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Validation of the Pattern of Digital Marketing Capabilities Affecting Product Development

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Abstract

Purpose: Due to the importance of creating competitive advantages, the present study was conducted with a view to validating the pattern of digital marketing capabilities affecting the development of new Abadan petrochemical products. The present research is applied in terms of purpose and has been done with a survey method.

Method: The type of research is quantitative. The data collection tool was a questionnaire with 50 questions. Confirmatory factor analysis was used for the validation of the questionnaire as well as Cronbach's alpha coefficient.

Findings: Findings showed that the value of confirmatory factor analysis (t-value) for all 5 paths of the model is greater than 1.96 and the significance of the test is less than 0.05, so with a 95% confidence level causal factors affect the main category (marketing capabilities for new product development) by 0.705; The main category (marketing capabilities for new product development) has an impact on strategies of 0.379; Intervening factors affect strategies by 0.129; Underlying factors affect strategies by 0.457; Finally, strategies have an impact on outcomes of 0.849

Conclusion: The results show that the innovation, customer orientation, marketing technologies improvement, research and development capabilities

and communication capabilities are confirmed. Also they emphasized as causal dimensions and the basis of digital marketing. Finally, the board diversity is confirmed as the underlying dimensions and platform of digital marketing.

Keywords: Digital Marketing, Product Development, Accreditation, Abadan Petrochemical Company.

Introduction

Most of the world's leading industries are fully aware of the fact that the most important factor that makes them superior in a competitive market is the ability to continuously design and market a new product faster and more efficiently than other competitors. Today, organizational survival depends on the tendency towards new products and the use of methods to create new products. At present, with the advancement of new technologies, we can witness the increasing competitiveness of organizations, the emergence of new production sciences and equipment, as well as fundamental changes in the needs and tastes of customers; The   process of making new products is confronted with new challenges (Mo et al., 2016). Also, because of the risks involved in launching new products, companies must constantly think about improving the new product development process. In recent years, many researches have been done into the effectiveness of new product development processes and various models have been proposed to systematize these processes (Ozdemir et al., 2019).

New product development is a vital resource for an organization's competitive advantage that will enable companies to create a competitive advantage, create barriers to entry, new markets, and ultimately increase revenue and benefits for companies. There is a general classification of a new product definition that is actually used to identify a new product.

However, numerous studies show that the failure rate of new product development has been a major problem in many companies. This has raised concerns in organizations as to develop new products. Recent researches suggest that new product success rates are initially less than 60%- 54% for the United Kingdom, 59% for the United States, 59% for Japan, and 49% for Spain (Gonzalez & Palacios, 2002). Given that the failure of a new product in practice entails huge costs for organizations, so the need for planning with a competitive approach has led companies to adopt appropriate approaches towards competition (Soltani Fesghandis et al., 2016). In most industries, successful development and commercialization of products are done with a competitive approach and attention to the main competencies of the company. Growth and development also depend on the ability to introduce the product to the market at the optimal time (Cooper, 2001). Research shows that innovation to make a new product for companies, on average, takes three years and the cost is approximately equal to

27.5% of the company's sales from the production of the first product to the end of sales (Cooper, 2013). Identifying the success factors in new product development in the form of business strategies has led researchers to conduct extensive research in this field. Research related to examination of the factors affecting the success of new product development shows different results. Cooper believes that the key factors for success in the new product development process in terms of market and product are as follows (Cooper, 2005): proper market orientation, market attention, product and customer focus; focus on providing a world-class product, having an international orientation in design, development and marketing processes (Mo, 2015).

Capabilities, to the extent that they exist in the procedures by which individuals interact with each other and the decisions they make in the organizational context, do not exist within individuals and do not come from the individual. Capabilities are a complex set of cumulative skills and knowledge applied through organizational processes, enabling companies to coordinate activities and utilize their assets. These capabilities enable the company to add value to its goods and services, to accept market conditions, to take advantage of market opportunities, and to see competitive threats (Dee, 1994: 30-31).

