

Identifying and ranking the factors influencing the gray marketing and its impact on borderline markets

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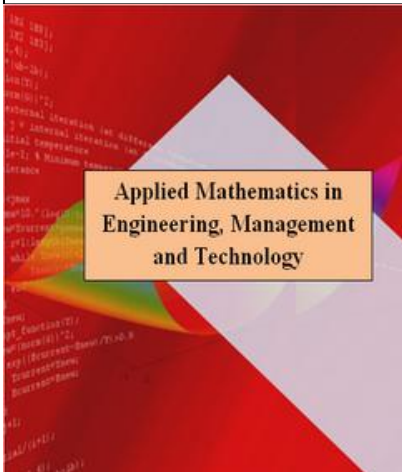
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Abstract

One of the major issues of international trade is gray market or parallel import. The main reason for its development in international trade is the price differences between countries which makes independent risk taker or buyers get into the market and they buy products in low-cost countries and export to countries with a high price and take advantage of price disparity. Usually this type of import occurs in external distribution channels of firms' channels, networks and legal channels. In this regard, given that one of the most important factors in borderline markets is gray marketing issue. In this study, we have tried to develop more effective role of borderline markets on gray marketing. After a review of theoretical basis of conducted experimental studies, theoretical basis of the study model along with modeling, the relationship between variables were calculated. According to objective of this study investigating the effects as well as offering suggestions and practical solutions in this area, thus this is applied, practical value and descriptive-

survey research in terms of objective and collecting data method, respectively. In this study, first, it was determined the more effective variables of gray marketing on borderline markets and then 6 effective factors of gray marketing on borderline markets were determined using factor analysis techniques. These include structural behavior, customers purchase culture, marketing ethics, distribution channel quality, brand perception, and marketing structure. After factor analysis, it was presented structural model of effective factors of gray marketing affecting on the borderline markets. Since market ethics standard coefficient is 0.28 and less than 0.30, then the final model was eliminated. Finally, the factors and effective variables of gray marketing techniques on borderline markets are ranked using AHP. The customer purchase culture, structural behavior, brand perception, marketing structure, and distribution channel quality are ranked at first to fifth levels, respectively.

Key words: marketing, gray marketing, borderline markets

Introduction

One of the most complicated problems of international companies is price differences between countries. If the prices disparity is high, risk-takers or buyers enter the market independently and they should buy products in low-cost countries and re-export to high-price countries and thus, they benefit from price disparity. This trait is called arbitrage, parallel import or gray market; since this import occurs in distribution channels outside the legal departments of firm. Gray market (parallel import) is formed when a firm produces a product in addition to the parent company in a few other countries. In this case, manufactured products may be sold by foreign distributors in gray markets through other subsidiary branches of a firm in another country. The distributors offer products to market of manufactured country. Although, gray market products have a brand similar to domestic products of the same company, but the quality of the components may often vary (keegan, 1999). Gray market has been concerned by producers and retailers as an expanded and international activity since mid-1980s (Baldo, 1985; Barlass, 1988; Mitchell, 1998). This study identifies and ranks the factors influencing gray marketing and its impact on borderline markets that at the beginning, it is identified the factors and then extracted structural model.

Literature

Gray market develops in an international way that there are large differences between two markets in common prices of the same product; and the higher the price differences, the more efficiency the gray market that market dealers would have expected. It makes them respond to the Inconsistency of supply and demand between two markets (Soleimani, 2006). According to Hoyer and McInnis (2001) gray market is one where manufacturer does not schedule entering product to that market. Since some of the international companies simultaneously do marketing their same and standard products at several foreign markets, these firms and their goods of authorized channels encounter with an unpleasant phenomenon that is gray market. According to some theories, the problem of gray market is not based on products, but it is in marketing procedure and process. In addition to the parallel import, gray market occurs in larger aspects of marketing. Gray market can occur in packaging or logo of a product (Eagle et al., 2001). It is believed that a gray channel hurts authorized retailers, because gray market dealers work free in the market. However, the impact of gray market on original manufacturer is left unknown (Chen, 2009).

Gray goods

As Bucklin (1993) defined, gray markets goods often have brand that are only distinguishable through their sales by unauthorized channels of the trademark owner. Some researchers believe that gray market goods are not counterfeit; but in many cases, counterfeit goods can also be seen among the goods of this market. Whereas, counterfeit goods are labeled, packed, and copied as the same original goods to deceive customers. Gray market goods are original that only enter into a certain country through illegal or unauthorized channels. However, since these goods are physically original, they are not generally considered illegal. They are only considered as illegal when principles, rules, and regulations related to product or contract for the use of the brand and the rules for import in a certain country are violated (Kay, 1990).

