the impact of SCM practices on competitive advantage and organizational performance, but did not link Supply chain performance with the brand performance.

Doyle (2001) found that many marketers hold a view of brands that is too naive. Through an uncritical belief in the importance of brands and the case for brand investment, the views of marketing professionals often become marginalized when top management debate the big strategic issues facing their business. He further argues that successful brands impact most directly on the customer relationship management process enhancing the confidence and satisfaction customers gain from the product. But effective brand management also engages with the product development and supply chain management processes.

Knox & Bickerton (2004) analysed changing relationship between customer value and how it has been traditionally interpreted within the organisation. It also provides a practical framework that enables senior management to develop and market the customer value proposition at a broader level across the organisation. This is referred to here as the organisation brand and its positioning within the supply chain. The role of the business leader in leading this transformation is discussed and the efficacy of the traditional marketing department to respond is brought into question. He concludes that as manager of the organisation brand, each chief executive must continuously question all investment in marketing. He further says that supply partners must have access to all parts of the organisation; purchasing should not impose itself between supplier and company. The traditional marketing department, perversely, can act as a barrier to the marketing of the organisation brand if it does not support process management in this broader approach to delivering customer value. The focus of this study was to highlight the fact that marketing department only cannot deliver the customer value. There is a need for integrating all the value-adding processes outside the remit of marketing department.

Min & Mentzer (2000) propose that the concepts of the marketing, a marketing orientation, relationship marketing, and SCM are not separate. Rather they are inextricably intertwined. The main purpose of this study was to highlight the role of marketing in implementation of SCM by suggesting a cause-and-effect relationship.

Study by Kim, & Cavusgil (2009) explored the impact of a firm's supply-chain specific intangible assets on firm performance, drawing on the dynamic capabilities view of the firm. This study tried to link supply chain activities with firm brand, investigating how a firm's supply chain characteristics, such as inter firm activity integration, inter firm system integration, and supply chain responsiveness, affect brand equity and ultimately firm performance. The results of the study indicated that both inter firm system integration and supply chain responsiveness have a direct positive effect on brand equity. However, the effect of inter firm activity integration on brand equity is totally mediated by supply chain responsiveness. This study was based on primary research with 184 supply chain managers in US companies. The limitation of this study was reliance on the single respondent for investigating a selected few supply chain specific antecedents of brand equity only. Also the study focused on integration aspect of supply chain management assessing its impact on brand equity.

Gunasekaran, Patel, & McGaughey (2004) created a framework for supply chain performance measurement around supply chain activities and processes such as plan-source-make/assemble-deliver. They believed that unless supply chain performance is measured, it cannot be improved. Further, all participants in the supply chain should be involved and committed to common goals, such as customer satisfaction and enhanced competitiveness. This study emphasized the need for collaborative and constructive efforts to design new measures and new programs for assessing the performance of the supply chain as a whole as well the performance of each organization that is a part of the supply chain.

Glaster (2008) studied the role of branding in the value chain attempting to demonstrate that the brand is the one mechanism that unites both the supply and demand sides of the value chain. The author critically evaluated design/methodology/approach - Mission, vision and transaction models as aligning mechanisms to the value chain. He found that the brand strategy management should be both a demand and supply chain priority, in contrast to its general demand chain focus. This study did not empirically demonstrate the role that the brand plays in value chain dynamics, particularly the behavior of participants in the supply chain.

5. Research Methodology

This research project is based on the secondary data and information gathered from various sources. The main sources on which this study is based are AMR/Gartner Research Top 25 Supply Chains reports and Milward Brown Optimor reports from 2007 to 2013. Other internet resources like Google Scholar and EBSCO are extensively used to gather on-line articles. Websites of Supply Chain Digest and CNN Money were also valuable sources of information. Textbook references are made wherever relevant.

5.1 Measuring and Ranking the Supply Chain Performance

As many organizations are now learning to become customer value focused, business requires a fundamental transformation; a shift from a compartmentalized view - where marketing is seen as the responsibility of the marketing department to one that recognizes that processes deliver customer value and, hence, should be managed accordingly (See Figure 1, Source: (Christopher, 1996)). Increasingly demanding markets will lead to the rise in companies that are prepared to understand and make this change (Christopher, 1996).

There is an undeniable link between the supply chain performance and market leadership. An organization that is aware of the customers' expectations can engineer its business processes towards meeting them by aligning the entire supply chain towards sustainable performance and providing the promised value to the customer on a continuous basis.

An ever changing global business environment poses a major challenge in meeting and responding to the market demand. The Supply Chain top 25 by Gartner Research identifies companies that best exemplify the demand-driven ideal for supply chain management (Hofman et al., 2013). Presently, the supply chain ranking is based on a composite score obtained from the weighted sum of 2 components the details of which are given in Table 1.