One of the most important sources of value for companies is their marketing capabilities. In explaining this type of capability, it should be said that marketing is the only business activity whose main role is to understand the needs, demands and preferences of customers and satisfy their needs in a better way than competitors. Marketing capabilities can be assumed as the organization's ability to understand the market and communicate with the customer (Dey, 1994, citing Mo et al., 2016). Digital marketing capabilities are integrated processes that are designed to apply collective skills, knowledge and resources of the company and identify market needs and improve the value of the company's goods and services, and the company is able to adapt itself to changing market conditions and use market opportunities to avert competitive threats. Digital marketing capabilities reflect a company's unique capabilities in identifying target markets, strategies, and emerging market blends that maintain loyal customer relationships (Zhang, Jiang, & Zhu, 2015).

On the other hand, considering the nature of markets for oil and gas and petrochemical products and the nature and structure of foreign

markets for petrochemical products due to various factors such as sanctions, entry of foreign competitors in the market, etc., paying close attention to product performance and products in the market, especially new products, is very important for these companies. Iran's petrochemical industry is one of the major industries in the country that, due to its shortcomings and problems, is in dire need of innovation and development of its activities in domestic and foreign markets.

In this regard, petrochemical companies, like most leading global companies   in the oil and gas industry, are fully aware of the fact that the most important factor that makes them superior in the domestic and global competitive market, is the ability to sustain the design and launching of new products to the market faster and more efficiently than the other rivals. Today, organizational survival depends on the tendency towards making new products and the use of methods to create new products. With the advancement of technology, the increasing competitiveness of organizations, the emergence of new production sciences and equipment, and fundamental changes in the needs and tastes of customers, manufacturing new products is confronted with new challenges. Also, because of the risks involved in launching new products, companies need to constantly think about improving the new product development process. The petrochemical industry is also one of the key and valuable industries in our country and the   necessity of conducting applied research to improve its performance is of great account in terms of implementation   on a national scale. Therefore, the extreme importance of this research necessitates the development of a model of digital marketing capabilities affecting the development of new petrochemical products in Abadan, as one of the most important petrochemical industries in Iran, so that some sagacious and scientific solutions can be presented to the managers of petrochemical industry in order to improve digital marketing capabilities that can increase the manufacture of their products that will in turn result in the increase of competitiveness in foreign markets. On this score, this study seeks to answer the following question: "what is the pattern of digital marketing capabilities that affects the manufacture of new Abadan petrochemical products?"

Literature Review
The researcher analyzed the content of 60 English and Persian articles from Ebsco databases, Proquest Dissertations Database, Emerald

database and also searched in authoritative trustworthy search engines such as Google Scholar, Bing, etc. and by referring to internal databases like Irandoc (Iran Information and Scientific Documentation Center), Noormags, Magiran and Namamatan and reading most of the domestic publications and books in the field of digital marketing with topics and phrases such as marketing, digital marketing, digital marketing capabilities, product development, research etc. extracted the ones that were more similar to the present study. The researches in Table 1 are consistent with this research in terms of subject area:

Table 1. The Taxonomy Table of Research

Researcher (year)	Title	Method	Results
Salimabadi & Salehi & Heidari Kia (2019)	The effect of knowledge and experience of marketing staff and exporting company, logistics capability, production and development of products and export functioning on the mediating role of digital marketing planning capabilities and distinctiveness in services	Quantitative-descriptive-survey	Experience and knowledge of marketing staff and exporting company, logistics capability, production capability and product development capability marketing planning capability, service distinctiveness and export functioning, as well as digital marketing planning capability and service distinctiveness capability on the company's export functioning.
Jokari & Rezaei Dolatabadi (2018)	Evaluating the role of dynamic marketing capabilities and modeling digital marketing capabilities in company performance (Case study: Isfahan Chamber of Commerce member companies)	Applied descriptive correlation type	There is a significant relationship between dynamic marketing capabilities and company performance as a moderator of market orientation and processing of market strategies. Also between modeling marketing capabilities and company performance with the role of market orientation moderator and processor of market strategies. Digital marketing and company performance have a significant impact.

