FACTORS AFFECTING FRESH FLOWER CONSUMPTION STRATEGY OF VIETNAM IN THE FOREIGN MARKETS WHEN VIETNAM INTEGRATES TPP: A STUDY IN DALAT, VIETNAM

Tran Phi Hoang
Industrial University of Ho Chi Minh City, Vietnam
tranphihoang@ihu.edu.vn

Nguyen Thi Thanh Phuong
Van Hien University of Ho Chi Minh City, Viet Nam

Nguyen Minh Toan
Industrial University of Ho Chi Minh City, Vietnam

Nguyen Thi Tuc
Industrial University of Ho Chi Minh City, Vietnam

Abstract
This study intends to analyze the factors affecting fresh flower consumption strategy of Vietnam in foreign markets when Vietnam integrates TPP (Trans-Pacific Strategic Economic Partnership Agreement - also known as TPP). Qualitative and quantitative research methods were used to perform a survey on 140 managers and experts working in exporting fresh flowers in Da Lat. The research results show that fresh flower consumption strategy of Dalat is affected by the following 05 elements: (1) Development policy, (2) Technology Engineering (3) Quality management, (4) Sales promotion, and (5) Supply capacity. Through the study results, measures to improve the consumption Dalat fresh flowers into foreign markets in the future are proposed. After the data analyzed, the obtained main objectives of this study were to: First, identify the factors affecting fresh flower consumption strategy of Dalat in foreign markets; Second, determine the priority orders of the impact factors affecting fresh flower consumption
strategy of Dalat; Third, propose solutions to enhance the affecting fresh flower consumption strategy of Dalat in particular and Vietnam in general in overseas markets in the future. Study found that all five factors have positively correlated to fresh flower consumption strategy of Da Lat in foreign markets.

Keywords: Consumption, consumption strategy, competitive strategy, development strategy, overseas market

INTRODUCTION
Dalat is flower city of Vietnam that has over 400 kinds of flowers with thousands of species of flowers. There are 70 chrysanthemum varieties, 30 gerbera varieties, 30 carnation varieties, and tens of roses, etc. originated in Da Lat long ago and originating from Europe, Japan, China, India and Thailand. The area for flowers in Da Lat is on 7,600 hectares, production has reached 2.5 billion branches, of which 10% are exported accounted for USD 26 million; 60% is consumed domestically (Ho Chi Minh City, Vietnam). If we compare Da Lat plateau with Cameron plateau (Malaysia), Cameron plateau is superior in the number of flowers, flower quality and value of exports. Although there are about 600 hectares of chrysanthemum but Cameron’s exports to Japan accounted for 60% of annual total production of flowers. Export quantity of fresh flowers of Da Lat is limited compared to the potential of the flower industry of this city. Dalat Fresh flowers heavily depend on domestic markets while the domestic market often fluctuates, good prices but bad harvest or vice versa. In fact, many years, flower farms in Da Lat have burned flowers because they could not have consumption markets while the current flower area keeps growing. There are many reasons but the main one is due to the production scale of the farmers are small, fragmented, missing links and planning; Slow technical application of new technologies in production, processing and storage so the quality of flowers is poor which do not meet the strict requirements of the world market; The new varieties of high quality flowers are planted depending on the variety market imported from abroad at high prices which increases the cost of production; There is no connection among State agencies and local governments, they do not know how to launch a market, to forecast about market for the farmers, therefore value of Da Lat flowers is still low which can not compete with countries having flowers modern industrial in the world. In the final report 15 years ago, the export volume of the Da Lat flower was 5% of the total output, now the figure is only 5% of exports. The rising export figures have mainly been flower businesses which have 100% foreign capital. The above issue brings out enormous challenges for Dalat flower industry in the future.
LITERATURE REVIEW & RESEARCH MODEL

There are many researches on competitiveness but Michael Porter is a master of competitive strategic research. Michael Porter (2012) mentioned a lot about enhancing competitiveness and the consumption of goods on the market in 03 famous books "Competitive Strategy" (1980) and "Competitive Advantage of Nations" (1980) and "Marketing Strategy 2.0 "(2011). According to him, the strategic focus of consumption is to focus on issues such as development policy, promotion, supply capacity, quality management, marketing budgets and manpower. Bane & Delt (1982), Asakada et al., (2013) suggested that the competitiveness of the enterprise depends on internal factors such as company resources, corporate strategy, supply capacity; human resources, creativity, technology and other brand values. Singh, V. et al., (2013), Datta, S et al., (2011), Gaspar, J. and Massa, M. (2006) were in agreement with the above statements in their findings and emphasized their role of "quality management" and "technology engineering" to the fields such as food, fresh flowers which are very important because they relate directly and indirectly to the health and safety for consumers. These authors believed that this factor is determinant deciding existence and sustainable development of any organization, particularly for organizations choosing difficult markets to export such as the US, EU and Japan. Cravens, David W (2012), Kale, J. et al., (2011), and Christian et al., (2010) also made the same conclusion in their study.

