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# UBERIZATION OF CUSTOMER NEEDS WITH DATA ANALYTICS: HOW MARKETING STRATEGY LIFTS PRODUCTS INNOVATION?

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**ABSTRACT:** An unprecedented explosion of innovation in the areas of big data, cloud computing, artificial intelligence, robotics, block-chains, self-driving cars, and mobile services has made changes permanent with higher customer expectations and growing switching loyalty to new products and services. The central question addressed by the study is how the digital fragmentation is disrupting the global business environment for new product growth, customer experiences and marketing innovation in supporting marketing decisions. This study used qualitative content analysis methodology and relied on recent marketing research articles, case studies, and digital analytics surveys. The findings of the study contribute to the evolving discussion on how the innovative digital globalization powered by free-flowing data with evolving customer experiences is giving way to the success of the new product. The final sections provide directions for future digital innovation, the customer experience research and product marketing success, with significant implications for academicians, practitioners, and policymakers.

**KEYWORDS:** Big Data, Customer Experience, Customer Needs, Digital Innovation, Marketing Analytics, Product Marketing Strategy.

## INTRODUCTION

Digital innovation is the creation of unique technology-based products and services. In the modern era, entrepreneur's debate whether innovation comes from technology breakthroughs or customer needs (Power, 2017). Hinnings et al., (2018) argued that the digital transformation is the combined effects of several digital innovations bringing about novel actors, structures, practices, values, and beliefs that change, threaten, replace or complement existing rules of the game within organizations and fields.

As Bartoloni and Baussola (2016) highlighted that the emphasis on innovation alone is misleading, as a firm's decision to undertake technological innovation brings about a more complex and general process which may involve new attitudes regarding organization and product market orientation. Services, today, are disrupted by breakthrough innovations due to the advancement of technology. Also, the blurring line between product and service is resulting in the bundling of product-service mix offering by the market players (Dalal & Sharma, 2018). The sources of ideas, as valuable strategic firm resources, directly, and/or indirectly via innovation (De Zubielqui, Lindsay and O'Connor, 2014) activities, contribute to firm performance. To support the activities growth for

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making ventures, products, and services successful, companies have to strategically manage entrepreneurship and innovation funnel, Fig. 1.



Fig. 1. Digital Innovation and Entrepreneurship funnel [Credit: EIT Digital].

Featuring increasingly cross-industry and multi-actor innovation processes, digital innovation reveals the inherent technology bias in the dominant perspectives on innovation (Makkonen, & Komulainen, 2018). The focus from technology-centered ideas of digital innovation to a more balanced concept in which digital innovation is conceptualized as a combination of multiple customer needs and market strategy solutions linked to various actors and their behaviors (Nambisan, Lyytinen, Majchrzak, and Song, 2017).

The evolution of the smartphone and the mobile technology specifically mobile data provides the most precise and current view of any individual consumer allowing firms to create an extremely personalized user experience making understanding the consumer better and also made consumers more entitled than ever before. Personalization has ceased to surprise and delight consumers – it's expected and no longer considered a bonus feature or perk of one company versus another. This shift making personalization becoming more of a marketing necessity and baked into a brand's marketing and advertising strategy in order to not fall behind and lose potential customers (CMO Network, 2017).

Digital business has moved from an experiment to the mainstream. Supporting scale has led to inevitable changes in business models as organizations shift how they create, deliver and capture value. As businesses move to scale their digital initiatives, they're focusing on three areas to support customer engagement – Volume; Scope and Agility, Fig 2.

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# Fig. 2. Digital Maturity [Credit: Gartner Digital Survey- 2017].

This study highlights that firms who actively involve users in their innovation process can benefit from the initiative as the participation of customers in innovation is a vital part of addressing their customer needs.