Researcher (year)	Title	Method	Results
Karami & Amini Lari (2018)	Design and formulation of digital marketing strategies for petrochemical products using mixed marketing tools	Quantitative descriptive-survey	In this research, digital marketing strategies of petrochemical products have been designed and developed using mixed marketing tools and it has been concluded that product improvement capabilities, pricing capabilities, distribution capabilities and capabilities to improve promotions and virtual advertising in these plans are not effective.
Nosrati and Taghizadeh (2017)	New product development and the role of market orientation, absorption capacity and digital marketing capabilities	Quantitative-correlation	The results show that market orientation through accurate customer identification, market capability with a focus on pricing, distribution channels, market planning implementation and absorption capacity also contribute to the success of product development and manufacture through the acquisition of marketing knowledge of the organization.
Panizzon et al. (2020)	Key determinants of new product development and manufacture ability for international markets: An experimental study of Brazilian export companies	Quantitative-correlation	The results show that NPDA explains 79% of these determinants of their role in new product development and manufacture. Model validation supports an emerging framework and supports how to identify these five key success factors: innovation capability, customer orientation capability, marketing technology improvement capability, R&D capability, and communication capabilities.
Ozdemir et al. (2019)	Stakeholder collaboration for corporate innovation in new product development: The moderating role of	Quantitative-correlation	While securities reduce the likelihood of shareholder involvement during technological turmoil, these partnerships increase corporate innovation for corporations with

Researcher (year)	Title	Method	Results
	legal papers and operational links		operational links. In addition, stakeholder collaboration improves company innovation under technological turmoil and enhances company performance through new product presentation.
Mu et al. (2018)	Digital marketing capability from outside to inside and company performance	Quantitative-survey	Modeling digital marketing capability outside the company along with internal marketing capability and strategic flexibility, provides a more accurate picture of the company's performance results and increases the effectiveness of digital marketing capability logic according to the company's functioning. It has also been shown that digital marketing capability outside the company only affects the positive performance of the company while transformational leadership and employee activity are relatively high.

Method

This research is applied in terms of purpose and has been done with a survey method. The data collection tool was a questionnaire with 50 questions. The statistical population of the study consisted of senior managers of Abadan Petrochemical Company with more than 15 years of experience and high academic degrees to determine the validity of the scale developed for the digital marketing capabilities model for new product development and manufacture in Abadan Petrochemical company based on simple random sampling.

The model based on its validation in this research draws on the qualitative data method of the foundation with the tool of collecting in-depth interviews, generally with a retrospective description of a phenomenon provided by the interviewees. In order to create focus and increase the level of credibility and reliability in interview design, Spicard (2010) proposed approach was used to relate interview

questions to research questions and to determine a useful framework for interviews. To check the internal validity and reliability of interviews, pluralism, pluralism theory, long-term observation in the research site or repeated observations of a similar phenomenon, receiving the opinion of colleagues, putting aside prejudices, minimal intervention in the description and vice versa have been taken into account. First, open coding was done and then axial coding or categorization of open codes was carried out.

The researcher tried to categorize, conceptualize and approximate to open codes according to the repeated reviews of the interviews conducted and their scrutiny, in relevant categories concerning the phenomenon of capability. A total of 19 central codes were resulted from the classification of open codes and their organization and elimination of duplicate and similar items in terms of appearance and meaning. In the next step, the selected codes were conceptualized and organized into five categories of causal factors, contextual factors, intervening factors, pivotal concepts, strategies and consequences, which can be seen in Table 2.

Table 2. five categories of causal factors, contextual factors, intervening factors, pivotal concepts, strategies and consequences of selected codes

Number	Digital Marketing Factors	Selected Codes
The first factor	Causal factors	Market measurement, monitoring and research
		Innovation
		Design of efficient digital marketing dimensions
		Technological structure
		Intelligent human resources management
The second factor	Underlying factors Or contextual factors	knowledge management
		Brand and branding
		Market orientation
		Customer orientation
The third factor	intervening factors	Improvement of relationships
		Creating an advantage for the customer
		Environmental factors
The fourth factor	Strategies	Improvement of the communication capabilities of the organization
		Improving the pivotal market

Number	Digital Marketing Factors	Selected Codes
The fifth factor	consequences	Engendering the agility of organization and processes
		Value creation
		Strong and perceptible presence in the market
		New products with steady customers
		Sustainable development of the organization

Axial and selective coding were performed in a round trip process. Analysis of the concepts of selected codes led to the formation of a theoretical model that included 5 categories of factors such as causal, contextual, intervening, strategies and consequences, the main phenomenon of which explains "digital marketing capabilities for new product development and manufacture in Abadan Petrochemical company ". The theoretical model of "digital marketing capabilities for new product development and manufacture" according to the dimensions of the paradigm model can be seen in Figure 1.