The Financial Component consists of the 3 year Weighted Average Return on Assets (ROA), 3 year Weighted Average Revenue Growth and the Inventory turns. The ROA is supposed to represent overall operational efficiency and productivity, Revenue growth gives an idea of the market and organizational factors and innovation. The inventory turns does not particularly give a good idea of supply chain performance, but is widely understood and hence is still included. The 3 year weighted average is considered for revenue growth and ROA and a quarterly average for Inventory turn in order to smoothen fluctuations and to understand the effect of supply chain initiatives on the financial performance.

A company that appears in the Gartner top 25 needs to have done well in the peer panel's opinion, the Gartner Panel's opinion and should also be backed by a strong financial performance.

5.2 The Limitations of the Gartner Scoring System

Though the Gartner scoring system seeks to take into account a more holistic view of supply chain performance, there are some inherent limitations, which are as follows:

1. Not all industries are included in the rankings.
2. Some new companies are enlisted and old companies are removed because their industries are included for ranking for a particular year; for example McDonalds was added in 2010, and IBM and Microsoft were removed in 2012 due to the nature of their businesses.
3. The weights for the different components have been changing each year. This was done for consistency and improvement.
4. Previous panels have been very "North American". For 2013, 38% of the peer panel was from the Americas, another 38% from the Europe, Middle East and Africa and 24% from Asia.
5. Unavailability of precise parameters to measure supply chain operations (Perfect order Rate, Total Supply Chain Costs) and innovation performance (Time to Value, Return on New Product Launch)

5.3 Measuring and Ranking the Brand Performance

Keller (1998) proposed generic methods to value a company's brand such as the market value of the company's shares, using a market value added approach, using the brand's replacement value, using the difference between the value of a brand and a similar unbranded generic product and finally, the present value of the free cash flow from the brand.

For a specific brand, each of these will produce a different dollar value. As far as brand evaluation is concerned, the approach to be used can be confusing and complicated (Dowling, 2006). The second aspect is the ranking of different global brands on the basis of their value. There are a number of independent evaluators which annually evaluate and rank the global brands. For the purpose of this study we are using Milward Brown Optimor-BrandZ Top 100, as it is the only ranking based on a brand valuation methodology that is grounded in quantitative customer research and in-depth financial analysis (Lucas, & Jopson, 2011). The methodology and the valuation tool was created by Milward Brown Optimor and is based on the brand equity data from the BrandZ database and Financial Data from a number of sources including Bloomberg, Industry reports, Company filings with regulatory bodies and Kantar World Panel sales data. Analysts from Milward Brown Optimor then create financial models for each brand to ultimately link brand perceptions to shareholder and brand value. As mentioned in the BrandZ Top 100 report, the brand value is calculated by taking the sum of all the future earnings that the brand is forecasted to generate discounted to present day value. As per the brand evaluation process, the brand earnings are calculated by considering a portion of the earnings that are generated from the part of the business that carries the brand and then subtracting the capital charges from it.

The brand contribution is a part of the earnings that is driven by brand equity. It is as per Milward Brown Optimor, the degree to which the brand plays a role in the earnings. For our research, we have only considered the brand value.

The major limitation of BrandZ brand performance ranking method is that the corporate brands of companies like Procter & Gamble and Unilever are not included, as they are a house of brands and at the same time retain a corporate brand of their own.

The research was carried out to understand the role of supply chain performance in the success of top global brands. For this, total fourteen companies were analyzed on the basis of frequency of their appearance on Gartner and BrandZ lists (Refer Table 2). Only those companies are included in this analysis that has appeared at least three times consecutively in both the lists. A criterion for a minimum of 3 years on the list for consecutive years was necessary to comprehend a distinct trend if any.

6. Findings

The graphs of these fourteen companies were plotted with the Gartner Rankings on the Y-axis and the respective year numbers on the X-axis. A secondary vertical axis was introduced for the brand Rankings.

We observed following three types of behaviors (Refer Table 3 for summary):-

- Category 1: In-tandem movement of Supply Chain rankings and brand rankings.
- Category 2: Divergent movement of Supply Chain rankings and brand rankings.
- Category 3: No co-relation between the movement of Supply Chain rankings and brand rankings.

6.1 Category 1

We found that out of the fourteen companies under study, the global supply chain and brand rankings of eight companies are moving in tandem from 2007 to 2013. Hence if the supply chain performance in these years is good, the brand ranking is also high and vice versa. Graphs plotted in Figure 2 show this trend clearly. The list of these eight companies includes technology giants like Apple, HP and Nokia, retail giants like Tesco and Wal-Mart, Fast Moving Consumer Goods major Colgate Palmolive, PepsiCo and McDonald's. (Refer Figure 2)

In the case of PepsiCo, the BrandZ and Gartner ranks follow the same trend in the period between 2007 and 2008 and from 2010 to 2013. In the period from 2008 to 2010, they diverge with the Gartner rank rising and the BrandZ rank falling in this period. It should be mentioned that the BrandZ rank here refers to the Pepsi brand by itself and not the whole of PepsiCo. The Fact that the BrandZ rank having fallen from 2008 to 2013 for Pepsi- a carbonated soft drink highlights the general trend with regards to people moving towards non-carbonated, natural beverages.

