

Survey questionnaire for new product pricing strategy selection and quantification of importance and interaction degrees of decision attributes

Dear Madam/Sir

This is an academic research about “Evaluating new product pricing strategies via Fuzzy Cognitive Maps and hierarchical fuzzy TOPSIS”. The purpose is to select best pricing strategy for your new product and to explore the importance and interactions of several attributes on the new product pricing strategy selection decision.

We would like to cordially invite you to contribute to our academic research by filling out the enclosed questionnaire. Having the honor of obtaining your precious opinions, the result and credibility of this research will be tremendously benefited. All the information provided will be used for academic purposes only, and will not be separately announced to the outside or transferred to other applications. Please feel at ease in filling out the answers.

Your support will be very crucial to the successful completion of this research. We sincerely hope that you would spend some time to express your opinions to be taken as reference for this research. Please accept our most sincere appreciation. Thank you and wish you all the best.

1. Instructions for filling out the questionnaire

This questionnaire is divided into six parts. 1) Instructions for filling out; 2) Descriptions of attributes; 3) Method for filling out; 4) Comparison of the impact of the six main attributes; 5) comparison of the impact of the 29 sub attributes; 6) Comparison of interaction degrees; 7) Descriptions of alternative pricing strategies; 8) Method for filling out ratings of alternatives 9) Rating of alternatives with respect to sub-attributes.

2. Descriptions of evaluation criteria

Main Attribute	Sub Attribute	Description
Innovation	Product development capability	New product development capability provides competitive advantage and differentiates the firms from its competitors in terms of rapid response to market needs.
	New product life cycle	Management of products all the way across lifecycle, from the very first idea to all the way through until it is disposed of.

	Degree of innovativeness	Level of innovativeness. For instance, products emerged from radical innovations can be easily differentiated from the conventional products in the market.
Marketing	Target markets	Specific groups or group of customers at whom the firm serves its products.
	Time to market	Total time required to bring a new product into existence.
	Scope	Possibility that the new product can be sold in different markets and consumer groups, apart from the targeted markets.
	Competition	Level of competition, where competitors can launch similar products into market with more advantageous conditions for customers.
	Demand elasticity	Measure of responsiveness or elasticity, of the quantity of a good or service to a change in its price.
	Growth	Growth strategy of a firm. Companies pursuing growth strategy in their marketing policy agenda will probably pursue distinct pricing models for their rapidly evolving business and target consumer group.
Organization	Structure	Organizational structure influences the knowledge flow among the personnel during new product development stages. Dynamic pricing models entail analyzing and detecting market conditions responsively, which in turn necessitates high performance knowledge sharing among personnel.
	Location	Firms operating in different geographical locations involve personnel in separate locations, which influence new product development decisions
	Culture	Organizational culture is one of the factors that can lead to product customizations and different pricing strategies peculiar to company.
	Partnership	Organizations build variety of ties with other organizations and involve different value networks to improve their knowledge bases. Participating value networks and building partnerships results in greater value adding solutions, and more competitive pricing.
Customer	Willingness to pay	Customer preferences express themselves mostly through the willingness to pay. Willingness to pay of different consumer groups plays a pivotal role in the pricing strategy selection
	Customer involvement	Customer involvement to new product design or introduction. Co-creation or customization with consumers results in satisfaction of the consumer needs.
	Customer heterogeneity	The level of price sensitivities can be different across customers. The knowledge regarding customer heterogeneity allows policy makers to implement price based segmentation.