Confirmatory factor analysis and Cronbach's alpha coefficient were used for the validation of the questionnaire:

Table 3. Reliability of variables

Key variables	Cronbach's alpha calculated	Acceptable limit	Confirmation or disapproval of variable reliability
Causal factors	0/834	Above 0/7	Confirmation of reliability
Underlying factors	0/728	Above 0/7	Confirmation of reliability
Intervening factors	0/721	Above 0/7	Confirmation of reliability
The main category	0/834	Above 0/7	Confirmation of reliability
Strategies	0/867	Above 0/7	Confirmation of reliability
consequences	0/895	Above 0/7	Confirmation of reliability

Data analysis
Normality test

In this study, the Kolmogorov-Smirnov test was used to test the hypothesis of normality of the research data. If the significance level (sig) for the variables is greater than the test level (0.05), the data distribution is normal. The results of this test are shown in Table 4.

Table 4. Kolmogorov-Smirnov test

Indicators	Significance level	Test result
Causal factors	0.000	abnormal
intervening factors	0.000	abnormal
Underlying factors	0.000	abnormal
Strategies	0.000	abnormal
consequences	0.000	abnormal
Main category (marketing capabilities for new product development and manufacture)	0.000	abnormal

As shown in Table 4, the significance level for all variables was less than 0.05, which stands for abnormal distribution of data.

Measurement of validity and reliability criteria of the measurement model
These criteria include AVE and combined reliability (cp) and alpha, which are given in Table 5, and the results show that all variables have a criterion limit:

Table 5. Combined reliability and Cronbach's alpha as index reliability tests and mean variance extracted (Ave) as convergent validity test

Variable / Index	cr	AVE	α
causal factors	0/758	0/566	0/732
interfering factors	0/790	0/519	0/719
underlying factors	0/900	0/750	0/834
strategies	0/849	0/553	0/865
consequences	0/860	0/587	0/828
main category (marketing capabilities for new product development and manufacture)	0/911	0/515	0/898

Confirmatory factor analysis
In Table 6, the factors of items on the research structures are reported and the results show that all explicit variables are approved of at this stage due to the criterion limit, i.e. higher than 0.7, and are not removed from the model in the validation stage of the model.

Table 6. Factor analysis for explicit variables

Variable / Question	Factor load	The correct limit	Result	Variable / Question	Factor load	The correct limit	Result
1	0/744	More than 0.6	Confirmation	26	0/873	More than 0.6	Confirmed
2	0/783	More than 0.6	Confirmation	27	0/884	More than 0.6	Confirmed
3	0/799	More than 0.6	Confirmation	28	0/875	More than 0.6	Confirmed
4	0/754	More than 0.6	Confirmation	29	0/838	More than 0.6	Confirmed
5	0/713	More than 0.6	Confirmation	30	0/725	More than 0.6	Confirmed
6	0/741	More than 0.6	Confirmation	31	0/742	More than 0.6	Confirmed
7	0/729	More than 0.6	Confirmation	32	0/741	More than 0.6	Confirmed
8	0/752	More than 0.6	Confirmation	33	0/759	More than 0.6	Confirmed
9	0/806	More than 0.6	Confirmation	34	0/704	More than 0.6	Confirmed
10	0/831	More than 0.6	Confirmation	35	0/758	More than 0.6	Confirmed
11	0/792	More than 0.6	Confirmation	36	0/796	More than 0.6	Confirmed
12	0/755	More than 0.6	Confirmation	37	0/732	More than 0.6	Confirmed
13	0/796	More than 0.6	Confirmation	38	0/796	More than 0.6	Confirmed
14	0/745	More than 0.6	Confirmation	39	0/800	More than 0.6	Confirmed
15	0/751	More than 0.6	Confirmation	40	0/764	More than 0.6	Confirmed
16	0/721	More than 0.6	Confirmation	41	0/788	More than 0.6	Confirmed
17	0/788	More than 0.6	Confirmation	42	0/700	More than 0.6	Confirmed
18	0/710	More than 0.6	Confirmation	43	0/754	More than 0.6	Confirmed

Variable / Question	Factor load	The correct limit	Result	Variable / Question	Factor load	The correct limit	Result
19	0/773	More than 0.6	Confirmation	44	0/818	More than 0.6	Confirmed
20	0/727	More than 0.6	Confirmation	45	0/820	More than 0.6	Confirmed
21	0/746	More than 0.6	Confirmation	46	0/816	More than 0.6	Confirmed
22	0/796	More than 0.6	Confirmation	47	0/799	More than 0.6	Confirmed
23	0/757	More than 0.6	Confirmation	48	0/794	More than 0.6	Confirmed
24	0/866	More than 0.6	Confirmation	49	0/706	More than 0.6	Confirmed
25	0/783	More than 0.6	Confirmation	50	0/767	More than 0.6	Confirmed