Colgate Palmolive entered the Gartner rankings in 2009 (ranked 20th) with its rank rising to 17 in 2010 and finally 10 in 2013. The world-wide implementation of an ERP system helps track the quality of the products reaching the consumers, the level of service provided to the customers, level of service provided by the suppliers and the cost associated with providing the service. This allows the company to optimize its procurement costs and also improve the visibility within the supply chain. ("Colgate-Palmolive Empowers end Users with Supply Chain Reporting," 2011). The BrandZ rank associated with Colgate-Palmolive is that of the Colgate brand. Further improvement of the Gartner rank in 2013 could be attributed to efforts to improve operational efficiency.

McDonald's entered the Gartner ranking in 2010. Its Gartner rank has been increasing and presently has the second best supply chain. Strong financials, better execution of new product launches and the success of the McCafe initiative around the world, advanced demand sensing capabilities are among the many reasons for its success. It has remained at number 4 on the BrandZ ranking for the last three years. A refocus on customer service may perhaps be the reason for it to remain at number 4 on the BrandZ ranking

Wal-Mart and Tesco are falling in both the Gartner and BrandZ rankings. Wal-Mart was struggling with product availability issues and is now competing directly with Amazon.

6.2 Category 2

This category of companies does not show an absolute relationship between their supply chain performance and brand performance. In this category, either the rankings of the companies are moving in tandem for some time during the last seven years, or they are showing a completely divergent behavior.

The BrandZ rank for Cisco had been continuously falling from 2008 onwards while the Gartner Ranking has been rising in the period from 2007 to 2010 (Figure 3). In the period from 2010 to 2012, it has fallen-only to rise again in 2013. A strong refocus on the core business has helped Cisco's Gartner ranking and its BrandZ ranking seems poised to improve.

In June 2007, Dell began selling two models of their low-end dimension personal computers in 3,500 Wal-Mart stores in United States, Canada and Puerto Rico (Ogg, 2007). From 2009 onwards, Dell has slowly started to reduce its dependence on the Direct to Customer model and has started to leverage Original Device Manufacturers (ODMs) to produce an ever-increasing share of their devices (Gilmore, 2008). With powerful processing available in most devices, ODMs manufacturing for a number of brands and the need for having devices customized to one's requirement and affordability, the distinctiveness of the Dell brand has reduced. A superior supply chain performance in 2011 is in contradiction with its absence from BrandZ ranking list in the same year (Figure 4). However, a down turn in the PC market due to advent of mobile computing devices (IDC, 2013) has resulted in weaker financials with the result that it may leave the PC market completely to focus on its enterprise and cloud solutions (M.G.,2013).

The graphs for Nike follow a rising trend in the period from 2007 to 2008. Subsequently, the graphs start to follow a diverging trend in the period post 2008 with the BrandZ ranking initially falling till 2009 and then starting to increase in the subsequent period till 2012 and subsequently falling in 2013 (Figure 5). On the other hand the Gartner rankings increase till 2009 and subsequently start to fall till 2011, increase in 2012 and stay constant in 2013. It is interesting to note that the BrandZ ranking for Nike is the highest in 2008 and 2012- both were the years when the Olympics were held. Nike's Gartner ranking has increased post its pledge in 2011 to incorporate environmentally friendly and sustainable practices across its supply chain (Farfan, 2013).

Amazon's BrandZ rank has shown an increasing trend- except in 2012, after which it recovered in 2013 (Figure 6). On the other hand, its Gartner ranking has been increasing positioning it at the number 2 spot in 2012. However, due to weak financials, it has lost its spot in 2013. Heavy investment in technology and new fulfillment centers and razor thin margins could be the reason behind these values (channeladvisor, 2013).

Samsung's Gartner and BrandZ rankings were divergent till 2012 after which they are following an upward trend (Figure 7). Samsung's offer of a total customer solution along with its vertically integrated operations augments the use of technology to reduce channel lead times and allows for real time scenario planning. Samsung's line of mobile computing devices like the "Galaxy" smart phones and tablets have seen a strong demand across multiple markets allowing for very strong financials.

6.3 Category 3

This category of companies shows divergence in the relationship between their supply chain performance and brand performance.

Coca Cola's Gartner rankings had stayed constant in the period from 2007 to 2010 (ranked 13th). In 2011 and 2012, the ranking improved and it was ranked 11th and 6th respectively. However, its position slipped in 2013 and is now ranked at number 9 (Figure 8). It was in the top 5 of the BrandZ ranking till 2010. Its ranking slipped to 6 in 2011 and 2012. In 2013, it rose to 5th rank. Coca Cola has vertically integrated with some of its larger bottlers and has strived to improve collaboration with other bottlers. The Coca Cola BrandZ rank is reflective of the Coca Cola and diet Cola brand and not Coca Cola Company as a whole. The slight fall in the BrandZ rank could be attributed to consumers preferring a more natural option.