	Customer sophistication	The degree of customer sophistication differs across markets. More sophisticated customers are tend to focus their efforts to locate the best price, and they are more patient to time their purchases until the prices are lowered.
	Purchase frequency	The dynamics of pricing is influenced by the purchase frequency. Cumulative or repeated sales have different impacts on the pricing decisions. The cumulative sales leads to saturation effect, whereas repeated sales help establish brand loyalty.
Product	Product type convenience	Product types along with the different market conditions are found to be influence the product prices. Different products might demand varied selling channels, selling strategies and pricing strategies as well.
	Support after sale	After-sale services for particular products incur additional costs and directly affects the pricing decisions.
	Branding	A brand is a combination of name, symbol, term, and/or design that identifies a specific product. Product should be offered in a way that succinctly captures the customer needs, where pricing has a pivotal role while launching the new products.
	Substitution	Substitution is highly correlated with the terms: price sensitivity and uniqueness of the value that the firm provides. If the value of the firm's product has not been differentiated from the competitor's product substantially, then the price sensitivity of customer increases
	Royalty	Royalty is defined as the cost, consideration, compensation, or price paid or incurred for a license
	Delivery	Decision makers should answer how the new products will reach the customer
	Patent protections	If the intellectual property of the firm is protected by the patents, greater competitive advantage is gained and the firms can set higher prices or pursue different strategy
Technology	Payment channels	Payment channels impact the customer behavior to pay for the product. Sufficiency and reliability of payment channels influence the charging decisions.
	Security infrastructure	IT security infrastructure caters a comprehensive plan that provides confidentiality protection, integrity and availability of information resources. Security infrastructure influences the online purchasing behavior of customers.

	Consumer search capability	Consumer search capability refers to the consumer ability to search for the prices of similar products in national or international setting. If the consumers are able to reach the information of product prices, shipping charges or the other consumer views about the competitor products, then dynamic pricing tactics should be followed to compete.
	Technology uniqueness	Technology uniqueness refers to the technology that the firm and the customers congregate in value creation, co-creation or the purchasing stages.

3. Method for filling out level of importance

Examples for filling out the level of importance.

Method for filling out the survey is described below with illustration. Evaluate the level of importance of each attribute at the left, and enter the scale specified for importance of attribute given in linguistic terms. Please put a cross onto the linguistic term, which represents your preference accurately.

Example:

Filling out the level of importance for main attributes

Attribute	Level of importance
X	

VL: Very low, **L:** Low, **ML:** Medium low, **M:** Medium, **MH:** Medium high, **H:**High, **VH:** Very high

Indicate that importance of attribute X with respect to decision goal is medium low.

Filling out the level of importance for sub attributes

With respect to	Sub-attribute	Level of importance
Y	Z	

VL: Very low, **L:** Low, **ML:** Medium low, **M:** Medium, **MH:** Medium high, **H:**High, **VH:** Very high

Indicate that importance of sub-attribute Z with respect to attribute Y is high.

Examples for filling out the level of interaction.

Method for filling out the survey is described below with illustration. Evaluate the level of interaction between each attribute placed in rows/columns, and enter the scale specified for degree of interaction among attributes (How much influence does the attribute given in row

have on the attribute given in column?). Please write down an appropriate linguistic term, which represents your preference accurately. If there is no interaction, then leave that cell empty.

	A	B	C	D	E
A		VVL	VL	<i>i.e.(A influences D)</i>	H
B	M		L	H	-
C	H			VH	M
D	L	-	H		-
E	-		VVL	-	

VVL: Very very low, VL: Very low, L: Low, M: Medium, H: High, VH: Very high, VVH: Very very high

Indicate that attribute A influences attribute B very very low, attribute B influences attribute D high, and so on. In other words, attribute A has a very very low impact on the attribute B and attribute B has a high impact on attribute D.

4. Importance of main attributes

Please fill out the level of importance for main attributes with respect to goal.

Attribute	Level of importance
Innovation	
Marketing	
Organization	
Customer	
Product	
Technology	

VL: Very low, L: Low, ML: Medium low, M: Medium, MH: Medium high, H:High, VH: Very high

5. Importance of sub attributes

Please fill out the level of importance for sub attributes with respect to innovation.

With respect to	Sub-attribute	Level of importance
Innovation	Product development capability	
	New product life cycle	
	Degree of innovativeness	

VL: Very low, **L:** Low, **ML:** Medium low, **M:** Medium, **MH:** Medium high, **H:**High, **VH:** Very high

Please fill out the level of importance for sub attributes with respect to marketing.

With respect to	Sub-attribute	Level of importance
Marketing	Target markets	
	Time to market	
	Scope	
	Competition	
	Demand elasticity	
	Growth	

VL: Very low, **L:** Low, **ML:** Medium low, **M:** Medium, **MH:** Medium high, **H:**High, **VH:** Very high

Please fill out the level of importance for sub attributes with respect to organization.