Divergent validity

Table 7 shows the results of the cross-factor load tests as one of the divergent validity tests and Table 8 shows the results of the Fornell-Locker test as the second divergent validity test:

Table 7. Cross-factor loads to investigate divergent validity in the research model

Variable / Question	1	2	3	4	5	6
1	0.431	0.169	0.108	0.158	0.344	0.174
2	0.736	0.558	0.605	0.561	0.683	0.539
3	0.422	0.258	0.233	0.217	0.299	0.270
4	0.675	0.272	0.186	0.232	0.454	0.278
5	0.400	0.146	0.097	0.134	0.213	0.169
6	0.561	0.427	0.353	0.395	0.641	0.536
7	0.588	0.487	0.452	0.479	0.729	0.541
8	0.698	0.486	0.506	0.521	0.752	0.589
9	0.853	0.591	0.508	0.602	0.806	0.558
10	0.842	0.666	0.692	0.699	0.831	0.670
11	0.724	0.635	0.482	0.607	0.692	0.518
12	0.402	0.590	0.372	0.460	0.540	0.588
13	0.273	0.595	0.430	0.526	0.413	0.700

Variable / Question	1	2	3	4	5	6
14	0.468	0.701	0.606	0.635	0.637	0.754
15	0.622	0.833	0.701	0.763	0.669	0.818
16	0.611	0.804	0.774	0.725	0.685	0.820
17	0.567	0.884	0.699	0.736	0.654	0.816
18	0.491	0.561	0.724	0.691	0.577	0.799
19	0.481	0.592	0.717	0.629	0.524	0.794
20	0.147	0.317	0.727	0.370	0.320	0.506
21	0.179	0.353	0.572	0.377	0.337	0.467
22	0.355	0.269	0.528	0.272	0.262	0.276
23	0.696	0.497	0.669	0.441	0.509	0.395
24	0.645	0.391	0.550	0.376	0.300	0.196
25	0.751	0.625	0.860	0.545	0.593	0.504
26	0.721	0.499	0.546	0.598	0.548	0.554
27	0.288	0.134	0.056	0.836	0.173	0.197
28	0.109	0.110	-0.031	0.846	0.124	0.072
29	-0.071	-0.073	-0.232	0.116	-0.159	-0.114
30	0.206	0.127	-0.044	0.030	0.393	0.060
31	0.041	-0.146	-0.237	0.177	0.501	-0.085
32	0.605	0.696	0.526	0.624	0.761	0.552
33	0.321	0.457	0.301	0.425	0.705	0.336
34	0.667	0.866	0.694	0.711	0.751	0.635
35	0.484	0.783	0.545	0.653	0.794	0.599
36	0.594	0.873	0.724	0.697	0.748	0.646
37	0.655	0.758	0.884	0.740	0.816	0.727
38	0.547	0.656	0.875	0.710	0.786	0.656
39	0.511	0.598	0.838	0.682	0.812	0.640
40	0.380	0.457	0.408	0.625	0.886	0.523
41	0.539	0.613	0.613	0.742	0.583	0.927
42	0.494	0.645	0.614	0.741	0.572	0.738
43	0.518	0.648	0.680	0.759	0.617	0.704
44	0.558	0.674	0.642	0.704	0.560	0.739
45	0.489	0.644	0.661	0.758	0.580	0.789
46	0.490	0.708	0.686	0.796	0.540	0.712
47	0.182	0.164	0.153	0.232	0.073	0.217
48	0.593	0.613	0.514	0.696	0.548	0.663

Variable / Question	1	2	3	4	5	6
49	0.307	0.141	0.290	0.300	0.207	0.652
50	0.571	0.596	0.546	0.764	0.505	0.992

According to Table 7 above, all items have the highest factor load on their own structure, which shows that the research structures have a good divergence validity. Table 8 also reports the results of the second criterion.