A similar divergence is seen in case of IBM. It has moved up in the BrandZ ranking despite poor supply chain performance (Figure 9).

Toyota was once the world's largest car manufacturer and the only automobile company in the Gartner list, whose supply chain performance reflected its brand performance (Figure 10). However, after a spate of recalls, its BrandZ and Gartner Rankings have fallen drastically. The case in point is the announcement by Toyota Motor Corporation that it will conduct a voluntary safety recall involving approximately 52,000 vehicles. 2001 through 2003 Prius vehicles sold in the U.S. to replace the electric power steering pinion shaft attachment nuts (Toyota Motor Sales, USA Inc., 2011). The persisting problem related to the defective parts supplied by Toyota vendors was reported that led to a declining brand performance.

Intel entered the Gartner top 25 rankings in 2009 (Figure 11). It was subsequently ranked 16th in 2011, 7th in 2012 and 5th in 2013. Intel is trying to make supply chain design central to its business strategy and in turn reduce costs and improve customer response performance. In 2007, Intel embarked on applying the Theory of Constraints (TOC) to their distribution networks. Some of the more visible improvements from this implementation include average order cycle times decreasing by 75%, decrease in variability of cycle times by a similar margin and increase in the total throughput (“Logistics News: Using Theory of Constraints to Improve Distribution Throughput at Intel,” 2007).

By 2009, Intel had a 40 percent improvement in customer feedback scores with a 300 percent-plus improvement in change order responsiveness and also achieved a best-in-class level of delivery performance. This was achieved by reducing pipeline inventory by 33%. The other changes that were made that augmented this improvement in response levels were hub based distribution systems, cross-organizational co-ordination, forecast improvements, postponement and reduced cycle times (“Intel Corporation Receives top Supply Chain Award at CSCMP Conference,” 2009).

In 2011, Intel was moving its market beyond the PC market and into that for mobile devices like tablets. They are shifting towards a more demand driven supply chain taking into account the long lead times and rapidly evolving products that their supply chain had been handling (“How Intel Boosted Supply Chain Response Times,” 2011)

Intel is following a more “designed for supply chain approach” focusing on key aspects like packaging and supplier relations rather than only quantifiable production costs. (“For Intel, Small Is Beautiful, both in Product Size and Supply Chain Cost,” 2011)

However, post 2009; Intel has fallen in terms of its BrandZ ranking. This could be due to the following factors-

- In 2009, due to the after-effects of a global slowdown of the PC business, Intel for the first time in history faced a first quarter loss. This loss included the \$ 1 billion write down of Clearwire (Barak, 2009).
- A number of complaints filed against Intel for anti-competition practices by its competitors were settled by the Federal Trade Commission in 2010 with Intel (Federal Trade Commission, 2010).
- Post 2008, sale of net-book sales fall due to consumers preferring tablets and other similar devices. This affected Intel’s business in net-book microprocessors (Burt, 2011).

Intel overcame, chipset design issue(s) identified in 2010-11(IntelPR, 2011) that could have been potentially damaging to the company’s brand image and could have even affected the supply chain performance. The slight spurt in Intel’s BrandZ ranking in 2012 and its subsequent fall can be attributed to the launch of the “Ultrabook” line and the weak PC and laptop sales this year. However, Intel is poised to launch a new generation of processors that are designed specifically for mobile applications (Halleck, 2013) which should help it improve its offerings in this growing market.

7. Conclusion

In a volatile business environment, where consumer demand is highly unpredictable and demand planning is one of the toughest challenges, an organization with well-defined supply chain strategy is better equipped to effectively meet consumer demand. Such organizations can sense the changing demand patterns, align their supply chains to respond to the changes and meet the consumer demands in a predictable manner. Apple is the prime example of such attributes and therefore it leads in the supply chain rankings as well as brand rankings. Apple is a force to be reckoned with when it comes to the supply chain for electronic devices. It gives buyers what they want faster than its rivals -- and in the process, it sometimes delays the competition's products from coming to market (Goldman, 2011). Nokia on the other hand is an example, where the lack of product and process innovation has seen their supply chain and brand rankings plunging over the last five years. Nokia was leading the Gartner supply chain rankings at number one position in 2007, is not even finding a place in these rankings in 2011. Interestingly, its brand rankings have also fallen in the BrandZ list from number twelve in 2007 to number eighty one in 2011. The Apple and Nokia examples clearly show a strong link between Supply chain performance and brand valuation. We also find that any ‘slip’ in the supply chain performance in a particular year leads to a fall in brand performance in the same or subsequent year. Example of Toyota Motors is already cited elsewhere in this paper. Change in the macro economic factors such as GDP growth rate, unemployment rate, per capita income, rate of inflation etc. have a direct bearing on brand performance. Companies who are vigilant enough to notice any changes in the economic environment and have capability to react by re-engineering their supply chains are better equipped to meet such challenges.