With respect to	Sub-attribute	Level of importance
Organization	Structure	
	Location	
	Culture	
	Partnerships	

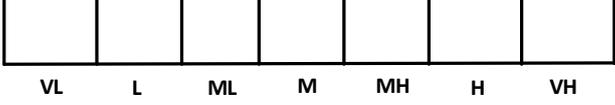
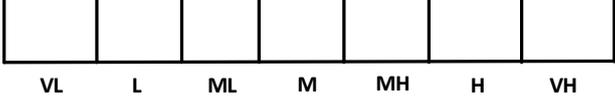
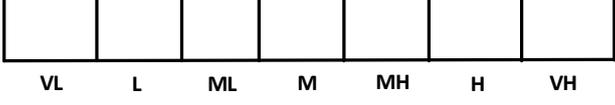
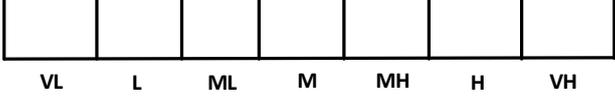
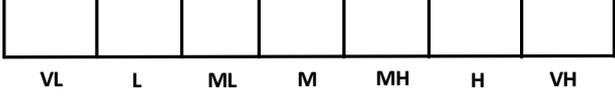
VL: Very low, **L:** Low, **ML:** Medium low, **M:** Medium, **MH:** Medium high, **H:**High, **VH:** Very high

Please fill out the level of importance for sub attributes with respect to customer.

With respect to	Sub-attribute	Level of importance
Customer	Willingness to pay	
	Customer involvement	
	Customer heterogeneity	
	Customer sophistication	
	Purchase frequency	

VL: Very low, **L:** Low, **ML:** Medium low, **M:** Medium, **MH:** Medium high, **H:**High, **VH:** Very high

Please fill out the level of importance for sub attributes with respect to product.

With respect to	Sub-attribute	Level of importance
Product	Product type convenience	
	Support after sale	
	Branding	
	Substitution	
	Royalty	
	Delivery	
	Patent protections	

VL: Very low, **L:** Low, **ML:** Medium low, **M:** Medium, **MH:** Medium high, **H:**High, **VH:** Very high

Please fill out the level of importance for sub attributes with respect to technology.

With respect to	Sub-attribute	Level of importance
Technology	Payment channels	
	Security infrastructure	
	Consumer search capability	
	Technology uniqueness	

VL: Very low, **L:** Low, **ML:** Medium low, **M:** Medium, **MH:** Medium high, **H:**High, **VH:** Very high

6) Comparison of interaction degrees

Please fill out the level of interactions among main attributes.

	Innovation	Marketing	Organization	Customer	Product	Technology
Innovation						
Marketing						
Organization						
Customer						
Product						
Technology						

VVL: Very very low, **VL:** Very low, **L:** Low, **M:** Medium, **H:** High, **VH:** Very high, **VVH:** Very very high

Please fill out the level of interactions among innovation sub attributes.

	Product development capability	New product life cycle	Degree of innovation
Product development capability			
New product life cycle			
Degree of innovativeness			

VVL: Very very low, VL: Very low, L: Low, M: Medium, H: High, VH: Very high, VVH: Very very high

Please fill out the level of interactions among marketing sub attributes.

	Target Markets	Time to market	Scope	Competition	Demand elasticity	Growth
Target Markets						
Time to market						
Scope						
Competition						
Demand elasticity						
Growth						

VVL: Very very low, VL: Very low, L: Low, M: Medium, H: High, VH: Very high, VVH: Very very high

Please fill out the level of interactions among organization sub attributes.

	Structure	Location	Culture	Partnership
Structure				
Location				
Culture				
Partnership				

VVL: Very very low, VL: Very low, L: Low, M: Medium, H: High, VH: Very high, VVH: Very very high

Please fill out the level of interactions among customer sub attributes.

	Willingness to pay	Customer involvement	Customer heterogeneity	Customer sophistication	Purchase frequency
Willingness to pay					
Customer involvement					
Customer heterogeneity					
Customer sophistication					
Purchase frequency					

VVL: Very very low, VL: Very low, L: Low, M: Medium, H: High, VH: Very high, VVH: Very very high

Please fill out the level of interactions among product sub attributes.

