

# The relationship between global economy and the effect on export pricing strategy of petrochemical products

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(Communicated by Javad Vahidi)

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## Abstract

The export of petrochemical products in Iran has a magnificent position due to making added value for the country. Exporting these products, which is considered the largest volume of non-oil exports of the country, has a great impact on the country's GDP. In addition, "Price" as the only element of the marketing mix that generates revenue, has great importance for petrochemical companies. In addition, pricing has been used as a major tool to increase company profitability and also been known as a key element in marketing strategy. Pricing strategy can be observed in a set of internal and external political and economic influences which affects the pricing decisions of a company. As well as the other companies petrochemical companies must be able to arrange for pricing commensurate with the value of their product. These factors depend on the strategies of the petrochemical companies by-product pricing and also how they envision themselves in the future. In this research, descriptive and inferential methods have been used; In the descriptive method, to determine the desired components, the exploratory factor analysis technique and through SPSS software and in the inferential method, the effect of the discovered components of the pricing strategy in increasing exports, using the SEM technique, the desired structural model through software AMOS is provided. Factor analysis of the research shows that 4 hypotheses including "Restriction of entry into the export market", "Penetration strategy", "Market development strategy" and "opportunity creating" have been recognized as effective in the export of petrochemical products in Iran.

Keywords: Pricing Strategy, Exporting Petrochemicals Products, Pricing  
2020 MSC: 91B24

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## 1 Introduction

IRAN is located in the southwest of Asia and in a region known as the Middle East. The Middle East and North Africa region having of about 63% of the world's proven oil reserves. Also, 37% of the world's natural-gas condensate (The South Pars/North Dome field) is located in this region, which is one of the richest places in the world due to these natural resources. According to the official statistics published by Iran's Ministry of Oil, Iran has 33 trillion cubic meters of gas resources, which will be considered the second largest gas resource in the world after Russia [23].

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Also, according to the statistics published by the Customs of the Islamic Republic of Iran, about 20 billion dollars (equivalent to 40%) of Iran's total non-oil exports belongs to the export of petrochemical products [24].

As is known, the most important factor in achieving any success is to specify goals. In addition, as Acemođlu says optimization creates the necessity for managers and stakeholders to choose options at different levels. Although, economists believe that economic factors are not always successful in optimization, but they believe that people try to optimize with the information and data they have. In other words, by using optimization in levels, they calculate different options to reach the net profit, or by using optimization in the differences and change in net profit shift from one option to another, and then refer to the comparison of final or marginal, choose the best option [1].

Meanwhile, at the beginning of the pricing strategy and design section, Philip Kotler about the importance of pricing says that there is no brand loyalty that cannot be overcome with a few cents discount! [9] for this reason the role of pricing becomes very noticeable and is considered an important element in the decision-making for the sellers as well as the buyers.

From the point of view of decision-making experts, these decisions can be influenced by many reasons such as survival, maximizing current profits, maximizing current earnings, maximizing sales growth, maximizing market exploitation, or product quality leadership, to strange goals such as social goals. This wide circle shows the importance and necessity of discussing pricing strategies [3]. A company can pursue major targets by using strategy tools. Because of the importance of the export of petrochemical products, these targets can have a great impact on the export of petrochemicals from the past to the future of the petrochemical industry. Therefore, in the current research, mainly we are looking for an answer to the question, what are the factors, which affect the pricing strategy of exporting petrochemical products?

## 2 Research literature

According to Cutler, there are a number of circumstances that push businesses to choose survival as their primary price goal, including excess output, fierce competition, and changes in consumer needs. Even though new studies indicate that the marketing mix should include the 12 Ps, including product, place, price, promotion, people, physical evidence, process, proof (social), portfolio, prestige, productivity, and performance packaged (bundled product), there is still only one component that actually generates revenue: "price." For petrochemical managers and businesses, price is crucial because it is the sole component of the marketing mix that creates income [9].

Its influence on several aspects, including the environment, company aims, client profiles, and pricing position, is highlighted by prior studies. Different pricing tactics, such as price skimming, penetration pricing, price bundling, price marketing, or complimentary pricing, reflect these variables in turn [7].

