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Executive's Cognitive Factors with Reference to New Product Launch Success in Pharmaceutical Industry

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Abstract

New product launch plays a vital role in the pharmaceutical industry. The study identifies the key determinants of new product launch success, examines their role and impact on launch performance and links them to the different stages of product life cycle in the pharmaceutical new product launch context. In order to determine the factors of new product launch success in the pharmaceutical industry, the factors are as follows: Market Orientation, Relationship Orientation, Product Advantage, Strategic Choices, Tactical Decisions, Sales Force Management, Relationship Marketing Activities, Customer Acceptance, New Product Launch Success, etc. The sample size collected for this study are 115 respondents working in Sales, Marketing and Marketing in different Pharma Companies in India. For the study, tools used are Reliability and validity, Frequency analysis, Descriptive statistics, *t*-test, ANOVA and Correlation using SPSS. Smart PLS software also used for drawing the graphical user interface variance-based structural equation model (SEM) using the partial least squares (PLS) path analysis modelling method for the study. The research design used for the study is descriptive research design. The results of the study show that the Pricing of the Product is a very crucial decision to be taken by the company and pre-launch activities like competitor information, KOL identification and discussions, and a launch plan is crucial.

Keywords: Product launch, Pharmaceutical, PLS

1. Introduction

"You can't do today's job with yesterday's methods and be in business tomorrow" – Gerald Marion. This is true of Pharma Industry where changes are happening every day. Newer drugs, new combinations aimed at convenience and compliance, new dosage formulations. Companies have to "BE IN THE MARKET ALWAYS" and adapt themselves to the changing trends in the Pharma Industry. The Pharma Industry is an ever-growing industry in India. The Industry has been growing consistently over the years in India. In the earlier years, the Industry was dominated by Multi-National

Companies like Glaxo, SKF, Abbott, Merck, Bayer, etc. The period from 1980s saw a change with Indian Companies becoming aggressive and started growing very fast. The few Indian Companies which became very prominent are Ranbaxy, Cadila, Cipla, Dr. Reddy's. Pharma Marketing is unique and different from other marketing. The following are the significant differences

1. In Pharma Marketing is Indirect Marketing as sales happens through promotion to doctors, who are not always end users.
2. In Pharma Marketing the customer is more knowledgeable than the company person, who is usually arts or science graduate.
3. In Pharma Marketing there may not be any tangible product but only the perceived benefits have to be experienced.

2. The first mover advantage

The new product launch also depends on the time of launch. The first one gets always a better recognition. In 1995, we launched Nimulid (Nimesulide) in Panacea Biotec which was a smaller company that time. Success of Nimulid changed the profile of the company and fuelled growth of the brand and the company. When bigger companies launched also Nimulid remained market leader and started growing faster. There are lots of new molecules/brands which have failed and affected the image and growth of the company. For Ex, Rofecoxib was launched by many companies but subsequently was banned due to side effects it affected the companies who had invested a lot of money and time on this product. The launch of new products has become a very crucial factor for a company's growth and survival. Today, the companies are looking at this "Don't find Customers for Your Product, Find Products for Your Customers" – Seth Godin "The secret of Change is to focus all of your energy, not on fighting the Old but Building the New" Socrates. There has been no single rule which is there to ensure the launch of a new product. Steps to success of a new launch is still a million-dollar question to the Pharma Companies. This study is an attempt to find out what are the reasons for success or failures for new products. The data have been compiled from different levels of people from the industry in marketing and sales departments. The response includes feedback from top management, middle and front – line sales personnel which we feel will give us good inputs in our search to find out the possible "Cognitive factors responsible for Success of New Launches in Pharma Industry".

3. Review of literature

Iran J Pharm Res, **Nazila Yousefi, Gholamhossein Mehralian, *Hamid Reza Rasekh, and Mina Yousefi (2017)** state that, "the current market scenario there are several strategies for new product development. However, almost half of the resources are spent on products that may fail. The results of the study contribute to create base line information for pharma industry for more effective budget allocation in new product development".