## Significance and Conceptual Contribution of the Study:

While most new firms and startups are looking to disrupt an established big business or even an entire industry, Docherty's (2015) research on collective disruption provides a surprising and viable alternative. He argues that the future of growth and innovation is not via a singular focus on internally developed ideas nor is it big companies simply acquiring external technologies and commercializing them. The coming virtual enterprise is one that's connected in a web of relationships with customers, suppliers, and a curated group of entrepreneurs and startups who matter to each other all of this supported by crowdsourcing and open innovation for access to even larger groups of ideas and resources in the world at large.

However, the significant success of organizations depends more and more on their ability and willingness to innovate. The very development of innovative products or technologies does not guarantee market success. Product commercialization (Koszembar and-Wiklik, 2016) requires the undertaking of marketing activities. For new technologies and products, the most effective solution is to develop brand image through public relations (PR), in particular, media relations. PR is becoming more and more significant in the model of the open approach to innovation in the era of development of social media to enhance the customer experience by constant nurturing focused on customer retention strategy to impact customer loyalty, and higher revenues and retention.

The study contributes by providing strategic frameworks that capture the process of digital innovation. The market dimension of digital innovation and the market dimension from a limited view of customer information and useful knowledge to further include needs, actions, and

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behaviors of market actors directly or indirectly using, complementing, or substituting (Makkonen, & Komulainen, 2018) the digital innovation and innovation process.

## **Problem Statement:**

Technological and innovation present both coordination and market design challenges to the innovator that generally lead to market failure in the form of an excess of social over private returns. Tees (2018) argued that the low private return leads to socially sub-optimal underinvestment in future R&D that can be addressed to some extent by better strategic decision-making by the innovator and/or by far-sighted policies from government and the judiciary. If a technology standard is not treated as the embodiment of significant R&D efforts enabling substantial new downstream economic activity, then rewards are likely to be calibrated too low to support appropriate levels of future innovation.

Artificial intelligence, robotics, blockchains, reusable rockets, self-driving cars, genetic engineering — there is an unprecedented explosion of innovation going on all around us, and nowhere is it creating more froth than in the corporate sphere. And yet, as Erixon and Weigel (2016) points out that how so little is created by so many working so hard, the GDP growth, productivity, and corporate investment in the capitalist economies of the West are not attracting upward mobility because of gray capitalism, excessive corporate managerialism, second-generation globalization, and complex regulations.

The fundamental problem addressed by this study is that the large companies have produced an environment in which innovation flourishes, but never generates a full measure of economic output. This study argues that any success of product innovation has to move beyond relying on chance, creative brainstorming and focus on investments in building digital innovation processes, structures and market strategies based on Kano's model of rapidly growing and changing customer needs to repeatedly find new opportunities, Fig. 3.

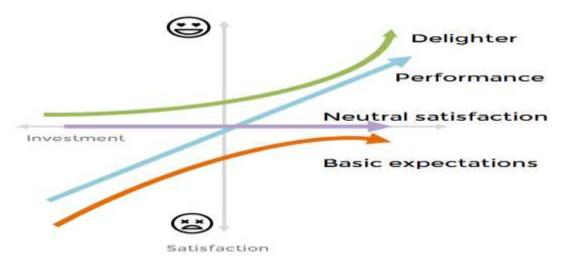


Fig. 3. Kano Model – Customer Satisfaction [Credit – Medium Corporation – Mesz]

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### Literature, Theoretical Underpinning and Research Objective:

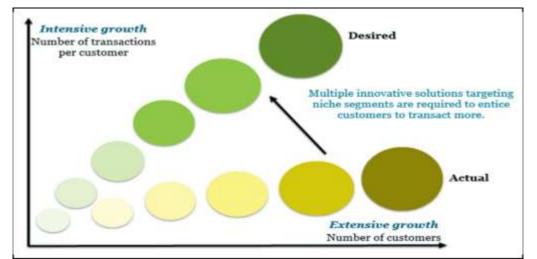
To create a culture of innovation corporate incubators and accelerators have to be considered as part of the infrastructure of innovation for the success of the company. Ramirez, et al., (2018) study built on the 2012 database Technological Innovation Panel (PITEC) with a sample of 994 manufacturing firms show how external information obtained about relationships with suppliers, customers and competitors lead to marketing innovation. The study demonstrated the mediating effects of product innovation and organizational innovation on the relationship between external information flows to innovate in both their products and organization as a prerequisite to marketing innovation.