There are two kinds of gray goods: Domestic and import goods. Legal producer channels of trademark sell goods to illegal channels through domestic gray market goods, then, they sell the goods within the country. In contrast to the import gray market goods, foreign gray market goods has valid trademark and they enter to market with disagreement of trademark owner. Distribution channels for both gray market goods is called parallel channel in which there is at least one delivery channel an illegal distributor (Berman, 1996). Li and Robles (2007) in "parallel trade and product innovation" found the effect of the presence or absence of parallel trade and import on companies' innovation to create new products.

Results indicated that if parallel trade is a stimulus for products innovation, it will be involved following conditions:

- First, new product is sufficiently a close substitute for old product.
- Second, there is a significant difference between the transportation costs of product.

Due to these conditions, the researchers stated such that in a competitive market, parallel trade cannot have a significant effect on product innovation (Li and Robles, 2007). Arbitrage behavior of profit from price disparity in different countries called parallel import or gray market, it has been said that they occur at distribution channels which are external legal departments of a firm.

Borderline markets

Borderline markets can be defined as a surrounded enclosure; located on the borderline zero point and in the vicinity of customs, authorized to perform clearance formalities; both parties can present the needed goods and products in the markets in compliance with import and export regulations.

Setup objectives of borderline markets have been provided as follows:

- Stable employment and providing basic needs of the borderline inhabitants
- Reducing migration of frontiersmen to the cities and internal territory
- providing facilities and amenities for inhabitants of the borderline regions and those areas, directing capital and human resources to the legal and official business, taking desired advantage of entry points at common border, the development of commercial relations between Iran and neighboring countries, reducing obvious and hidden unemployment crisis, and safe employment through borderline transactions
- Organizing informal exchanges and reducing smuggling

- Reducing the economic and social crisis and problem in borderlines and thus reducing the cost of providing security in these regions
- Transferring some tasks of governmental functions to meet borderlines' inhabitant needs and thereby reducing related costs (Islamic Republic of Iran Customs Administration (IRICA¹, 1999)

Methodology

In this study, after exploratory factor analysis of 36 variables selected by experts, first, in order to explore the factors affecting on the gray markets, 6 factors was extracted and given name to them; then, a questionnaire was distributed and collected among 320 Customs experts and specialists to measure relationship of variables due to assess the effectiveness of these components on real-time delivery to customers. The data obtained from the sample survey through structural equation was analyzed using software Amos. Cronbach's alpha is 0.755 for this study showing the reliability is good. Sampling adequacy test is 0.716 that is a desired number and is presented in the following table:

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.716
Approx. Chi-Square	2688.028
Bartlett's Test of Sphericity	df
	630
	Sig.
	.000

According to above explanations and obtained values for KMO, 0.71, and the significance level of 0.000 at Bartlett's sphericity test, questions in the questionnaire have the necessary conditions for the implementation of exploratory factor analysis.

Data Analysis

Results of exploratory factor analysis are summarized in the following table:

NO.	component	variables	item	Factor Weighting
1	Structural behavior	Limited supply	15	.806
		Gross margin	16	.729
		Consumer knowledge	14	.704
		purchase decision	18	.569
		Selective Demand	20	.463
2	customers purchase Culture	Finding new model	7	.728
		Advertising messages	6	.703
		Counterfeit goods	2	.643
		product Popularity in several markets	7	.607
		Currency	5	.467
3	market Ethics	Market share	24	.774
		Copyright	10	.729
		trade relationships	23	.565
4	distribution channel Quality	distributed Parallel product	30	.667
		Channel unplanned	31	.642
		expensive distribution	1	.624
		distribution channel Members	12	.499

¹ Islamic Republic of Iran Customs Administration

5	Brand Perception	Loyalty to Brand	11	.820
		Brand value	25	.626
		brand Rules	13	.448
6	Marketing structure	Production costs	32	.771
		Marketing costs	9	.477
		price difference	29	.447