All the flower industry's leading experts agreed that "quality management" and "technology engineering" are two issues that need special attention in conquering the US, the EU and Japan market. If technical breeding are well-developed, tissue growing, and high technology applications will help increase export value, shorten production time and technologies after harvest to save costs, ensure quality and increase competitiveness in the market. According to L.D Xiang et al., (2009) businesses need diversifying their markets, focusing on seeking new markets besides the traditional markets.

According to Cravens et al., (2012) a good consumption strategy is decided based on a logic review of the market from many different angles, making objective analysis, avoiding subjective and having good measures on risk management. Thus, based on the theories, the results of scientific research related practices of the authors and reviews of the top experts, it can be identified that the factors affecting fresh flower consumption strategy of Dalat in foreign markets as Vietnam integrates the TPP includes 5 factors: Development policy, technology engineering, quality management, sales promotion and supply capacity.
Development policy and consumption strategy

According to Cravens, David W and Nigel. F Piercy (2012), development policy is a set of policies and actions on certain aspects of the senior management board and leadership, including managing goals to be achieved and how to accomplish those goals. These goals incorporate the comprehensive development in the manufacturing sector and the efficiency of economy, culture, society and environment. Porter, M.E. and Ketels, C.H.M. (2003) identify that development policies is the evolvement of a set of interdependent factors. It is used with the connotation of the phenomena in active status, not static (Booth, L., 2001). According to the authors, if we increase investments in these factors, it will increase the power of consumption according to the proportion.

**Hypothesis H1**: Is there a relationship between "Development policy" and fresh flower consumption strategy of Dalat in foreign markets.

Technology Engineering and consumption strategy

ECPC organization of the USA (2010) defines "Engineering" is the creative application of scientific principles, structures, machinery, tools, and processes into the construction or operating objects intentionally with full awareness of their design. “Technology” is creation, modification, use, and knowledge of tools, machinery, technology, professional skills, systems, and methods of organization in order to solve a problem, improve an existing solution, achieve a purpose, or perform a specific function. Technology significantly affects the ability to control and adapt of man and his natural environment. According to the authors, the more thorough investment in such aspects can be done, the higher equivalent level of consumption might get.

**Hypothesis H2**: Is there a relationship between "Technology Engineering" and fresh flower consumption strategy of Dalat in foreign markets.
Quality management and consumption strategy
According to Bunn (2012), Lee Nguyen (2009), quality management is the coordinated activities to direct and control an organization in terms of quality including quality policing, quality objectives, quality planning, quality control, quality assurance and quality improvement. Quality management has now been applied in every industry, not just in manufacturing but in all areas, in all types of organizations, from large scale to small scale, whether participating in the international markets or not. Quality management ensures the organizations implement the right steps and execute tactics that are important, according to the philosophy of "doing the right thing" and "doing the right thing", "doing it right from the start" and "doing the right thing at all times" (Hoang et al., 2015). According to the authors, if we increase investments in these factors the power consumption according to the proportion will be increased accordingly.

*Hypothesis H3*: Is there a relationship between "Quality management" fresh flower consumption strategy of Dalat in foreign markets.

Sales Promotion and consumption strategy
Sales promotion is promoting activities, seeking to purchase goods and providing services, including activities connected transactions, promotions, advertising, display and introduction of goods, services and fairs, trade exhibition in order to seek contracting opportunities, boosting consumption. According to the American Marketing Association (2009): "Promotion is marketing activities different from direct sales, advertising and propaganda to stimulate consumer purchases, and increase the efficiency of the intermediate distributors (Porter, M.E. and Ketels, C.H.M, 2003). According to the authors, the more thorough investment in such aspects can be done, the higher equivalent level of consumption might get.

*Hypothesis H4*: Is there a relationship between "Sales Promotion" and fresh flower consumption strategy of Dalat in foreign markets.