Harper (2018) argued that corporate executives need to anticipate internal resistance to incubators, and respond by building governance infrastructure to align leaders around their roles in making innovations a success. Moreover, Kieżel (2016) identified innovative solutions implemented by retail banks in the context of assumptions of the paradigm of relationships and features of product orientation. He ascertained that banks aim at providing customers with a broad scope of benefits while applying active innovative policy and offer individualization, frequently on the basis of new technologies. Even if it is convergent with the assumptions of the paradigm of relationships, it should be indicated that some banking products are based on advanced solutions that may surpass real market demands. In this case, such operations are closer to the implementation of assumptions of product orientation.

The objective of this study is to have firms fully understand the customer problems and that the customer needs to drive innovation. If the firms understand the customer problem, they dramatically improve their odds of successful innovation. Christensen, author of The Innovator's Dilemma encourages innovators to understand the jobs a customer needs to solve.

As Power (2017) highlighted when Apple launched its ill-fated Newton device, no one understood what problem it was supposed to solve. Later, when Apple launched the iPhone customers understood that this was the way to carry one digital device instead of a separate phone, music player, and organizer.

Firms do not spend enough time understanding the changing needs of their customers. They spend time on product development and not enough time on customer development. The firm's goal is a business success, the innovation has to line up with a critical customer problem that no one has solved, Fig. 4.



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Fig. 4. Customer Growth [Credit - CGAP Digital Financial Services Report 2017]

As digital disruptions transform Customer's Digital world across the customer touch points and constantly evolving customer behavior. Shrivastava (2017) study argued that the digital disruptions constantly changing customer's expectations, pushing Communications Service Providers (CSP) to embrace the constant change and offer personalized seamless Customer Experience. As digital disruptions bring an opportunity for a CSPs to transform their complete ecosystem and be relevant to the digital aspiring experience hungry customers and retain their market position. CSPs need to transform themselves into a digital company with digital competencies to manage the changing experience across the multiple touch points and embrace continually evolving customer's expectations through innovative digital products and services. The enhanced customer experience creates a perceived customer experience value for their customer, and it leads to customer loyalty which creates a sustained business value or revenue streams for CSPs. Customer-centric digital transformation enables CSP to adapt and an embrace digital technologies, know the customer insides, align the internal business operation processes and governance to offer a digital experience across all the digital touch points with a greater speed. For CSP, continuous journey to embrace the digital disruptions for their own sustainable and profitable growth and be significantly be relevant to their digitally enabled customers.

This study's research objective is to understand how firms transform digital innovation into marketing innovation. The specific aim is to analyze the mediating role of product innovation and organizational innovation in the relationship between external information and marketing innovation.

# MATERIALS AND RESEARCH METHODS

This study used qualitative content analysis methods and relied on recent marketing research articles and digital analytics surveys. This research study also shows the advantage of mixing traditional research methods (research articles, and surveys) with the analysis of existing content

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(e.g. PwC survey, and Gartner Survey) by identifying additional insights which complement traditional research results. The approach of creating additional value by analyzing existing data focused on innovative and creative insights (Faber, Eihnorn, Hofmann and Loeffler, 2012) when addressing the main question examined by the this research study is how the digital fragmentation is disrupting the global business environment for new product growth, customer experiences and marketing innovation in supporting marketing decisions.

#### Surveys

#### **Gartner Customer Experience Report - 2017**

According to the 2017 Gartner Customer Experience in Marketing Survey, 81% of marketing leaders responsible for customer experience (CX) say their companies will mostly or completely compete on the basis of CX. Yet only 22% say their CX efforts have exceeded customer expectations as the brands fail to deliver the basic information and experiences that customers expect and need. The Gartner customer experience five-stage pyramid, Fig. 5, is a powerful framework for building effective experiences that lift satisfaction, loyalty and advocacy and start to chip away at this chasm between expectation and reality.