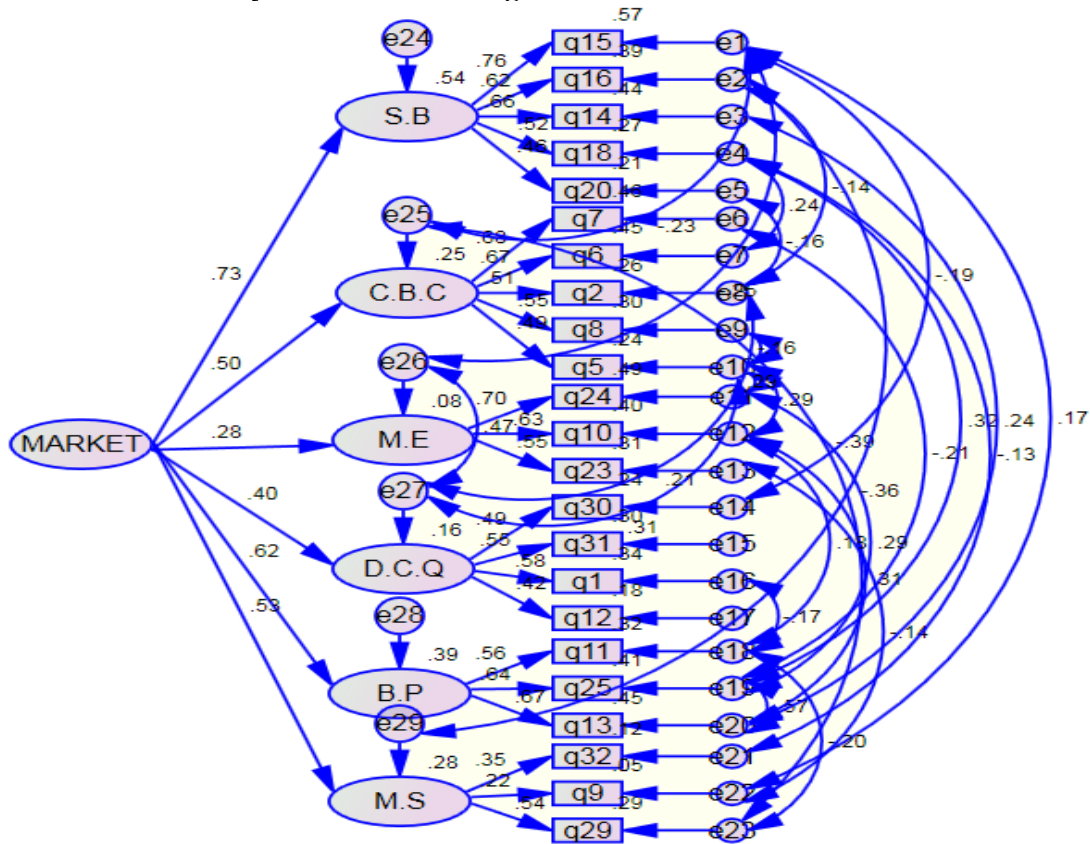
Here, hypothesis are concluded using structural equation modeling:

1. Structural behavior has impact on borderline markets.
2. Customer purchase culture has impact on borderline markets.
3. Market Ethics has impact on borderline markets.
4. Distribution channel quality has impact on borderline markets.
5. Brand perception has impact on borderline markets.
6. marketing structure has impact on borderline markets