Pricing has also been a significant instrument for boosting business profitability and is seen as a crucial component of marketing strategy. A variety of internal and external political and economic forces that have an impact on a company's price decisions can be seen as increasing the inherent complexity and reforming pricing tactics [16]. The aforementioned engagement with globalization is intensified when a business wishes to grow and broaden the market for its products. It is important to keep in mind that various economic elements have a significant impact on our prices when it comes to pricing, in this case, [17]. For companies that offer goods to consumers, the transition from the 4Ps to the 7Ps and finally the 12Ps was developed. Companies considering price as the reason for long-term survival [3] must therefore choose target markets based on the netback price for the exportation of their products, as stated by Smart Insights: "The 4Ps were designed at a time where businesses were more likely to sell products than services, and the role of customer service in helping brand development wasn't so well known." The prices and pricing goals of the companies may be impacted by restrictions on entering new markets [4]. The target market for petrochemical products may impose restrictions like tariffs on the nation of import. Pricing decisions may be impacted by the amount of taxes and tariffs imposed on imported items [15]. Some nations have petrochemical tariffs that are so high that doing business there is next to impossible and results in a sharp increase in the cost of the finished product. The target exporting nation may have chosen to impose these tariffs or taxes in order to support domestic producers. One of the factors affecting the pricing is the technology used to make the good [22]. For instance, the target country might not yet have the technology to use the product or it might be technologically behind the rest of the globe.

The goal of the influence strategy is to make the prices appealing to consumers so that they will buy the products in addition to the ones they already do. Stabilizing the price is one of the company's goals in order to avoid a pricing war in the market [2]. Managers and scholars frequently view price promotions as simple incentives that persuade customers to accept offers that they might not have even considered in the past. However, the possibility of a cheaper price deterring consideration can also "dumb down" the purchase experience by making it seem less important [6].

In a dual-system theory of consumer behavior, we investigate this option. In particular, we contend that price marketing reduces a consumer's motivation to exert mental effort; hence, behavior is influenced less by in-depth information processing and more by effect, a quicker, simpler, yet potent influencer of preference. This hypothesis is supported by six tests and real-world data from a major daily deal provider, which details its consequences primarily for consumer choice, but also for willingness to pay and product ratings [19].

According to the current study, a pricing strategy is a way to establish relative price levels by taking into account determining elements and achieving certain business goals in a given circumstance. Therefore, "a pricing strategy provides a systematic delineation of the elements that must be managed to achieve profitable performance in a business." Typically, these elements consist of the intended pricing objective (such as profit maximization), the relative target price level (associated with cost, competition, and/or customer value), and the internal and external factors (such as the market environment) that the business must deal with [7].

Gaining customer satisfaction has a direct impact on price goals and the company's competitiveness in relation to its competitors [13]. Most businesses set their prices in order to maximize their earnings [9]. They determine a price for their goods by weighing demand and cost at various price points in order to optimize the profit for their cash flow or current investment gain. The most fundamental of the price objectives is this one. Price factors have a direct and significant impact on how much a company's market share grows [5]. Whether a business is aiming for a sizable market share or not might be inferred from its pricing approach. Pricing wheels, a term used to describe the company's marketing tactics, show how this policy is implemented [10]. In other words, a company's marketing strategy must be determined in order to realize price targets.

Only pricing generates money, not traditional marketing components [18]. As Morris [14] points out, "one of the more basic yet critical decisions facing a business is what price to charge customers for products and services." This choice is especially important in the period that *The Economist* (2013) refers to as the "age of austerity"—a period in which sales are stagnant, further cost reductions are unlikely, and the price is the only remaining tool. A sound pricing strategy is necessary now more than ever to promote customer value creation, structure pricing decisions, and generate a profit in this competitive climate [11]. A poor pricing approach prevents profitability, warns Hinterhuber. The state of the world economy has a direct impact on the price of petrochemical goods. A company's pricing decisions are influenced by a variety of internal and external political and economic factors, which are becoming increasingly complicated and changing pricing methods [12]. The aforementioned engagement with globalization is intensified when a business decides to build out and grow the market for its products. It must be emphasized that our rates in this case are significantly impacted by the prices set by industry leaders [20]. A company's goal may occasionally be to be recognized as the leader in quality. In this manner, increasing the price of the products would reflect their increased quality. In other words, increasing pricing relative to competitors won't cause us to lose market share [21].