Out of seventeen companies studied by us, eight show an absolute correlation between their supply chain and brand performance. That is; more than fifty percent of companies under study are showing this correlation. In addition, other companies like Toyota and Samsung have displayed this correlation for three years out of five years under the study. This study therefore underlines the necessity for the brand owner to first understand the value the customer is looking for in a product, and then decide how to align his supply chain strategy to deliver the desired value to the customer.

There is scope for further research to identify the supply chain drivers that can enhance brand value. This will help the companies to focus on these drivers to meet customer's expectations and translate brand promise into reality on a sustainable basis. In many instances the brand value erodes due to defective products, non-availability of spare parts, poor after sales service and delivering less than the promise. Research may further be conducted to determine how these supply chain drivers can be leveraged to mitigate the potential damage to brand value in such instances. The major limitation of this research is that it is based only on the secondary data and on the results of findings of Gartner and BrandZ. This research can be further expanded by including the primary data from the companies under study to link the performance of their specific supply chain drivers with their brand performance.

Table 1. Basis of final Composite score for the Gartner top 25 supply chain rankings (Hofman, Aronow, & Nilles, 2013)

Component	Parameter	Weight in Final Score	How is it arrived at?
Opinion Component	Gartner Opinion	25%	Panelists made to force rank the top 25 based on their understanding of Gartner's demand driven ideal of supply chain excellence
	Peer Opinion	25%	Panelists made to force rank the top 25 based on their understanding of Gartner's demand driven Ideal of supply chain excellence
Financial Component	Inventory turns	15%	2012 cost of goods sold / 2012 quarterly average inventory
	3 Year weighted Revenue Growth	10%	$((\text{change in revenue } 2012-2011) * 50\%) + ((\text{change in revenue } 2011-2010) * 30\%) + ((\text{change in revenue } 2010-2009) * 20\%)$
	3 Year weighted ROA	25%	$((2012 \text{ net income} / 2012 \text{ total assets}) * 50\%) + ((2011 \text{ net income} / 2011 \text{ total assets}) * 30\%) + ((2010 \text{ net income} / 2010 \text{ total}) * 20\%)$

Table 2: Global Brands and their Supply Chain & Brand Performance Ranking

Company	Gartner Rank							BrandZ Rank						
	2007	2008	2009	2010	2011	2012	2013	2007	2008	2009	2010	2011	2012	2013
Apple	2	1	1	1	1	1	1	16	7	6	3	1	1	1
Cisco	11	8	5	3	6	8	7	24	22	33	35	44	59	77
Coca Cola	13	13	13	13	11	6	9	4	4	3	5	6	6	5
Colgate Palmolive	*	*	20	17	13	11	10	78	71	56	47	55	51	50
Dell	*	3	2	5	2	4	11	37	41	42	66	*	*	*
Hewlett-Packard	21	18	17	15	17	24	*	15	16	17	12	18	26	54
IBM	4	5	4	8	14	*	*	9	6	4	2	3	2	2
Intel	*	*	25	18	16	7	5	25	27	23	48	58	49	61
Nike	18	15	14	16	20	14	14	63	53	59	59	57	44	56
Nokia	1	2	6	19	*	*	*	12	9	13	43	81	*	*
PepsiCo	15	11	9	6	9	12	16	48	39	44	58	63	67	75
Tesco	8	12	15	20	23	29	*	32	25	21	17	31	36	55
Toyota Motors	5	7	10	*	*	*	*	10	12	14	26	27	28	23
Wal-Mart	6	6	7	4	7	9	13	7	13	11	13	15	17	18
Amazon	*	*	*	10	5	2	3	92	61	26	15	14	18	14
Samsung	10	9	8	7	10	13	8	44	58	*	68	67	55	30
McDonalds	*	*	*	11	8	3	2	11	8	5	6	4	4	4

Table 3: Summary of Gartner and BrandZ Ranking

Company	Category	Comments
Apple	1	Has consistently performed in both rankings. Currently the highest ranked.
Colgate Palmolive	1	Showing strong growth in supply chain rankings and brand performance
Hewlett-Packard	1	Both Supply Chain Rankings and BrandZ ranking showing a dip
Nokia	1	Strong drop in both rankings. Out of both the rankings before 2011.
PepsiCo	1	Showing fall in both rankings.
Tesco	1	Showing fall in both rankings recently. Showed some divergence in 2007-2010
Wal-Mart	1	Showing a slight fall in both the rankings
McDonalds	1	Strong performer in the Supply Chain Rankings, held its position in the BrandZ rankings
Cisco	2	Showed Divergence between 2007 and 2010, tandem behavior between 2010 and 2012 and again divergence between 2012 and 2013
Dell	2	Divergence in 2008-09, tandem behavior in 2009-10 and divergence again in 2010-11 as it fell out of the BrandZ ranking
Nike	2	Tandem in 2007-08, 2011-2012, diverging in other periods
Amazon	2	Tandem behavior till 2011, diverging subsequently
Samsung	2	Diverging behavior till 2012, tandem in 2012-13
Coca Cola	3	Diverging behavior throughout
IBM	3	Diverging behavior throughout except for the 2008-09 period
Intel	3	Diverging in 2009-2011 and 2012-13. In tandem in 2011-12
Toyota Motors	3	Out of Gartner ranking in 2009 without recovery. BrandZ ranking shows recovery