Table 8. Fornell Locker test

Variable	1	2	3	4	5	6
Causal factors	0/605					
interfering factors	0/719	0/565				
Underlying factors	0/664	0/780	0/866			
Strategies	0/710	0/846	0/822	0/673		
consequences	0/709	0/752	0/705	0/752	0/622	
Main category (marketing capabilities for new product development and manufacture)	0/626	0/753	0/781	0/849	0/766	0/718

According to Table 8, the mean/average of the extracted variance of all research variables is less than 0.9.

Extracted model test

Figures 2 and 3 show the test results of the model to check the accuracy and validity of the model in significant and standard modes:
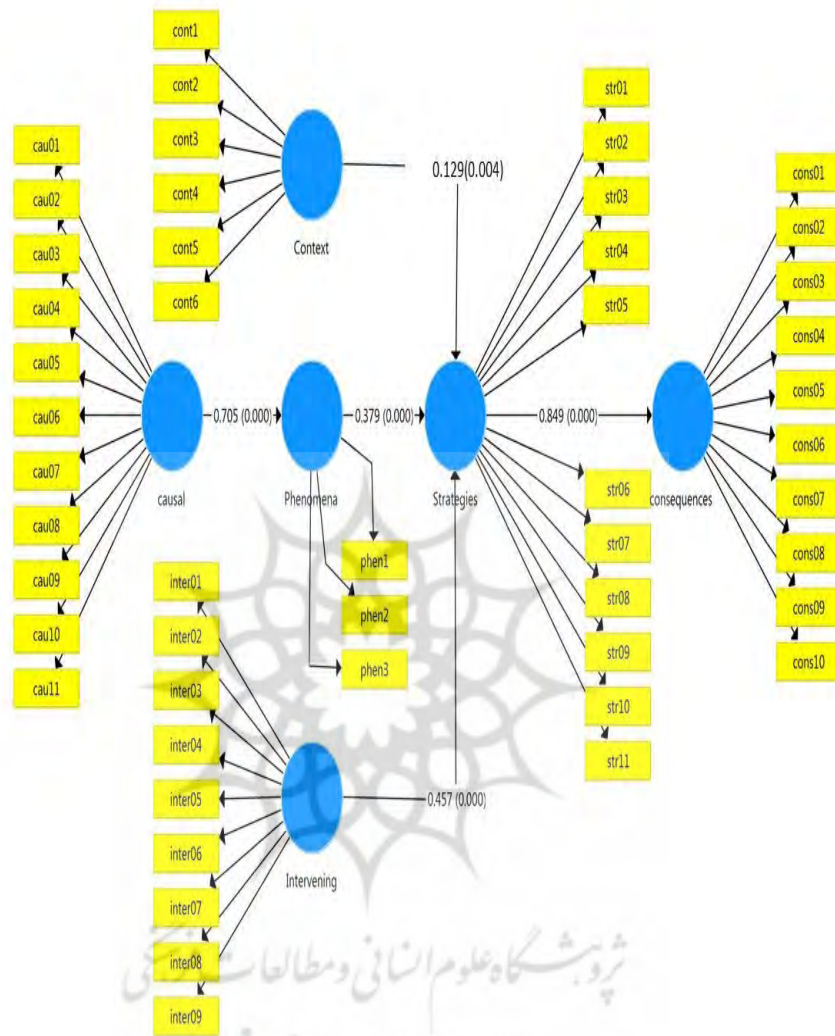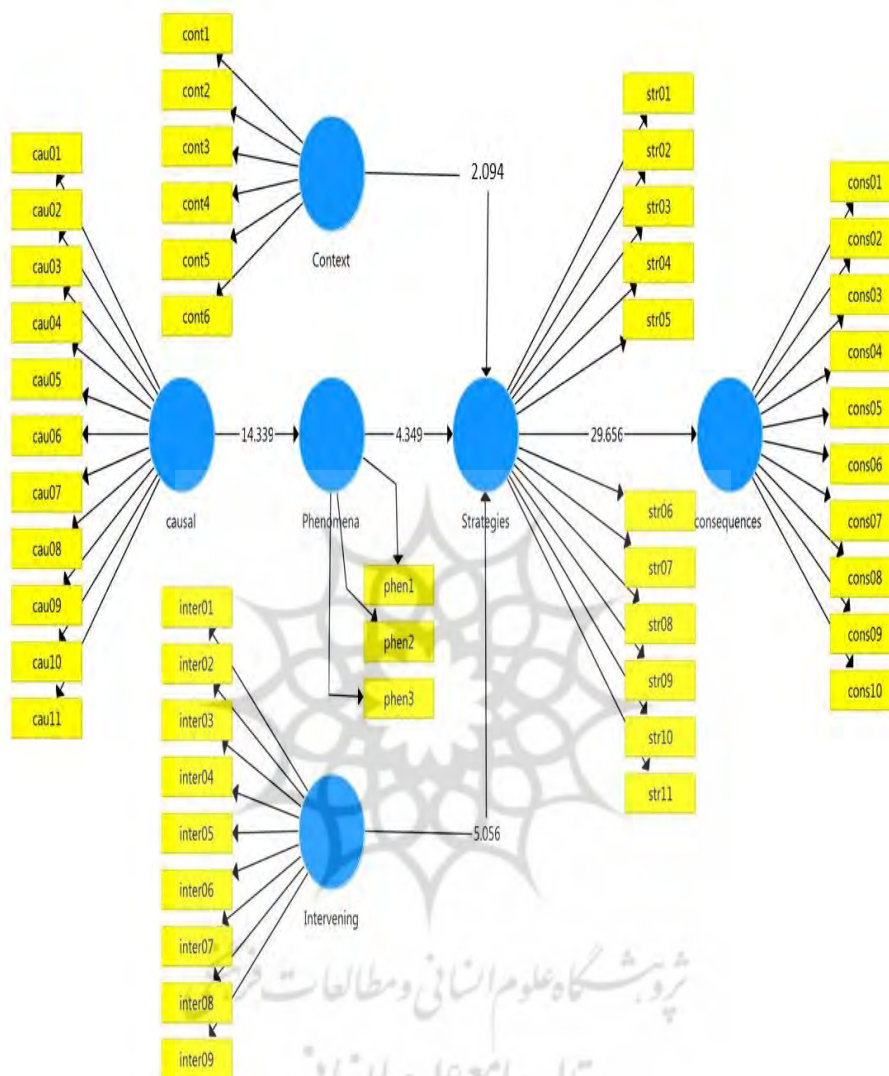
Figure 2. Model in standard mode