Confirmatory Factor Analysis

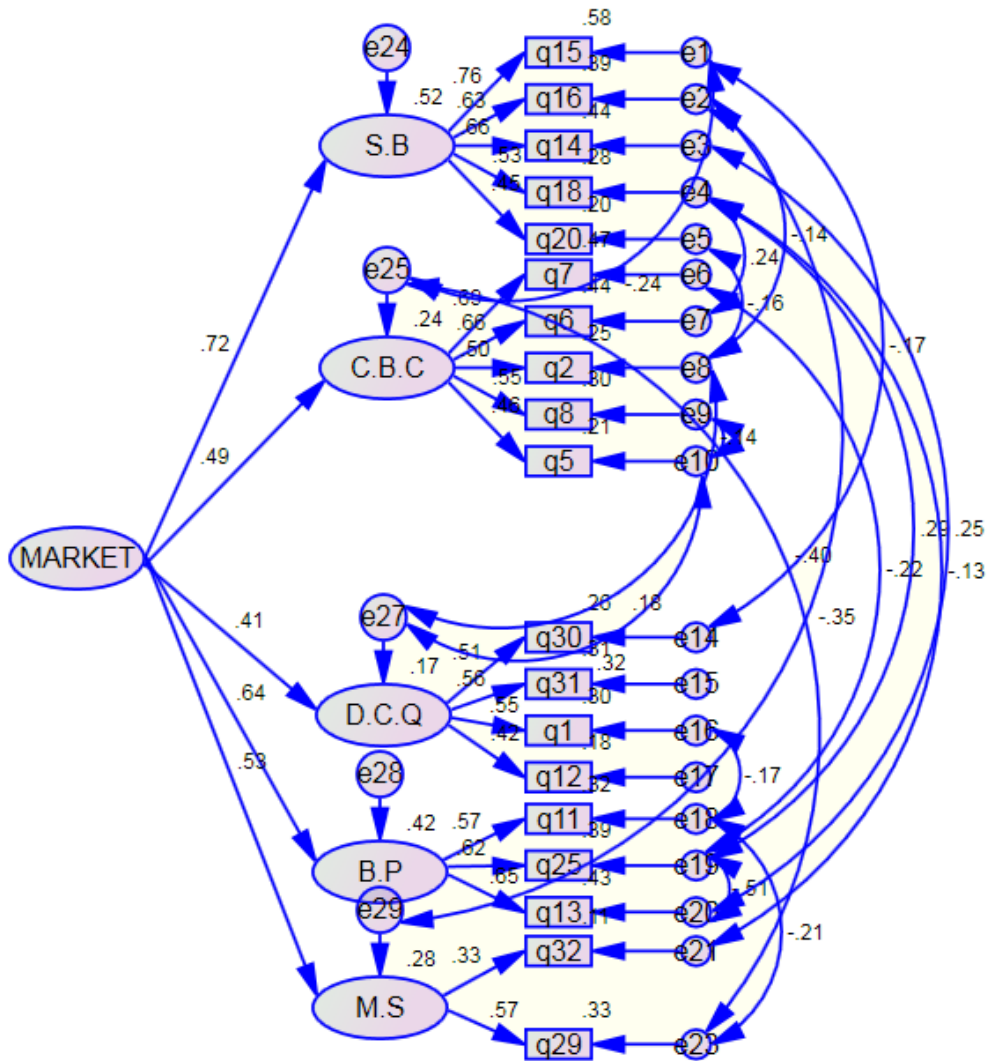
In the following, the forms related to analysis as well as factor analysis results are presented. It is noted that the relationship between errors in forms raised fitting model index. These relationships were created based on modified index in AMOS 18. Thus, if the modified index is higher for a relationship, adding it into a model improve fitting.

Factor Analysis Modification of general model with standard coefficient



Modified model fitting Index:

Chi-square of general model than degrees of freedom is 1.15 and appropriate. Some comparative fit indices are higher than 90% and appropriate. RMSEA is lower than 5% (0.02) and appropriate. All economical Indices are above 50% and appropriate. So there is a good fit in the whole model. Since, the standard coefficient of market ethic is 0.28 and lower than 0.30; also factor loading of question 9 was assessed 0.22, so it is deleted from the general model. The final model is presented as follows:



Apparently, the relationship between all factors and the latent variable was confirmed, but since data distribution was not normal, so bootstrapping should be done.

Comparison between maximum results of likelihood and Bootstrapping

			Max. likelihood ML				Bootstrapping results			
			Estimation	SE	critical ratio	significance level	Mean	SE	Low limit	High limit
structural behavior	<---	Borderline market	1.000				1.000	.000	1.000	1.000
customer purchase culture	<---	Borderline market	.472	.110	4.288	***	.445	.126	.309	.793
distribution channel quality	<---	Borderline market	.303	.083	3.659	***	.301	.158	.084	.683
brand perception	<---	Borderline market	.593	.149	3.988	***	.642	.216	.283	.963
marketing structure	<---	Borderline market	.279	.112	2.487	.013	.276	.155	.083	.603
q15	<---	structural behavior	1.000				1.000	.000	1.000	1.000
q16	<---	structural behavior	.715	.075	9.519	***	.736	.085	.615	.890
q14	<---	structural behavior	.731	.072	10.149	***	.733	.087	.595	.905
q18	<---	structural behavior	.662	.078	8.530	***	.695	.088	.513	.797
q20	<---	structural behavior	.474	.066	7.166	***	.480	.099	.315	.644
q7	<---	customer purchase culture	1.000				1.000	.000	1.000	1.000
q6	<---	customer purchase culture	1.041	.116	8.998	***	1.115	.173	.896	1.446
q2	<---	customer purchase culture	.893	.122	7.320	***	.969	.178	.724	1.310
q8	<---	customer purchase culture	.926	.121	7.641	***	.901	.153	.726	1.232
q5	<---	customer purchase culture	.660	.100	6.616	***	.698	.144	.507	1.006
q30	<---	distribution channel quality	1.000				1.000	.000	1.000	1.000
q31	<---	distribution channel quality	1.174	.208	5.644	***	1.187	.247	.778	1.558
q1	<---	distribution channel quality	.927	.165	5.606	***	.984	.448	.492	1.661
q12	<---	distribution channel quality	.893	.183	4.891	***	.880	.377	.407	1.529
q11	<---	brand perception	1.000				1.000	.000	1.000	1.000
q25	<---	brand perception	1.040	.215	4.832	***	.981	.239	.748	1.612
q13	<---	brand perception	1.036	.209	4.950	***	1.032	.252	.736	1.617
q32	<---	marketing structure	1.000				1.000	.000	1.000	1.000
q29	<---	marketing structure	1.759	.685	2.566	.010	2.181	1.678	.715	5.753