Some companies set the pricing of their products to maximize their sales revenue. Only the sales function needs to be evaluated in order to maximize the company's revenue [8]. Predicting consumer and competitive behavior is the goal of performance management, which aims to increase profits for the organization [5]. The choice of strategy and price objectives, then, has a significant impact on the goal of maximizing business profits. The majority of managers think that increasing short-term profit and market share will come through maximizing present incomes. The company's geographic position, particularly its access to exporting ports in the nation that produces its products, is crucial.

### 3 Research methodology

First, 74 initial factors were taken from a study of various articles on the subject of pricing, and after completing an overlap analysis and consulting a professional questionnaire, the number of variables was reduced to 32 and presented to respondents in the form of a major questionnaire.

The questionnaire that was created for petrochemical businesses and the exporters of their goods served as the foundation for the research approach used in this paper. This approach used 235 questionnaires built on the Likert scale. 212 of the 235 questionnaires that were distributed were returned and examined. This article uses factor analysis to investigate behavior. This test's computed KMO coefficient is 0.754, and this article's determined Cronbach's alpha is 0.717, both of which are regarded as good sustainability for research questionnaires.

Questions 4, 5, 6, 9, 11, 16, 20, 21, 22, 25, 29, 30, 34, 35, 37, 07, 10, 24, 28, were left off the questionnaire since component analysis is sensitive to skewness coefficient. Four primary components were found using factor analysis on a total of 37 variables.

The table below displays the general findings of the statistical test. For instance, question 1 was about survival, and the Likert scale assigned a minimum value of 3 and a maximum value of 9 to this question.

Table 1: KMO and Bartlett's Test.

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	0.754
Bartlett's Test of Sphericity Approx. Chi-Square	439.742
df.	153
Sig.	0.000

Table 2: Reliability Statistics.

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
0.717	0.723	32

Table 3: Rotated component Matrix.

	Component					
	1	2	3	4	5	6
(Taxes and tariffs in the host country)	0.569					
(Survival)	0.673					
(Technology in the host country)	0.663				0.360	
(Market segmentation)	0.583					
(Homogeneous)	0.713					
(Profit Maximization)		0.518				
(Production costs)		0.576				
(Attraction of new customers)		0.747				
(Marginal pricing)		0.502	0.390	0.357		
(Monopoly)		0.420	0.367			
(Product Associated with the global economy)				0.717		
(Market development)				0.653		
(Revenue Maximization)					0.812	
(Geographical location)		-0.501				
(Minimize production costs)				0.575	0.758	
(Pricing based on market leaders)			0.469		0.507	
(Political conflicts)						0.846
(Sales Maximization)	0.334	0.333				0.600