Stage No. 1: Furnish information I can use

The journey to better loyalty, advocacy and satisfaction begins with meeting customers' basic needs. This stage and those that immediately follow are tactical, reactive and focused on removing irritants that get in the way of better experiences and satisfaction.

Stage No. 2: Solve your problem when I ask

Here, your problem is the company's problem; that will be how the customer sees it. Moving beyond the foundational level means solving the company's basic issue when the customer asks. In the case of a flat tire this would mean providing the bare minimum tire replacement service a company is obligated to provide, such as using the customer's 40 mph-limit spare doughnut in the trunk.

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	<mark>Pyramid:</mark> A Fr owerful Expe	
	Make me better, safer or more powerful	
	Provide what I need without me asking	
	Resolve my needs when I ask	
	Solve <i>your</i> problem when I ask	
	Furnish information I can use	
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Fig. 5. Customer Experience Pyramid [Credit – Gartner]

Stage No. 3: Solve my needs when I ask

Once the company's needs are met, the hierarchy of CX needs starts to get interesting because this is where a brand addresses specific needs, wants and requests. This means recognizing that when a customer has a flat tire they want the car to drive as it was before they got the flat. So the service agent might arrive with a fully functional replacement tire or fix the flat tire on the spot.

Stage No. 4: Provide what I need without me asking

Moving beyond resolving customer needs starts to enter the realm of aspirational customer service. It requires deeper knowledge and data about the customer and effective processes to execute the experiences. In the case of roadside repair, a mobile service technician would not only fix a flat tire to its near-original state, but also check the rest of the car and fix a leaky radiator during the same service call. That type of CX drives significant satisfaction.

Stage No. 5: Make me better, safer or more powerful

The top of the pyramid is reserved for exceptional CX practices that fundamentally redefine the customer experience and what customers can become as a result of using the product or service. This is the rarified air of not just providing customers with superpowers, but making them feel like they have superpowers. This level might be as simple, and as complex as, dispatching a luxury self-driving vehicle to whisk a stranded customer to work at the push of a button — and delivering their fixed, washed and waxed car to their driveway while they are at work.

According to Garner, over 80 percent of brands say their success will soon be mostly or entirely dependent on customer experiences (CX), Fig. 6, but less than half have a strategy in place to

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explain why CX drives their ROI. Gartner suggests that companies view their CX framework as a five-stage pyramid:

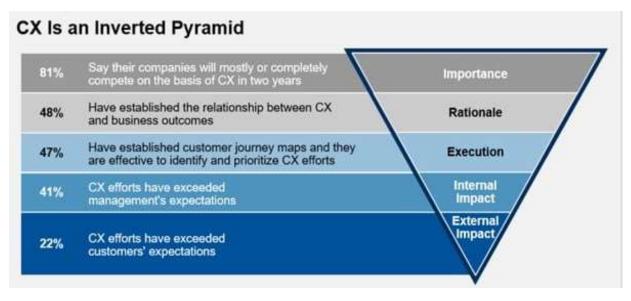


Fig. 6. Customer Experience Inverted Pyramid [Credit – Gartner Marketing Survey- 2017]

- "Stage 1—Communication: Customers need the right information at the right time in the right channel. If you accomplish this, you'll improve your inbound traffic. Get it wrong and you'll lose leads and frustrate your prospective customers.
- Stage 2—Responsive: This means solving customers' problems quickly and efficiently. Brands that succeed here see the customers' problems as the brands' problem, and respond in ways that balance the business and customer goals.
- Stage 3—Commitment: Listening for, understanding and resolving customers' unique needs is a critical step. Brands that do this convey a greater level of customer care and satisfaction. L.L. Bean, with its liberal return policy, is a classic example of this. Even when the policy was tightened earlier this year, it is still more generous than most competitors. A commitment to compassionate customer service can create differentiated experiences and resolve issues before they happen.
- Stage 4—Proactive: Here is where brands can get a step ahead of consumers, and give them what they need before they even ask. An example of a brand that made this happen is Nest, which disrupted the thermostat marketplace by offering a smart product that reprogrammed itself without customer action or intervention.
- Stage 5—Evolution: At the top of the pyramid is a level that few brands achieve. These brands are making customers not only view the brand more favorably, but change the way the customers think about themselves. Apple, notes Gartner, is an aspirational example of this. The iPhone wasn't the first smartphone, but it was the first that allowed people to carry their worlds with them in a way like never before. Because of this, Apple has powerful customer loyalty".