Raja and Geetha (2017) state that, "the study helps us to understand the causes of failure in new product development. This study further gives the solution to avoid failures with specific inputs to marketing employees to solve the problem".

Gomes, Bustinza, Vendrell-Herrero, and Baines (2017) state that, "the study explains the intersection of strategic partnerships, R&D intensity and successful product – as service innovation. The results reinforce the importance of strategic partnerships to successful product-service innovation in high R&D industries".

Corstjens, Demeire, and Horowitz (2017) state that, "the quarterly data of 56 new ethical drug products launched between 1989 and 1996 were studied is found that the future success of the new product is deductible by the third quarter after launch. If the product does not show signs of success by third quarter its unlikely to be successful. Being the first and best in quality is important for success".

Cooper (2019) states that, "the article identifies the success factors into three categories, (i) captures the characteristics of new products such as best practices and nature of the product itself, (ii) category captures drivers of success at business innovation strategy and its R&D investments for new product development, the climate, culture and leadership, and (iii) category identifies the system and methods put in place for new product development". **Moosivand, Ghatari, Rasekh (2019)** state that, "the study focuses on pharmaceutical supply challenges and the dynamics of the variables in supply chain. It provides different policies to overcome the challenge. The results can give a clear view for decision making and highlight the importance of feedbacks in the long term and its effects on organization decision and goals."

Bignami, Mattsson, and Hoekman (2019) state that, "the innovation with the companies is generated by knowledge from external and geographically dispersed sources. The importance of geographic proximity depends on the knowledge transferred in R&D".

Zhao, Tan, Papanastassiou, and Harzing (2019) state that, "the paper shows the use of licensing behavior to strategies. The in-licensing and out-licensing agreement guide the development. The study provides avenues to target the licensing partners".

4. Research gap

A vast amount of research has focused on the general topic of New Product Launch including associated with launch and novel launch practices. However, very limited research has been directed towards relationship management and sales force management. The focus of this study is also to find out their expectations and satisfaction in both environments.

5. Need for the study

Healthcare in India has been growing very fast and the focus is shifting from treatment of diseases to therapies aimed at well-being of people. To meet this new and diversified demands, the industry has to innovate and bring new products to meet this changing demand. The launch of a new product involves months of planning, huge expenditure and investment of time and money for few months to few years of launch. The growth of the companies is dependent on the success of new products to gain better position in the pharma market and increase their market share. Success of new products will also increase the top line and bottom line of the company. Therefore, it is essential that we study the cognitive factors in success of the launch of new products. The business in the pharma industry is unique and different from other FMCG industry. In pharma industry, the customer (Doctor) is

not the end user of the product. Companies have to evaluate strategies to communicate to the doctor who to give the time of 30 s to 2 min to the representative of the company. Launch of new products also is in different categories: (i) Launch of new molecules, (ii) Launch if extension of current products or new dosage forms, and (iii) Launch of new products from nutraceuticals to bring in natural products with sufficient scientific information. The success of the strategy will depend on how effectively the company is able to communicate the features and benefits at the limited time.

6. Objectives of the study

- To identify the executive cognitive factor with reference to new product launch success.
- To examine the impact of cognitive factors on launch performance.

7. Methodology

The research design is the conceptual structure within which research is conducted; it constitutes the blue-print for the collection, measurement and analysis of data. The research design used in this study is descriptive research design. The sampling design used in this study is simple random sampling for collecting the data from respondents. The simple random sampling means is in which every item of the population equal probability of being chosen. The sample size is determined as 115. The primary data were collected with the help of a questionnaire consisting of 9 factors – Market orientation, Relationship orientation, Product advantage, Strategic choices, Tactical decisions, Sales force management, Relationship marketing activities, Customer Acceptance, and New product launch success. The structured questionnaire is used to collect the primary data from the employers of the organization. Responses were recorded along a five-point Likert scale ranging from 1 (strongly agree) to 5 (strongly disagree) for all the items in the questionnaire. Standard validated instruments taken from **Minna Matikainen (2015)** for measuring new product launch success in pharmaceutical industry towards Market orientation, Relationship orientation, Product advantage, Strategic choices, Tactical decisions, Sales force management, Relationship marketing activities, Customer Acceptance, New product launch success.