Scree Plot

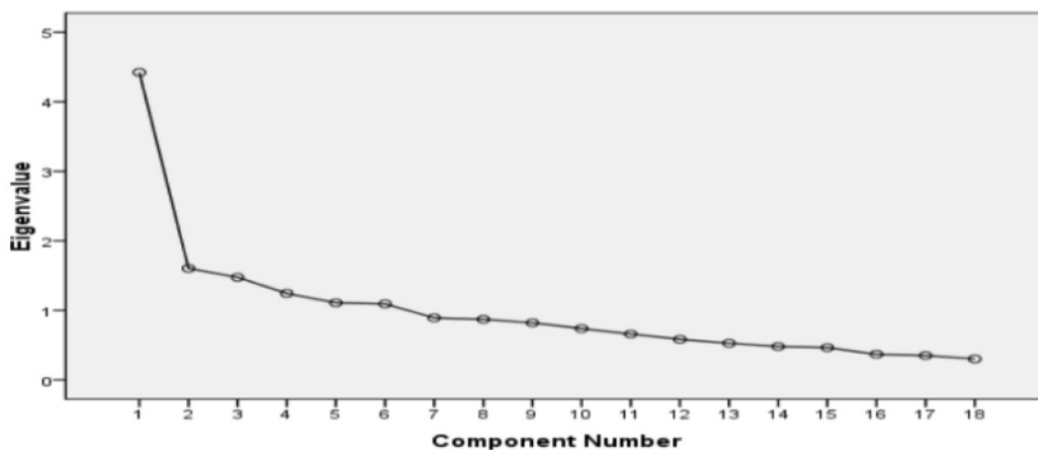


Figure 1: Scree plot Matrix

The eigenvalues are plotted on the y-axis of the scree plot, and the number of factors is plotted on the x-axis. It consistently shows a declining curve. The number of components that should be created by the analysis is indicated by the "elbow," which is where the slope of the curve is visibly leveling off.

Details of factor analysis:

Table 4: Components nomination

Component Numbers	Component	Naming factors affecting pricing strategies
1	Limitations over entering export market	Taxes and tariffs in the host country
		Taxes and tariffs in the host country
		Survival
		Technology in the host country
		Homogeneous
2	Penetration Strategy	Market segmentation
		Monopoly
		Profit Maximization
		Revenue Maximization
3	Market development strategy	Attraction of new customers
		Market development
		Political conflicts
4	Opportunity creation	Pricing based on market leaders
		Marginal pricing
		Geographical location
		Sales Maximization

In Table 4 numbers define as follows , A17: Tax and tariffs in host country; A15: Survival, A18: Technology in host country; A13: Homogeneous; A1: Market segmentation (price discrimination); A32: Customer satisfaction; A33: Gaining market share; A12: Current profit maximization; A27: Monopoly ; A3: Product Associated with the global economy; A36: Market development; A26: Market leaders 'pricing ; A31: Political conflicts ; A23: Current revenue maximization; A8: Geographical location of the company. Consequently, we will analyze the main factors in independent tables.

Table 5: Factor analysis for limitations on entering into the export market (Component Matrix).

	Component
	1
A17	0.754
A15	0.744
A18	0.700
A13	0.709
A1	0.582

Table 6: Initial eigenvalues factor analysis table 1.

Component	Initial Elgenvalues			Extraction sums of squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.454	49.071	49.071	2.454	49.071	49.071
2	0.807	16.145	65.215			
3	0.669	13.375	78.590			
4	0.620	12.401	90.991			
5	0.450	9.009	100.000			

Table 7: Cronbach's Alpha Table 1.

Cronbach's Alpha	N of Items
0.717	5

Taxes and tariffs in the host country, survival, technology in the host country, the target market, and pricing discrimination are some of the factors that restrict access to the export market. Cronbach's alpha is 0.737 in the calculations.

Table 8: Factor analysis for strategy: Component Matrix.

	Component
	1
A32	0.771
A33	0.681
A12	0.712
A27	0.688

Table 9: Cronbach's Alpha Table 2.

Cronbach's Alpha	N of Items
0.691	4

Penetration strategy factor includes attraction of new customers, current profit maximization, and gaining market share and customer satisfaction. Calculated Cronbach's alpha is 0.691.

Table 10: Factor analysis for market development strategy: Component Matrix.

	Component
	1
A3	0.807
A36	0.807
A26	0.717

Table 11: Initial eigenvalues factor analysis Table 2.

Component	Initial Elgenvalues			Extraction sums of squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1.304	65.188	65.188	1.304	65.188	65.188
2	0.696	34.812	88.54			
3	0.413	27.901	100.000			

Table 12: Cronbach's Alpha table 3.

Cronbach's Alpha	N of Items
0.723	3

Table 3's market development plan includes the following elements, whose correlation coefficients are 0.723: the relationship between the product and the global economy, product market development, and market leaders' prices.

Table 13: Factor analysis for opportunity creation strategy: Component Matrix.