As earlier mentioned, bootstrapping does not depend on the default normal data in their estimation. Since the hypothesis of multivariate normality was violated in general model, we compared our estimations using bootstrapping to ensure the results. Maximum likelihood method for data that is not normal, estimates standard error smaller than normal which may not be such that in reality. For relations in all directions, standard error was obtained at the maximum likelihood method being lower than bootstrapping. According to maximum likelihood method and significance level is lower than 0.05, so all relations are confirmed. In bootstrapping, such directions are significant that the mean is located between high and low limit. As it can be seen, in bootstrapping, the mean is located between high and low limit for all directions, so all relations are confirmed. Results of hypothesis test and rankings were obtained later.

Hypothesis Test

H1: structural behavior has impact on borderline market.

Descriptive statistics

sample size	M	SL	SEM
320	3.62	0.76	0.04

T-test

Test Value=3.0					
test statistic Value	Degree of freedom	SL	MD	Mean confidence interval; M=95%	
				low	high
14.66	319	0.000	0.62	0.71	0.54

H2: customer purchase culture has an impact on borderline market.

Descriptive statistics

sample size	M	SL	SEM
320	3.95	0.69	0.03

T-test

Test Value=3.0					
test statistic Value	Degree of freedom	SL	MD	Mean confidence interval; M=95%	
				high	low
24.74	319	0.000	0.95	1.02	0.87

H3: distribution channel quality has an impact on borderline market.

Descriptive statistics

sample size	M	SL	SEM
320	3.90	0.64	0.03

T-test

Test Value=3.0					
test statistic Value	Degree of freedom	SL	MD	Mean confidence interval; M=95%	
				high	Low
25.05	319	0.000	0.90	0.96	0.82

H4: brand perception has an impact on borderline market.

Descriptive statistics

sample size	M	SL	SEM
320	3.69	0.74	0.04

T-test

Test Value=3.0					
test statistic Value	Degree of freedom	SL	MD	Mean confidence interval; M=95%	
				high	low
16.59	319	0.000	0.69	0.77	0.61

H5: marketing structure has an impact on borderline market.

Descriptive statistics

sample size	M	SL	SEM
320	3.83	0.68	0.03

T-test

Test Value=3.0					
test statistic Value	Degree of freedom	SL	MD	Mean confidence interval; M=95%	
				high	low
21.91	319	0.000	0.83	0.90	0.75

Conclusion

Summary of hypothesis test results and significance coefficient

significance coefficient	significance level	Rejection / acceptance	Exploratory factors	Dependent variable
.723	0.000	acceptance	structural behavior	Borderline market
.488	0.000	acceptance	customer purchase culture	
.413	0.000	acceptance	distribution channel quality	
.644	0.000	acceptance	brand perception	
.532	0.000	acceptance	marketing structure	

Ranking variables results using AHP technique

Prioritizing Main criteria

	structural behavior	customer purchase culture	distribution channel quality	brand perception	marketing structure
Standard weight	0.356	0.425	0.048	0.117	0.053
rank	2	1	5	3	4

Customer purchase culture is ranked at the highest with normal weight of 0.425. Structural behavior, brand perception, marketing structure, distribution channel quality are ranked at level second to fifth with normal weights of 0.365, 0.117, 0.053, and 0.048, respectively.

Prioritizing structural behavior components

	Limited supply	Gross margin	Consumer knowledge	Purchase decision	Selective demand
Component weight	0.221	0.217	0.188	0.242	0.131
rank	2	3	4	1	5

Prioritizing customer purchase culture components

	Finding new model	Advertising message	Counterfeit goods	Product reputation	Currency rate
Component weight	0.254	0.085	0.157	0.270	0.234
rank	2	5	4	1	3

Prioritizing distribution channel quality components

	Parallel distribution	Unplanned channel	Expensive distribution	Distribution channel members
Component weight	0.377	0.134	0.315	0.175
rank	1	4	2	3

Prioritizing brand perception components

	Brand loyalty	Brand value	Trademark rules
Component weight	0.449	0.368	0.184
rank	1	2	3

Prioritizing marketing structure components

	Production cost	Marketing cost	Price disparity
Component weight	0.388	0.333	0.279
rank	1	2	3

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