7.1 Reliability test

The reliability of the 9 variables used in the study was carried out using SMART PLS software. The alpha scores which greater than 0.7 is generally acceptable as sufficient accuracy for a construct (Nunnally, 1978) (Table 1).

TABLE 1. Reliability test

S. No	Variables	Cronbach (α) Value
1	Market orientation	0.939
2	Relationship orientation	0.925
3	Product advantage	0.937
4	Strategic choices	0.953
5	Tactical decisions	0.933
6	Sales force management	0.955
7	Relationship-marketing activities	0.937
8	Customer acceptance	0.911
9	New product launch success	0.947

7.2 Conceptual framework of the study

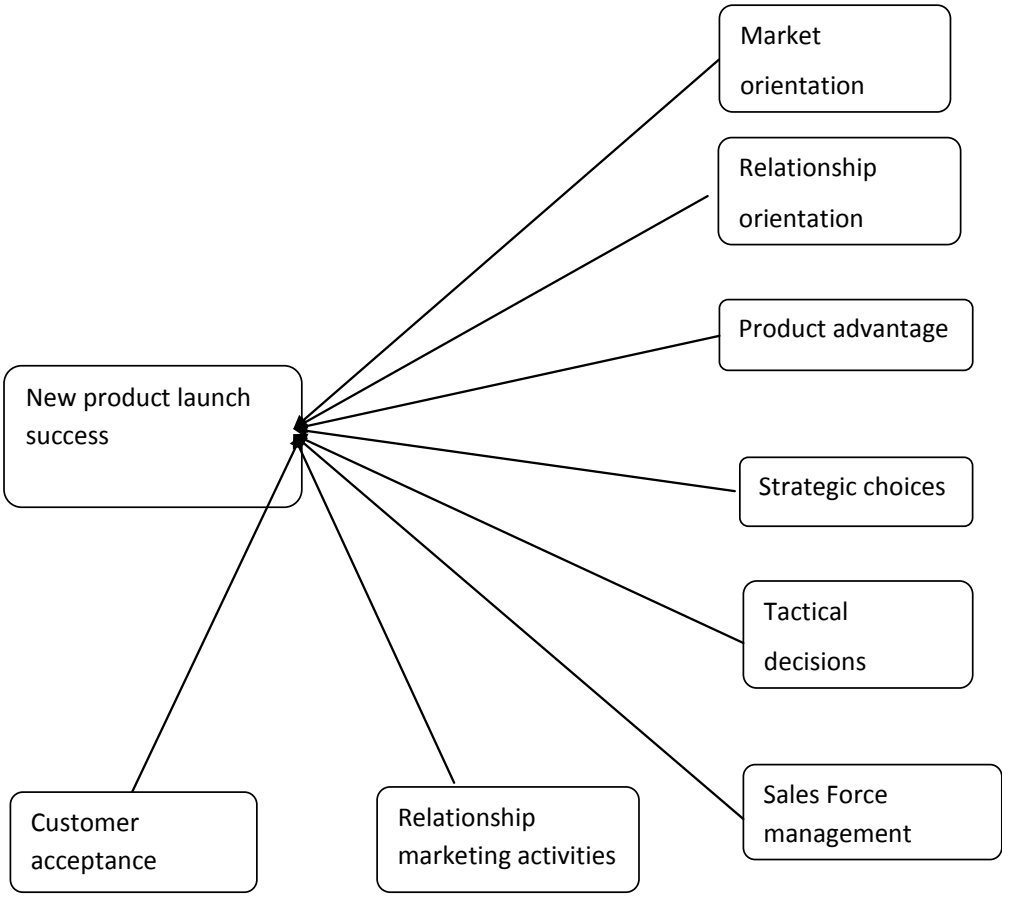

FIGURE 1. Conceptual framework of the study.