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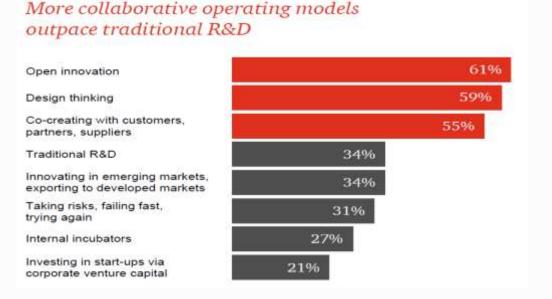
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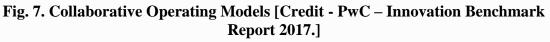
Gartner report also argues that as companies move up the pyramid they need to take steps to reduce risk such as gathering appropriate voice of customer data and even expanding their vision to include the entire customer journey. For example, Uber and Lyft expanded the vision of ordering a taxi by making it easy to hail a ride from the comfort of home rather than standing on a corner. Their customer journey started at the point of need rather than the point of pickup as defined by taxi companies much to the joy of millions of delighted and now loyal customers. For a customer who has endured pouring rain while waiting for a cab to arrive, ordering and waiting for transportation from the comfort of home starts to feel like a superpower.

#### Price Waterhouse Coopers (PwC) Innovation Benchmark Report - 2017

The PwC report (Viki, 2017) is based on a global survey that was conducted with over 1220 executives in 44 countries. The goal of the research was to understand how the leaders view innovation and what they are doing to better reap its rewards. Within the report are several key findings that are worth highlighting:

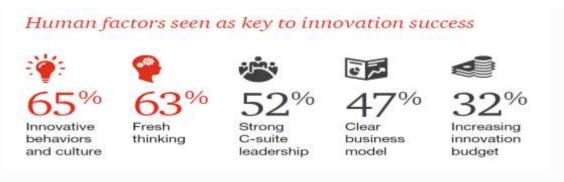
- The survey results showed that companies are embracing more collaborative models of innovation such as open innovation and design thinking. Companies that use more collaborative approaches to innovation were twice as likely as their counterparts to expect growth rates of 15% or more.
- Over 60% of companies view their employees as their most important partners for innovation compared to 16% of companies that held the same view for startups, Fig. 7.





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• Technology is no longer viewed as just a way to keep up with trends and competitors. It is viewed as a key driver of innovation. Executives are also realizing that beyond technology, it is just as important to develop innovative business models, Fig. 8.



# Fig. 8. Human Factor [Credit - PwC – Innovation Benchmark Report 2017].

- The Company's investments are to sustain sales growth as the most important metric for measuring the success of innovation.
- Random acts of innovation do not result in returns. Companies should not be investing in a random collection of unrelated projects.
- A large number firms struggle with bridging the gap between innovation strategy and business strategy. 65% of companies that invest over 15% of their revenue in innovation indicated that aligning business strategy with their innovation vision was their top management challenge.

Volker (2017) also argued that there are three main approaches to innovation strategy to connect to the overall company's business strategy.

- *Need Seekers:* Such as Apple, use their superior insights about customer needs to generate new product ideas.
- *Marker Readers:* Such as Samsung, focus on creating value by incrementally improving on products that have already been proven in the market.
- *Technology Drivers:* Such as Google, depend on their strong internal technology capabilities to develop new products.