	Component
	1
A23	0.805
A8	0.701
A31	0.763

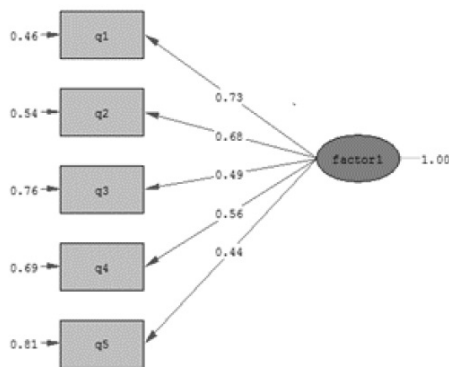
Table 14: Initial eigenvalues factor analysis table 3.

Component	Initial Elgenvalues			Extraction sums of squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1.297	64.865	64.865	1.297	64.865	64.865
2	0.878	48.267	83.565			
3	0.703	35.135	100.000			

Table 15: Cronbach's Alpha table 4.

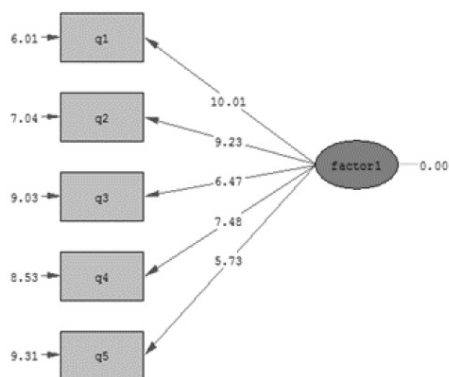
Cronbach's Alpha	N of Items
0.794	3

Factor of opportunity creation strategy include political conflicts, current revenue maximization, geographical location of the company Cronbach's alpha is 0.794.



Chi-Square=9.98, df=5, P-value=0.07573, RMSEA=0.070

Figure 2: Latent variable factor loadings of export market entry restrictions.



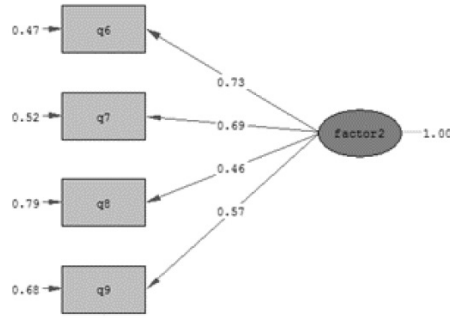
Chi-Square=9.98, df=5, P-value=0.07573, RMSEA=0.070

Figure 3: Significant coefficients of the latent variable of export market entry restriction.

According to Figures 2, 3, the standard coefficients of the paths are greater than 0.3 and the t-value of the paths are greater than 1.96. Therefore, the significance of the paths and latent variable of "Export market entry restriction" is confirmed (Table 16).

Table 16: Indices fit model.

Index	Amount	Acceptable amount
RMSEA	0.07	0.08 <
Chi-square/df	1.99	< 3
CFI	0.97	0.9 >
GFI	0.97	0.9 >
IFI	0.98	0.9 >
NFI	0.95	0.9 >
NNFI	0.94	0.9 >



Chi-Square=3.72, df=2, P-value=0.15578, RMSEA=0.065

Figure 4: Latent variable factor loadings of penetration strategy.

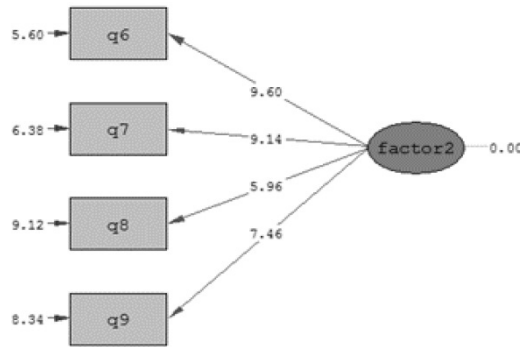
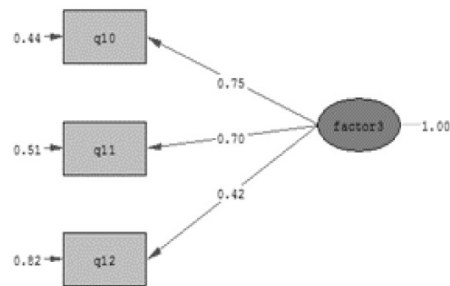


Figure 5: Significant coefficients of the latent variable of "penetration strategy".