8. Hypothesis of the study

Hypothesis 1: The Relationship between Market orientation and New product launch success.

Hypothesis 2: The Relationship between Relationship Orientation and New Product Launch Success.

Hypothesis 3: The Relationship between Product Advantage and New Product Launch Success.

Hypothesis 4: The Relationship between strategic choices and New product launch success.

Hypothesis 5: The Relationship between Tactical Decisions and New product launch success.

Hypothesis 6: The Relationship between Sales force management and New product launch success.

Hypothesis 7: The Relationship between Relationship marketing activities and New product launch success.

Hypothesis 8: The Relationship between Customer Acceptance and New product launch success.

9. Analysis and result

9.1 Demographic variable

One hundred and fifteen respondents participated in this study. Out of the one hundred and fifteen respondents 109 (94.8%) belongs to male category and 6 (5.2%) to the female category. The education level of the participants was as follows: 73 (63.5%) respondents has completed graduation, 41 (35.7%) respondents has completed post-graduation and 1 (0.9%) respondents has completed doctorate. The age of the study of the respondents is as follows: 17 (14.8%) belongs to 20–30 years, 36 (31.3%) belongs to 30–40 years, 45 (39.1%) belongs to 40–50 years and 17 (14.8%) belongs to 50–60 years category. The occupation of the study of the respondents are as follows: 51 (44.3%) belongs to Marketing, 63 (54.8%) belongs to sales and 1 (0.9%) belongs to market research category. The experience of the study of the respondents are as follows: 11 (9.6%) belongs to up to 5 years, 13 (11.3%) belongs to 5–10 years, 32 (27.8%) belongs to 11–15 years and 59 (51.3%) belongs to more than 15 years category. From the above figure, comparing the male and female respondents working in the organization. Male respondents have the highest frequency than the female respondents. Comparing with the under graduation, post-graduation and Doctorate, respondents with under graduation degree are higher than the post-graduation and Doctorate respondents. Therefore, age of the respondents 40–50 years of the age group of respondents are higher than all the age groups. 20–30 years & 50–60 years of respondents has the lowest frequency compared with all the age groups. Therefore, occupation of the respondents is higher in sales and the respondents in market research has the lowest frequency compared with all other occupation. Therefore, the experience of the respondents is higher in more than 11–15 years as compared to all other groups and the respondents has the lowest frequency in up to 5 years compared with all other groups. Inference is drawn for the above figure for gender, degree and age (Figure 1).

9.2 Assessment on the measurement model

The measurement model consists of relationships among the conceptual variables and the measures underlying each construct. The data indicate that the measures are robust in terms of their internal consistency reliability as indexed by the composite reliability. The composite reliabilities of the different measures ranged from 0.947 to 0.963 which exceed the recommended threshold value of 0.778 (Table 2).

Cronbach's Alpha reliability test is used to examine the reliability of the measurement scale. Scales were analyzed in term of their reliability, by means of the internal consistency. According to **Nunnally (1978)**, Reliability which is less than 0.6 is considered poor, reliability test value that is in the range of 0.7 is considered acceptable, those more than 0.8–0.9 are considered very good and the closer the Cronbach's Alpha is to 1, from the table its find that all the Cronbach's Alpha values for the variables are greater than 0.7 which is in the acceptable range. The coefficient of determination (R^2 value) is a statistical measure of how close the data are to the fitted regression line. In other words,