	Product type convenience	Support after sale	Branding	Substitution	Royalty	Delivery	Patent protections
Product type convenience							
Support after sale							
Branding							
Substitution							
Royalty							
Delivery							
Patent protections							

VVL: Very very low, VL: Very low, L: Low, M: Medium, H: High, VH: Very high, VVH: Very very high

Please fill out the level of interactions among technology sub attributes.

	Payment channels	Security infrastructure	Customer search capability	Technology uniqueness
Payment channels				
Security infrastructure				
Customer search capability				
Technology uniqueness				

VVL: Very very low, VL: Very low, L: Low, M: Medium, H: High, VH: Very high, VVH: Very very high

7. Descriptions of alternative pricing strategies

Alternative	Explanation
Prestige pricing	Prestige pricing assumes the fact that there is a customer segment in which the customers are ready to pay premium price. Prestige pricing captures the consumer attitude toward psychological value of ownership or quality of the item. Example of a software industry might be the video game Halo 3 ODST, which is launched in conventional and collector's edition. The latter has additional features with deluxed model and demands higher price. Hard-core gamers are expected to be willing to pay the premium price.
Price lining and versioning	Product lining refers to pricing products at discreet levels, where there exists price gaps between each product level. For the case of digital goods, versioning corresponds to price lining. For instance, three different versions of the same software can be provided. A comparison table which shows the features of the each product and corresponding prices provide company to serve customers with different willingness to pay.
Windowing	Windowing is a staged introduction of a product in different forms at different times, which mainly aims to avoid cannibalization. At each stage, the price is lowered, thus, windowing corresponds to skimming strategy in the case of durable products.
Captive product pricing	In captive pricing, the products only function with the dedicated components. A typical example of captive product pricing is the Apple software, which does only run in Apple devices.
Bundle pricing	Two or more goods are combined and they are offered with a single price. Further information can be given to experts if they need.
Loss leader pricing	Because of the low variable costs and zero reproduction costs of the digital goods, a product can be given to customers for free on the internet for a limited time. This strategy is used to build customer loyalty and attract wider potential customers.
Demand based pricing	Price can be changed according to demand. The advertisers on the certain websites are examples of demand based pricing strategies. Advertisers pay cost per click or cost per action.
Fixed fee pricing	Optimal situations for using fixed fee pricing and usage based pricing are investigated in the literature in detail. Fixed-fee pricing is fixing the fee for the unlimited usage, on the other hand, usage based pricing is monitoring the usage activity and pricing according to obtained information.
Dynamic pricing	One of the important examples is the yield management pricing, where the airlines adjust prices to gain higher revenues.

8. Method for filling out ratings of alternatives

Rating of alternatives:

Method for filling out the survey is described below with illustration. Considering the attributes in each row of the table, enter a linguistic term for the rating of the alternatives. The linguistic scale specified for importance of alternative strategy is given under the table.

Example:

Filling out performance levels for alternatives:

	Prestige pricing	Bundle pricing	Windowing
Growth	F	VG	P

VP: Very poor, **P:** Poor, **MP:** Medium poor, **F:** Fair, **MG:** Medium good, **G:** Good, **VG:** Very good

The example above indicates that prestige pricing has fair performance with respect to growth. Bundle pricing has very good performance with respect to growth sub-attribute. Windowing has poor performance considering growth sub-attribute.

9. Rating of alternatives

	Prestige pricing	Price lining and versioning	Windowing	Captive product pricing	Bundle pricing	Loss leader pricing	Demand based pricing	Fixed fee pricing	Dynamic pricing
Product development capability									
New product life cycle									
Degree of innovativeness									
Target markets									
Time to market									
Scope									
Competition									
Demand elasticity									
Growth									
Structure									
Location									
Culture									
Partnerships									
Willingness to pay									
Customer involvement									
Customer heterogeneity									
Customer sophistication									
Purchase frequency									
Product type convenience									
Support after sale									
Branding									
Substitution									
Royalty									
Delivery									
Patent protections									
Payment channels									
Security infrastructure									
Consumer search capability									
Technology uniqueness									

VP: Very poor, **P:** Poor, **MP:** Medium poor, **F:** Fair, **MG:** Medium good, **G:** Good, **VG:** Very good