According to the coefficients of the paths and the significance of the t value in the Figures 4, 5, the latent variable of the "Penetration strategy" is confirmed by the relevant items (Table 17).

Table 17: Indices fit model.

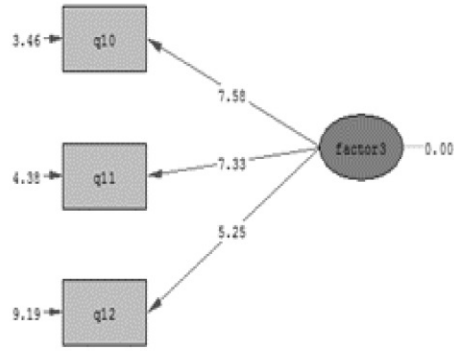
Index	Amount	Acceptable amount
RMSEA	0.065	0.08 <
Chi-square/df	1.86	< 3
CFI	0.99	0.9 >
GFI	0.99	0.9 >
IFI	0.99	0.9 >
NFI	0.98	0.9 >
NNFI	0.97	0.9 >



Chi-Square=0.00, df=0, P-value=1.00000, RMSEA=0.000

Figure 6: Latent variable factor loadings of market development strategy.

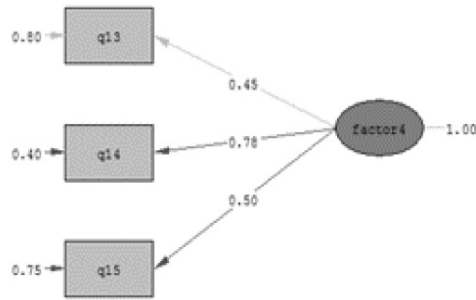




Chi-Square=0.00, df=0, P-value=1.00000, RMSEA=0.000

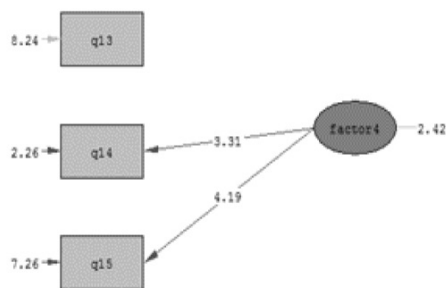
Figure 7: Significant coefficients of the latent variable of market development strategy.

According to the coefficients of the paths and the significance of the t value in the Figures 6, 7, the latent variable of the "Market development strategy" is confirmed by the relevant items.



Chi-Square=0.00, df=0, P-value=1.00000, RMSEA=0.000

Figure 8: Factor loadings of the latent variable of situation creation.



Chi-Square=0.00, df=0, P-value=1.00000, RMSEA=0.000

Figure 9: Significant coefficients of latent variable of opportunity creating.

According to the coefficients of the paths and the significance of the t value in the above figures, the latent variable of the "Opportunity creation" is confirmed by the relevant items.

### 4 Conclusion

In this study and during the years 2018-2022 by studying reliable papers and sources were attempted to find the variables and factors affecting the Pricing objective and strategies. Subsequently, by using factor analysis the

objectives have been determined and extracted.

In this regard and as seen the result shows that the factors obtained from Pricing Strategy have a vital effect on the export of petrochemical products. As said, nowadays national economics undergoing rapid changes. As no country can be separated from the global economy, the factors of globalization or in other words "increasing of trade and global competition" shall be considered as a very important role for decision makers. If a country closes its market to free competition, inevitably will be forced to supply the goods with lower quality and higher prices. The most important factor in achieving any success is to specify the objectives and strategies. Goal setting is the most important factor for creating the future. In this regard, pricing plays an important role for every single company. Many managers are not aware of the complexity of pricing and using casual way of pricing without considering the pricing strategy method put their company at risk. Finally, by using SPSS and inferential method and using the SEM technique, the desired structural model through the software AMOS, four final components which have a vital effect on the export of petrochemical products were extracted and named as follows: "Limitations over entering into the export market", "Penetration Strategy", "Market development strategy", and "Opportunity creation". A comprehensive model for the effecting of the above-mentioned factors on exporting petrochemical products can be studied in the next studies.

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