Figure 1: Marketing in a Process Context (Christopher, 1996)

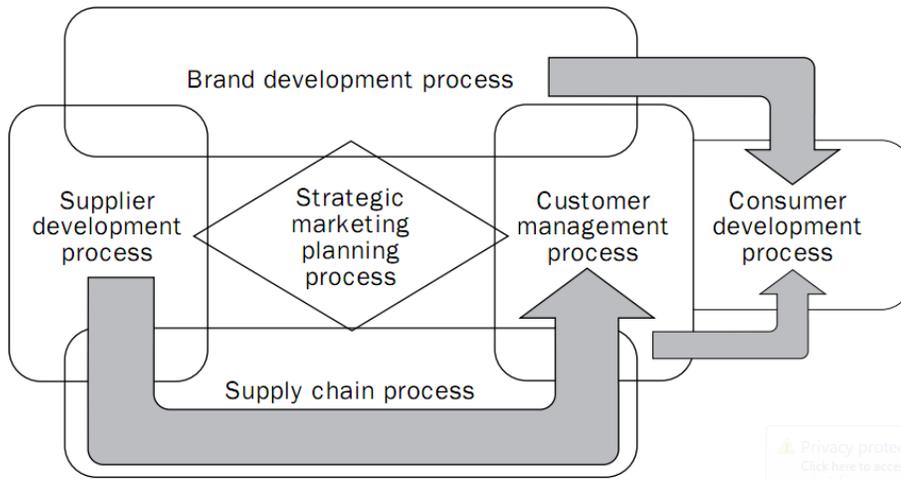


Figure 2: Comparing the Supply Chain and Brand Ranking: Category 1 (Source: AMR/ Gartner Reports, BrandZ Reports of Respective Years)