TABLE 2. Measurement model

Variables	Items	Loadings	Cronbach Alpha	AVE	CR	R2
1. Market orientation	MO1	0.915	**0.941**	0.773	0.953	–
	MO2	0.910				
	MO3	0.904				
	MO4	0.893				
	MO5	0.770				
	MO6	0.873				
2. Relationship orientation	RO1	0.880	0.926	0.819	0.948	–
	RO2	0.908				
	RO3	0.946				
	RO4	0.884				
3. Product advantage	PA1	0.912	0.939	0.804	0.953	–
	PA2	0.863				
	PA3	0.897				
	PA4	0.877				
	PA5	0.932				
4. Strategic choices	SC1	0.899	0.953	0.810	0.962	–
	SC2	0.897				
	SC3	0.898				
	SC4	0.923				
	SC5	0.922				
	SC6	0.861				
5. Tactical decisions	TD1	0.865	0.933	0.751	0.947	–
	TD2	0.870				
	TD3	0.817				
	TD4	0.922				
	TD5	0.869				
	TD6	0.853				
6. Sales force management	SFM1	0.874				
	SFM2	0.908	0.954	0.815	0.963	-
	SFM3	0.925				
	SFM4	0.854				
	SFM5	0.940				
	SFM6	0.913				
7. Relationship marketing activities	RMA1	0.898	0.938	0.802	0.953	–
	RMA2	0.896				
	RMA3	0.907				
	RMA4	0.890				
	RMA5	0.886				
8. Customer acceptance	CA1	0.900	0.903	0.775	0.932	–
	CA2	0.873				
	CA3	0.840				
	CA4	0.907				
9. New product launch success	NPLS1	0.939	0.940	0.846	0.957	0.778
	NPLS2	0.919				
	NPLS3	0.908				
	NPLS4	0.913				