Supply capacity and consumption strategy
According Brons, M., and Pels, E., (2012), the supply capacity is a system of organizations, people, activities, information and resources related to the production and transportation of products from suppliers to final consumers. Nukamp, P., and Rietveld, P. (2011) suggest that supply chain activities related to the transition of natural resources, raw materials and components into a finished product to create value for the end customer. Supply capacity is linked to the value chain. According to the authors, if we increase investments in these factors the power consumption according to the proportion will be increased accordingly.
**Hypothesis H5**: Is there a relationship between "Supply capacity" and fresh flower consumption strategy of Dalat in foreign markets.

**RESEARCH METHODOLOGY**
The researcher focused on 02 major research methods as qualitative research and quantitative research, the specific research process undergone three stages as follows:

Stage 1: Based on the review of relevant theories and results of scientific research regarding the research topic, the researcher used qualitative method for group discussing and consulting leading experts to select and variables observed into appropriate factors groups.

Stage 2: Based on the grouping of factors affecting fresh flower consumption strategy of Dalat in foreign markets when Vietnam integrates TPP, the researcher designed survey questionnaires to collect the opinions of 140 local managers and professionals working in the field of fresh flower, during the conference on the “Strategy for Vietnam flower Industry” took place in December 2015. In this study, sampling and convenience method were used. According to Hair (2016), the formula for calculating sample size is $n = \sum_{j=1}^{m} kP_j$. In which m is the scale and Pj is the number of observed variables of the scale. The proportion of the sample compared to 1 analysis variable (k) is 5/1 or 10/1. Thus, the number of samples is larger than "total observed variables" of scale times "5" and less than "total observed variables" of the scale times "10". The research model included 05 scales, 22 observed variables (research questions), using Likert 5-point scale, Distance value = (Maximum - Minimum) / n = (5 -1) / 5 = 0.8. Specifically: 1 = Completely disagree; 2 = Disagree; 3 = No opinion/Normal; 4 = Agree; 5 = Totally agree. Survey results are recorded using SPSS 20.0 and tested scale reliability using Cronbach's alpha coefficients.

Stage 3: After testing the reliability by Cronbach's alpha coefficients, the researcher conducted Exploratory Factor Analysis (EFA) to “zoom out” and summarize the data of the scale (Hoang In Chu and Nguyen Mong Ngoc, 2005, "Quantitative Research SPSS"). This method is based on extraction ratio factor (Eigenvalue), under which only those factors extraction ratio or Eigen value are greater than 1 will be retained, while the smaller ones will not work for better information summarizes of the original variables; because after the original standardized variance, each variable equals 1. The method of extracting the main components (principal components) and original method of factor rotation (Varimax Procedure) were used to minimize the number of variables having multiple large coefficients at the same factor, which increases the ability to explain the factors. The results then were used to analyze multiple linear regression to test the assumptions of the model, which consider the impact of factors affecting fresh flower consumption strategy of Dalat in foreign markets.
EMPIRICAL RESULTS

Table 1. Cronbach’s Alpha

<table>
<thead>
<tr>
<th>Model</th>
<th>Code</th>
<th>Factors</th>
<th>Cronbach’s Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>IDV</td>
<td>DP</td>
<td>Development policy</td>
<td>0.832</td>
</tr>
<tr>
<td>TE</td>
<td>Technology Engineering</td>
<td>0.784</td>
<td></td>
</tr>
<tr>
<td>QM</td>
<td>Quality management</td>
<td>0.855</td>
<td></td>
</tr>
<tr>
<td>PS</td>
<td>Sales promotion</td>
<td>0.842</td>
<td></td>
</tr>
<tr>
<td>SC</td>
<td>Supply capacity</td>
<td>0.805</td>
<td></td>
</tr>
<tr>
<td>DV</td>
<td>GT</td>
<td>Flower Consumption Strategy</td>
<td>0.821</td>
</tr>
</tbody>
</table>

The test results scale shows that the scale has good accuracy with Cronbach’s alpha coefficient > 0.7 and the correlation coefficients of the total variables of measurement variables meet the allowed standard (> 0.3), the scale will be accepted. The observed variables are used for factor analysis to discover in the next step.