Figure 3. Model in significant state (T-value)

In the above figures, the T-coefficients for the research pathways are reported to have a T-coefficient of less than 1.96 and are therefore not significant.

Model test to check the accuracy and validity of the model
The following table (Table 9) shows the estimation of path coefficients and t-test to evaluate the accuracy and validity of the research model variables:

Table 9. Path coefficients and t-test to check the accuracy and validity of the model

Route Number	Description of the path for model validation	Statistics of T.	Path Coefficient	Significant Statistics	Result
1	Causal factors to the main category (marketing capabilities for new product development and manufacture)	24/335	0/705	0/000	Confirmed
2	The main category (marketing capabilities for new product development and manufacture) to strategies	4/349	0/379	0/000	Confirmed
3	Intervening factors to strategies	2/094	0/129	0/004	Confirmed
4	Underlying factors to strategies	3/056	0/457	0/000	Confirmed
5	Strategies to consequences	29/656	0/849	0/000	Confirmed

Based on the findings in Table 9:
- The value of confirmatory factor analysis (t-value) provided for the first path is greater than 1.96 and the significant value of the test is less than 0.05, so with a 95% confidence level of causal factors to the main category (marketing capabilities for new product development and manufacture), It has an impact of 0.705.
- The value of confirmatory factor analysis (t-value) provided for the second path is greater than 1.96 and the significant value of the test is less than 0.05, so with a 95% confidence level of the main category (marketing capabilities to develop and manufacture new products), It has an impact of 0.379 on strategies.

-        The value of confirmatory factor analysis (t-value) provided for the third path is greater than 1.96 and the significant value of the test is less than 0.05, so with a 95% confidence level of intervening factors, It has impact of 0.129 on the strategies.
-        The value of confirmatory factor analysis (t-value) provided for the fourth path is greater than 1.96 and the significant value of the test is less than 0.05, so with a 95% confidence level of underlying factors, it has an effect of 0.457 on the strategies.
-        The value of confirmatory factor analysis (t-value) provided for the fifth path is greater than 1.96 and the significant value of the test is less than 0.05, so with a 95% confidence level, the strategies have an effect of 0.849 on the results.

Model fitting
In this section, the validity of the structural model is examined and the general model of the research is fitted. The coefficient of numerical determination is between zero and one. R ^ 2 values close to 0.67 are desirable, close to 0.33 are normal, and values close to 0.19 are weak (Chen, 1998).