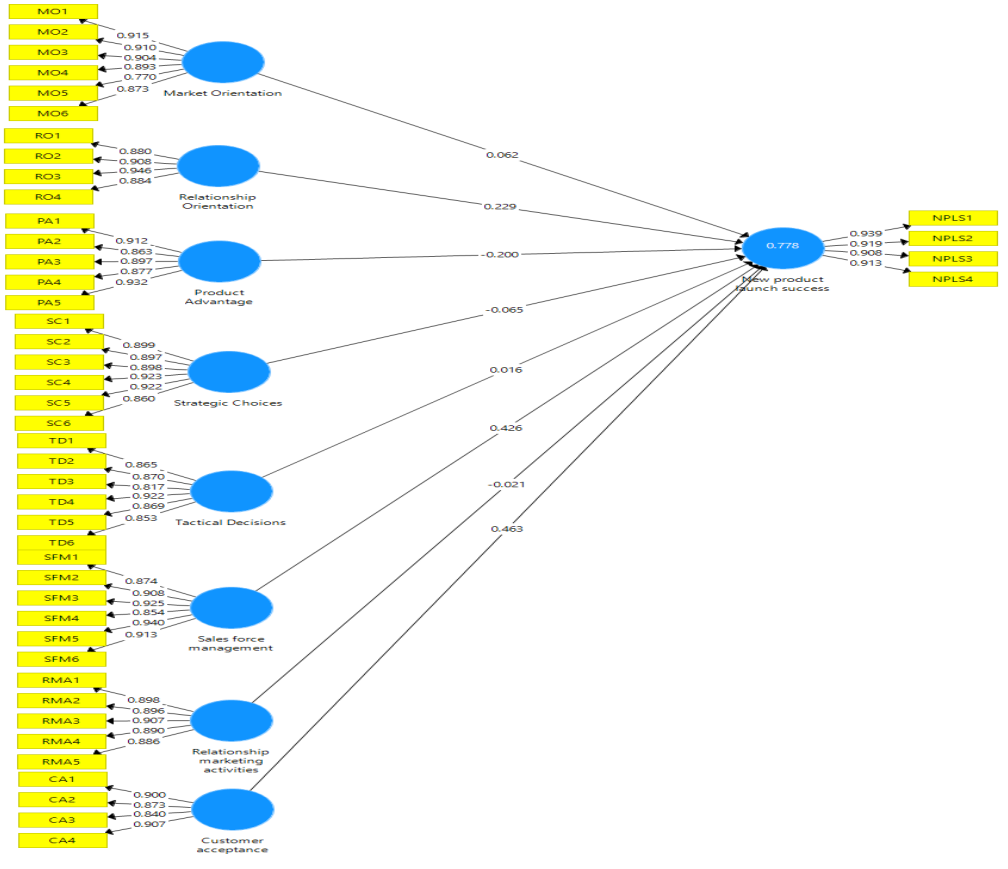

FIGURE 2. R-Square values.

R square is the square of the correlation between the response values and the predicted response value. The R^2 value ranges from 0 to 1. The higher the value, closer to 1, indicates higher level of predictive accuracy. According to the rough rule of thumb suggested by **Hair et al. (2013)**, R^2 values of 0.75 is substantial, 0.50 is moderate and 0.25 is weak. The New Product Launch Success is positively influenced towards (Market Orientation) with a path coefficient of 0.689. The *R*-Square value of New Product Launch Success is 0.778 it can be concluded that 77.8% of variation in New Product Launch Success of the sample as explained by New Product Launch Success towards (Market Orientation). The New Product Launch Success is positively influenced towards (Relationship Orientation) with a path coefficient of 0.262. The New Product Launch Success is positively influenced towards (Product Advantage) with a path coefficient of 0.281. The New Product Launch success is positively influenced towards (Strategic choice) with a path coefficient of 0.766. The New Product Launch Success is positively influenced towards (Tactical Decisions) with a path coefficient of 0.950. The New product launch success is positively influenced towards (Sales force management) with a path coefficient of 0.023. The New Product Launch Success is positively influenced towards (Relationship Marketing activities) with a path coefficient

of 0.911. The New Product Launch Success is positively influenced towards (Customer Acceptance) with a path coefficient of 0.007 (Figure 2).

Reflective measurement model's validity assessment focuses on convergent validity and discriminant validity. For convergent validity, researchers need to examine the average variance extracted (AVE). An AVE value of 0.50 and higher indicates a sufficient degree of convergent validity, meaning that the latent variable explains more than half of its Indicators variance. Convergent validity measures the degree to which items on a scale are in theory linked. A common rule-of-thumb is a loading greater than 0.6. In the outer model, it is necessary to observe the loading column. In this case, all items loaded on their constructs range from 0.6 to 0.8 indicating convergent validity. Each element in the principal diagonal is always higher than off-diagonal elements in their corresponding row and column. The pattern supports the measurement scales discriminant validity, as the components in the main diagonal are constantly higher than the off-diagonal components in their equivalent row and column. The discriminant validity is tested by exploring the average variance shared between a construct and its measures (AVE). According to Fornell and Larcker, the values which is higher than 0.50 are accepted.

9.3 Discriminant validity (Table 3)

Hypothesis decision based upon path coefficient and *t*-value (Table 4; Figure 3):

H1 (Hypothesis 1):

The Relationship between Market Orientation and New Product Launch Success is not supported, this is evidenced by the value of the (ß = 0.062, *t*-value = 0.420) since the *t*-value is lesser than 2 the hypothesis (H1) is Rejected.

H2 (Hypothesis 2):

The Relationship between Relationship Orientation and New Product Launch Success is not supported, this is evidenced by the value of the (ß = 0.229, *t*-value = 1.171) since the *t*-value is lesser than 2 the hypothesis (H2) is Rejected.