## DISCUSSION

To create a culture of innovation corporate incubators and accelerators have to be considered as part of the infrastructure of innovation for the success of the company. Harper (2018) argued that corporate executives need to anticipate internal resistance to incubators, and respond by building governance infrastructure to align leaders around their roles in making innovations a success.

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Moreover, Kieżel (2016) identified innovative solutions implemented by retail banks in the context of assumptions of the paradigm of relationships and features of product orientation. He ascertained that banks aim at providing customers with a broad scope of benefits while applying active innovative policy and offer individualization, frequently on the basis of new technologies. Even if it is convergent with the assumptions of the paradigm of relationships, it should be indicated that some banking products are based on advanced solutions that may surpass real market demands. In this case, such operations are closer to the implementation of assumptions of product orientation.

Jahanmir (2018) study of the determinants of late adoption of digital innovations and selection of five variables: a) attitude toward a technology, b) negative word of mouth about the technology, c) global brand image, d) consumer innovativeness, and e) lead-user profile show that with exception of negative word of mouth, all the variables have a negative effect on the probability of moving on the adoption scale from late to early adopter. Furthermore, increasing the positive attitude of consumers toward a technology such as reducing consumers' skepticism could be more effective to accelerate the rate of adoption than projecting the global image of the company. Late adoption will allow companies to develop technologies that diffuse faster and will help them to follow marketing, sales strategies, and new product development for enhancing digital innovations.

Kulbyte (2018) argued that customers no longer base their loyalty on price or product. Instead, they stay loyal with companies due to the on-demand experience they receive. Cross-device shopping via a wide range of channels has made it difficult for companies to maintain consistency. In order to provide delightfully optimum experience, technologies and processes will have the need to change, Fig. 9.



Fig. 9. Customer Experience Survey [Credit: Genesys].

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Zhan (201) study explored how big data is used to enable customers to express unrecognized needs particularly with increasing application of big data analytics for product development, operations and supply chain management. Managers need to identify how to establish a customer-involving environment that encourages customers to share their ideas with managers, contribute their knowhow, fiddle around with new products, and express their actual preferences. This study argues that big data offers customer involvement so as to provide valuable input for developing new products and services with integrated market strategy.

# FINDINGS, ANALYSIS AND RESULTS

Firms are to focus on using data-driven digital transformation with a goal to evaluate opportunities. An effective action plan needs to be developed based on the evidence-based roadmap, Fig. 10.

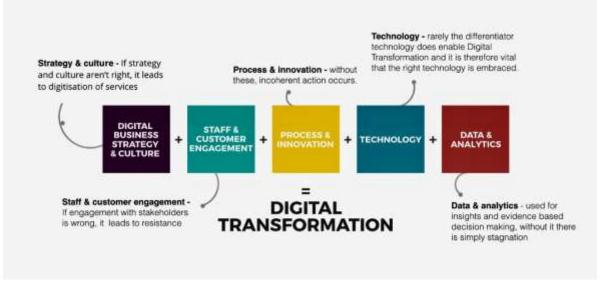


Fig. 10. Digital Transformation [Credit: Ionology]

Liu et al., (2017) argued that the impact of products' physical appearances, marketing mix, the design on demand, and consumer preference effectiveness depends upon the effectiveness of segment proto-typicality brand consistency and cross-segment mimicry.

O'Cass and Sok (2014) argued that although the combinations of product innovation, marketing capability, and intellectual resources influences the ability of small and medium-sized enterprises to meet or exceed performance goals however a high level of resources cannot compensate for a low level of capabilities.

A recent (EY, 2018) report highlights that focusing on productivity alone is not enough to generate a competitive advantage, and companies need to adopt a more cohesive, end-to-end approach to integrating digital initiatives.

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To capture or generate value, firms have to continuously introduce a new open-ended value landscape for digital innovation. To understand this landscape, Hendfriddson (2018) distinguished between design recombination and use recombination and explored how they play out together and redirect the attention from products and services toward digital resources.