Table 10. Coefficients for determining the research model

Structures	Determination coefficient (R^2)
Marketing capabilities for new product development and manufacture	0/497
Strategies	0/790
Consequences	0/720

As It can be seen in Table 10, the values of the coefficients of determination for the latent variables of the model express the degree of influence of the dependent variables on the independent variable. In fact, from the values in the table above, it can be deduced that 0.497% of the changes in marketing capabilities take place for the development and manufacture of new products; 0.790% of structural changes in strategies in marketing capabilities for new product development and manufacture and 0.720% of structural changes in outcomes; They are expressed by the structures entered, i.e. causal factors, underlying factors and intervening factors. The overall fitness of the model with the GOF index, which should be greater than 0.3, indicates that this index is appropriate:

$$GOF = \sqrt{Communalities \times R^2} = 0 \cdot 541$$

Conclusion

This research has complied with the "model of digital marketing capabilities affecting the development and manufacture of new Abadan petrochemical products". The results show that in the model and scale validation stage of the developed digital marketing capabilities affecting the development and manufacture of new products in Abadan Petrochemical company, the factor load of items on the research structures shows all the explicit variables due to the criterion, i.e. higher than 0.7 in this stage have been approved of and also in the validation stage of the structure of the model . Moreover, in the structural validity analysis and analysis of the paths of the developed model, the value of confirmatory factor analysis (t-value) statistics for all 5 paths of the model is greater than 1.96 and the significant value of the test is less than 0.05. So with 95% confidence level, causal factors affect the main category (marketing capabilities for new product development and manufacture) by 0.705; The main category has an impact of 0.379 on strategies ; Intervening factors affect strategies by 0.129; Underlying factors affect strategies by 0.457; Finally, strategies have an impact of 0.849 on outcomes .

The results of this study are in line with the results of Salimabadi & Salehi & Heidari Kia (1398) in the sense that in the present study, the dimensions of experience and knowledge of marketing staff, logistics capability, production capability, marketing planning capability, especially knowledge management, as underlying dimensions and the bed of the final model have been confirmed and emphasized; Also, they are in agreement with the research done by Monazzamy et al. (2018) in the sense that in the present study, this has been confirmed and emphasized by improving 360-degree relationships with all stakeholders and customers, as intervening dimensions of the final model; Also with the results of Panizzon et al.'s (2020) research in terms of innovation capability, customer orientation capability, marketing technology improvement capability, research and development capabilities and communication capabilities in the present study as causal and contextual dimensions and ground-breaking dimensions of the final model have been confirmed and emphasized, also they are in line with the results of research by Wang et al. (2020)

in the sense that market innovation, market orientation, customer participation in the present study have also been confirmed and emphasized as a causal dimension of the final model. Finally, they are consistent with the results of Sun, Ding & Price (2020) research in the sense that the diversity of the board in the present study has been confirmed and emphasized as the underlying ground-breaking dimension of the final model.

Based on the results of the research, senior managers, marketing managers and research and development managers of Abadan Petrochemical Company are recommended to analyze, research and collect relevant data in order to find new solutions for their products due to market turmoil; to promote speed, agility and flexibility in competition and the tendency towards introduction of new products and services to their market. The product development and manufacture team should include members of the marketing, research and development unit, engineering, sales, production and operations, etc. under the strong leadership, which requires the company to invest in the individual ability of its employees in all departments and generally speaking its manpower. The power of digital marketing and marketing expertise and market monitoring, competitive production power with respect to target markets, the power of the company's machinery and hardware and the power of market development required in the market growth and expansion process and proper market knowledge should all be taken into account by marketers and research managers, and company development, information on consumer needs, research and development unit research results, product life cycle, major factors in product production, organizational policies, competitive selling prices, product application, etc. should always be updated, effective and analyzable, and most importantly available.

Considering that this research has been cross-sectional and synchronic, it is suggested to future researchers that they conduct them researches diachronically and based on the findings of several consecutive periods to examine all dimensions of capabilities and marketing resources, so that the process of changing their models can be expanded. In the next researches, the possibility of implementing the developed model in other time periods should be examined. This research might be conducted for other large industries as well, depending on the type of product.

CONFLICT OF INTEREST: The authors declare that they have no conflicts of interest regarding the publication of this manuscript.

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