H3 (Hypothesis 3):

The Relationship between Product Advantage and New Product Launch Success is not supported, this is evidenced by the value of the (ß = −0.200, *t*-value =

TABLE 3. Discriminant validity

Factors	CA	MO	NPL	PA	RO	RMA	SFM	SC	TD
CA	0.880								
MO	0.796	0.879							
NPL	0.842	0.770	0.920						
PA	0.795	0.883	0.713	0.897					
RO	0.750	0.898	0.763	0.826	0.905				
RMA	0.844	0.829	0.770	0.780	0.741	0.896			
SFM	0.871	0.874	0.846	0.841	0.832	0.884	0.903		
SC	0.771	0.925	0.748	0.847	0.886	0.849	0.863	0.900	
TD	0.805	0.914	0.780	0.865	0.897	0.843	0.892	0.932	0.866

TABLE 4. Hypothesis decision based upon path coefficient and *t*-value

Hypothesis	Relationship	Std beta	Std error	*t*-value	Decision
H1	Market Orientation -> New Product launch success	0.062	0.147	0.420	Not supported
H2	Relationship Orientation -> New Product launch success	0.229	0.196	1.171	Not supported
H3	Product Advantage -> New Product launch success	−0.200	0.180	1.114	Not supported
H4	Strategic Choices -> New Product launch success	−0.065	0.211	0.310	Not supported
H5	Tactical Decisions -> New Product launch success	0.016	0.257	0.063	Not supported
H6	Sales Force Management -> New Product launch success	0.426	0.203	2.102	Supported
H7	Relationship Marketing Activities -> New Product launch success	−0.021	0.193	0.108	Not supported
H8	Customer Acceptance -> New Product launch success	0.016	0.162	2.865	Supported

1.171) since the *t*-value is lesser than 2 the hypothesis (H3) is Rejected.

H4 (Hypothesis 4):

The Relationship between strategic choices and New product launch success is not supported, this is evidenced by the value of the (ß = −0.065, *t*-value = 0.310) since the *t*-value is lesser than 2 the hypothesis (H4) is Rejected.

H5 (Hypothesis 5):

The Relationship between Tactical Decisions and New product launch success is not supported, this is evidenced by the value of the (ß = 0.016, *t*-value = 0.063) since the *t*-value is lesser than 2 the hypothesis (H5) is Rejected.

H6 (Hypothesis 6):

The Relationship between Sales force management and New product launch success is supported, this is evidenced by the value of the (ß = 0.046, *t*-value = 2.102) since the *t*-value is greater than 2 the hypothesis (H6) is Accepted.

H7 (Hypothesis 7):

The Relationship between Relationship marketing activities and New product launch success is not supported, this is evidenced by the value of the (ß = −0.021, *t*-value = 0.108) since the *t*-value is lesser than 2 the hypothesis (H7) is Rejected.

H8 (Hypothesis 8):

The Relationship between Customer Acceptance and New product launch success is supported, this is evidenced by the value of the (ß = 0.016, *t*-value = 2.865) since the *t*-value is greater than 2 the hypothesis (H8) is Accepted.