The building-blocks of digital innovation are the digital resources offered and assembled through design recombination and recombination potentially to simultaneously be part of multiple value paths.

It is imperative for firms to understand customer needs and satisfaction for designing of digital products and services. Product innovation and marketing innovation are to be complementary in all industries for product success.

## **Practical Implications to Research and Practice**

Digital maturity and a modern product marketing culture (Rashid, 2017) are necessary for a successful digital transformation in any business organization for meeting customer demands; process orientation, and innovation in business.

To generate optimum value, customer-centric approach to digital transformation has become a necessity. This research study suggests that digital leaders need to focus on creating a customer-centric approach at every touch point. The company's focus on the customer allows innovation satisfying customer needs to increase revenues and profits.

An online survey of nearly two hundred fifty senior-level executives of financial services (Ey 2018) firms highlighted that customer-centricity, clarity of responsibility, an unwavering commitment to talent, multi-dimensional focus and marketing innovation are crucial for future digital innovations.

Companies that do not provide their employees with the right tools and insights for making marketing decisions will lose competitive advantage. The returns on digital transformation investments reflect the complex links between customer and the product innovation. The broader the market transformation strategies and the more holistic the approach, the bigger the payoff is likely to be.

# RECOMMENDATIONS

The companies have to position their innovation to transform their organizations in order to achieve the agility, speed, and digital success (Ohr, 2018) for:

- Managing relations relationship with the startup community with seed investments.
- Overseeing labs, accelerators, and digital incubators to support initiatives.
- Developing business development ventures to generate new revenues.
- Focusing on business transactions as the Digital Innovation grows.

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- Globalizing and orchestrating innovation ecosystems strongly.
- Defining more differentiated business assignments and new models of cooperation internally and externally.
- Focusing on the human factor with ideation and prototyping for greater output.
- Integrating digital innovation units with incremental innovation.
- Focusing on scaling with radical and disruptive innovation impacting the intended digital transformation of the core business.

Data from BCG (2018) report shows that support for a radical approach to innovation is getting stronger. Strong innovators are much more likely to pursue disruptive or radical processes and cultures governing innovation projects focused on customer needs and market strategies.

# CONCLUSIONS

Technology-based product and brand innovations are lifting the living standards in the nation's economy. The impact of brand presence in virtual worlds on consumers' perceptions of brand innovativeness for product-oriented and service-oriented companies. Results from a Prospopec and Goel (2011) study show that the consumer's perception of innovativeness significantly decreases with brand presence in the virtual world for product-oriented companies but significantly increases for service-oriented companies.

The dynamic capabilities not only creates value creation but also value capture. Teece (2018) argued that innovation capabilities, environmental scanning and sensing capabilities, and integrative capabilities for ecosystem orchestration are crucial. Helfat and Raubitschek (2018) argued that dynamic capabilities can enable firms to create and capture value by building ecosystems and designing appropriate business models.

The product design becomes valuable to customers with intimately understanding what the customers want and need. For visibility and control, the product creations need to fully understand the interfaces, and ecosystems, to business models and public policy requiring a cultural shift. Digital innovation will become the driving force behind all business strategy, and insightful digital products becoming an essential part of the business framework in a customer-centric world.

For higher levels of customer empowerment and experience merely relying on customer relationship management and digital transformation is suicidal. A broad thinking framework and systematic design approach have become a necessity not only for the new products development but also for brand enhancement and higher market share.

## Limitations and Avenues for Future Research

Companies are increasingly experimenting with design thinking initiatives in which they invite their user communities to generate new product ideas. The promise of design thinking is unique in

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pointing out that marketing the source of design to customers might bring about an incremental increase in product sales.

The labeling of design thinking for new products marketing as customer screened at the point of purchase versus not mentioning the specific source of design—may not increase the product's actual market performance. The effect of consumers perceives customer screened products to be further explored that addresses their needs more effectively to be considered superior in generating promising new digital products that customers want.

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