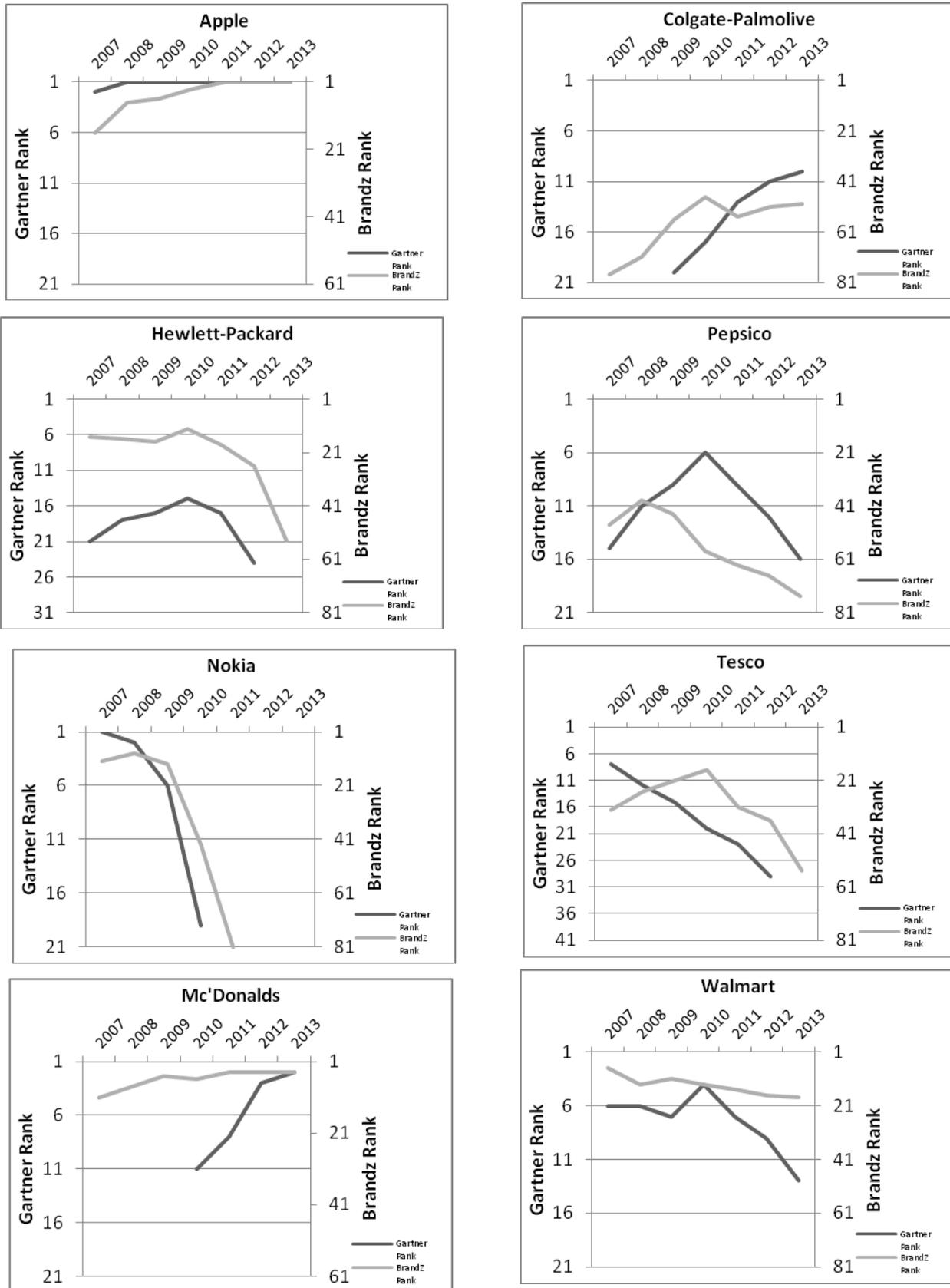


Figure 3: Comparing the Supply Chain and Brand Ranking: Category 2 (Source: AMR/ Gartner)