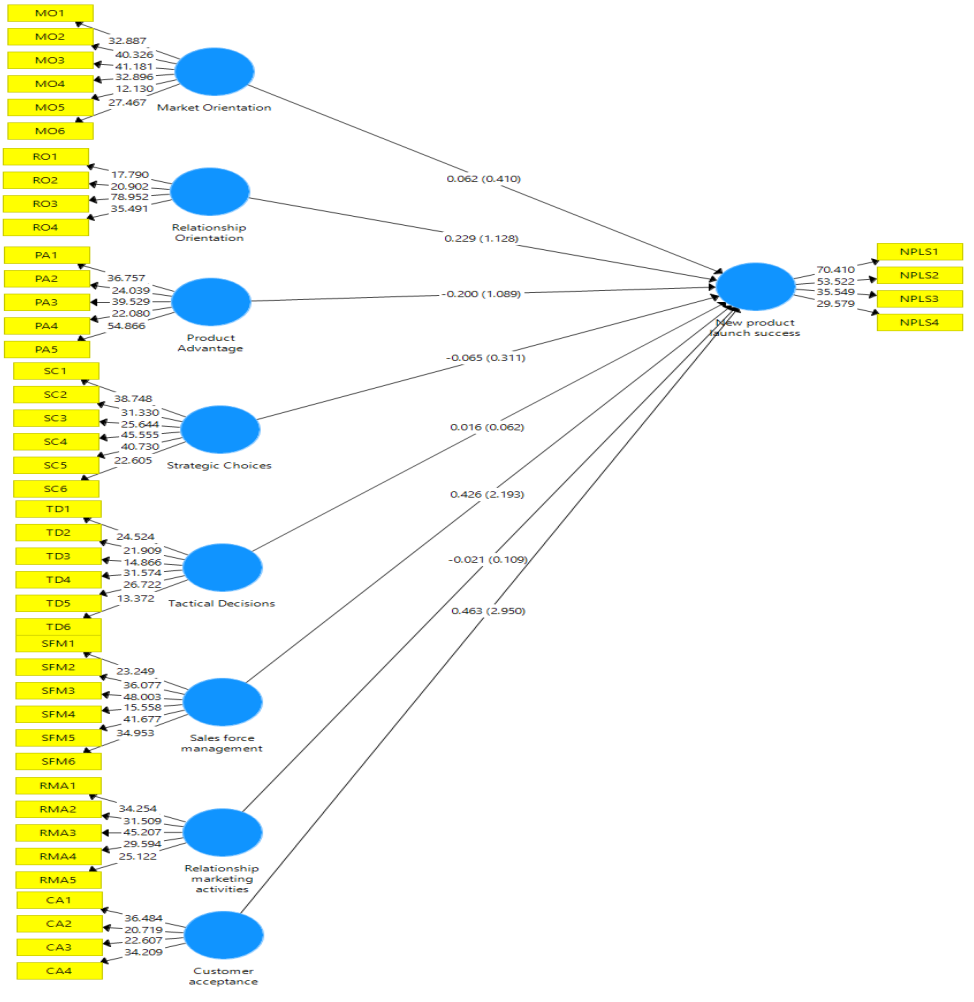

FIGURE 3. Hypothesis decision based upon path coefficient and *t*-value.

10. Conclusion

From the data analysis, few points stand out to be crucial for success of launch of new product: Pricing: "Pricing is actually pretty simple...Customers will not pay literally a penny more than the true value of the product." – Ron Johnson Fixing the Right Product for the Price becomes very crucial for success of a product. The company should take into consideration the cost of therapy for the product and justify the same if they decide skimming pricing. Very high prices deter the physicians from supporting as they are apprehensive whether the patients may buy or not. So right price is the major decision. **"The aim of marketing is to know and understand the customer so well the product or service fits him and sells itself."** *Peter Drucker.* Relationship Marketing: Acceptance by KOL – Identification and Building relationship with the KOL by the Company is very important. Acceptance of the Product by Key Opinion Leaders is found to be next important thing. These KOL have many followers and hence once they Like the Product the Product will be taken up AQ4

by many more. So building up KOL and involving them in Prelaunch and follow of these KOL past Launch is very Important. "Working Hard for something we love is Passion" Simon Sinek. Create the Passion in them. Co-ordination of activities of the sales staff: Once the launch plan is made its crucial to execute the same perfectly to ensure success. The execution of sales force ensure transfer of communication effectively to the physicians and active follow up of KOL leads to success. The success of Launch of a New Product is determined by the Tactical Decisions of the Company like – Branding, Pricing, launch plan and execution and followed by Availability. The four Ps continue to remain important – Product, Price, Promotion and Place (availability) Relationship Marketing like Building and maintaining a Team of KOL and involving them in Pre- and Post-launch activities is important. Sales force Management – Allocation of Resources, Training people on the Launch strategy and communication have to be ensured. Sales-people have to made accountable for success and should be Incentivized for good performance.

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