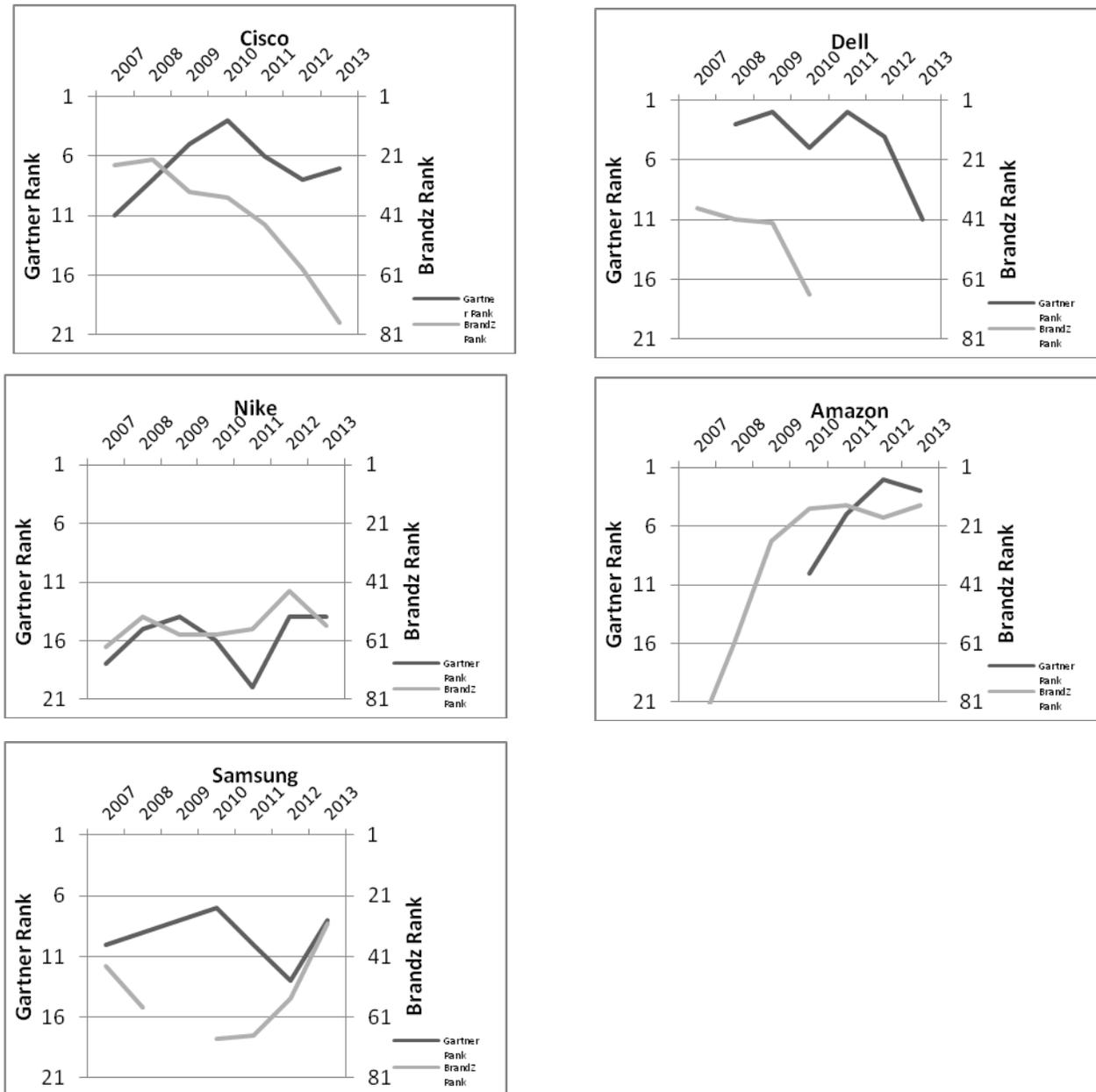
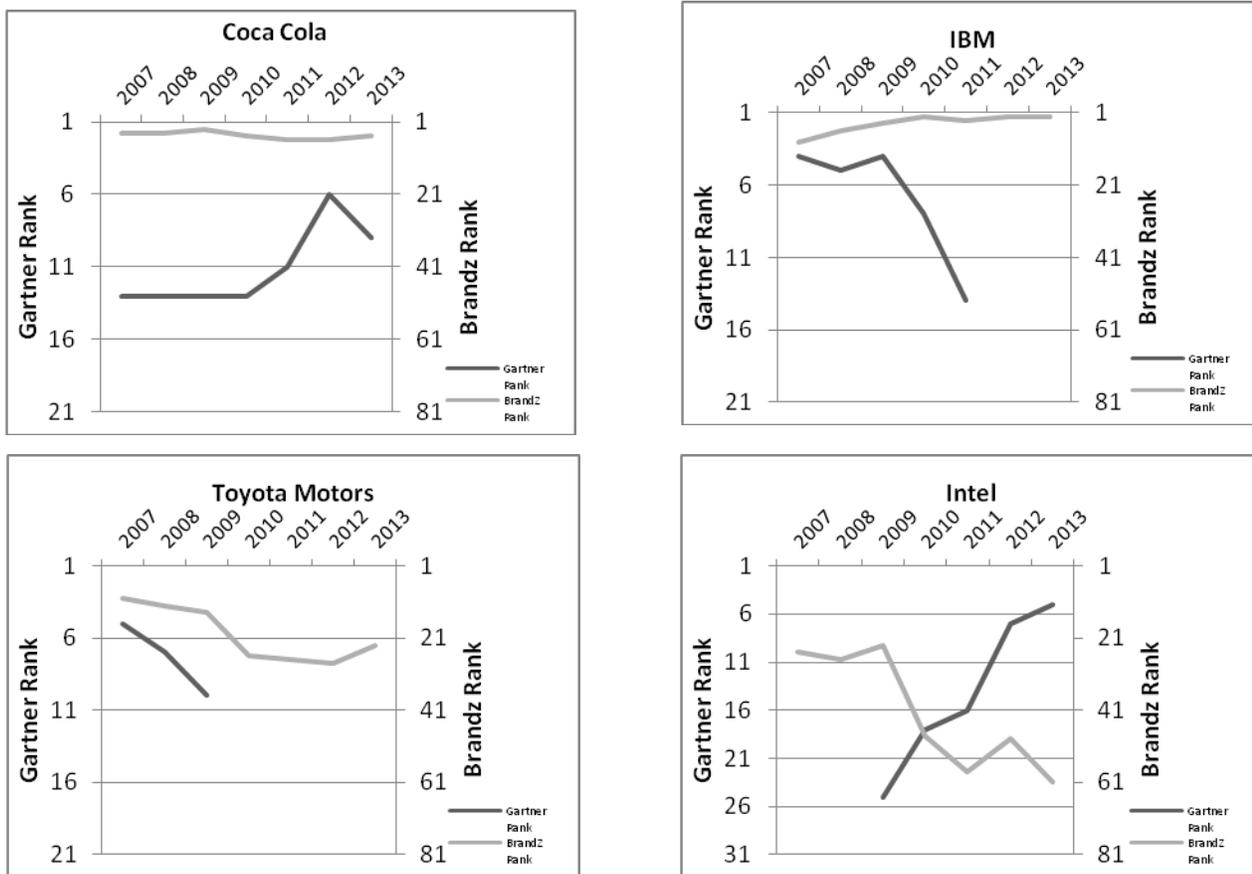


Figure 4: Comparing the Supply Chain and Brand Ranking: Category 3 (Source: AMR/ Gartner Reports, BrandZ reports of respective years)



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Notes

1. The industries not included in the Gartner top 25 Supply chain rankings this year are: Airlines, Healthcare (insurance, managed care, services, providers), Shipping, Banks, Insurance, Telecommunications, Crude Oil Production, Mail, Package and Freight Delivery, Temporary Help, Diversified Financials, Petroleum Refining, Trading, Energy, Pipelines, Utilities, Engineering/Construction, Entertainment, Mining, Services, Ship Building, Software development, Steel and Railroads.