Table 2. Exploratory Factor Analysis (EFA)

<table>
<thead>
<tr>
<th>Initial Eigenvalues</th>
<th>Extraction Sums of Squared Loadings</th>
<th>Rotation Sums of Squared Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total % of Variance</td>
<td>Cumulative %</td>
</tr>
<tr>
<td>1</td>
<td>8.92</td>
<td>40.544</td>
</tr>
<tr>
<td>2</td>
<td>1.781</td>
<td>8.094</td>
</tr>
<tr>
<td>3</td>
<td>1.317</td>
<td>5.986</td>
</tr>
<tr>
<td>4</td>
<td>1.221</td>
<td>5.548</td>
</tr>
<tr>
<td>5</td>
<td>1.087</td>
<td>4.941</td>
</tr>
</tbody>
</table>

The results of EFA (Exploratory Factor Analysis) shows the total variance extracted is 65.114% greater than 50%. This means that the withdrawing factors would explain 65.114% for model, 34.886% is explained by other factors. Extraction ratio factor (Eigenvalue) is greater than 01 that is kept.

Table 3. Factor Analysis - Rotated Component Matrix

<table>
<thead>
<tr>
<th>Code</th>
<th>Observed variables</th>
<th>Component 1</th>
<th>Component 2</th>
<th>Component 3</th>
<th>Component 4</th>
<th>Component 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>SC5</td>
<td>Many export flowers are distinctive</td>
<td>.745</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SC1</td>
<td>Flower quality are high</td>
<td>.678</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SC3</td>
<td>Packaging Technology, cold storage systems are good</td>
<td>.661</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SC4</td>
<td>Different kinds of flowers are rich and diversified</td>
<td>.660</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SC2</td>
<td>Flower yields are high</td>
<td>.620</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>QM3</td>
<td>Export quarantine is good</td>
<td>.770</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The above results show that the model of EFA (Exploratory Factor Analysis) is consistent with the data, calculated into 5 groups of factors and these results may be used for a multiple regression analysis. The most of the scales are average from 2.56 to 3:19. However, the scales "DP" and "TE" are quite low, the observed variables range from 2.56 to 3:00. The results of this study reflect the fact because the techniques of breeding, tissue culture, high technology applications will help increase export value, shorten production time and post-harvest technology in Da Lat and Vietnam is very poor. In addition, sales promotion also has many limitations that have much influenced on the consumption of Dalat fresh flowers in overseas markets recently.

Table 4. Analysis of multiple linear regressions

<table>
<thead>
<tr>
<th>Model Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Model</strong></td>
</tr>
<tr>
<td>1</td>
</tr>
</tbody>
</table>

*a. Predictors: (Constant), X5, X4, X3, X1, X2

*b. Dependent Variable: GT
The above result shows the correlation coefficient adjustment: $R^2 = 0.656$ (verification $F$, sig. <0.05); which means 65.6 % of the variable Y shift is explained by the five independent variables (Xi). Coefficient Durbin - Watson ($d$) = 2.096; some observers $n = 140$, parameter $k = 5$, the level of significance of 0.01 (99%), in the statistical tables Durbin - Watson, $d_L$ (less statistical value) = 1.623 and $d_U$ (statistical value over) = 1.725. So $(d_L = 1.623) < (d = 2.096) < [4 - (d_U = 1.725) = 2.275]$ proved that the model has no autocorrelation.

**Table 5. ANOVA**

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>$F$</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>51.750</td>
<td>5</td>
<td>10.350</td>
<td><strong>54.018</strong></td>
<td>.000$^b$</td>
</tr>
<tr>
<td>Residual</td>
<td>25.675</td>
<td>134</td>
<td>.192</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>77.425</td>
<td>139</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Accreditation ANOVA is to assess the relevance of the theoretical regression model. The test results $F = 54.018$ value and Sig. = 0.000 <0.05 shows the building model is consistent with the data set and the variables included in the model are related to the dependent variable. Generally, regression analysis is 99% reliability, corresponding to the selected variables with statistically significant at the $P <0.01$; the results also show that all variables satisfy the demand. Verification of conformity of the model show that multicollinearity phenomenon does not violate ($VIF <10$).

**Table 6. The factors affecting fresh flower consumption strategy of Da Lat**

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
<th>95.0% Confidence Interval for B</th>
<th>Collinearity Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
<td>Lower Bound</td>
<td>Upper Bound</td>
</tr>
<tr>
<td>1</td>
<td>-.459</td>
<td>.254</td>
<td>-1.803</td>
<td>.074</td>
<td>-.962</td>
<td>.044</td>
</tr>
<tr>
<td>X1</td>
<td>.190</td>
<td>.073</td>
<td><strong>193</strong></td>
<td>2.615</td>
<td>.010</td>
<td>.046</td>
</tr>
<tr>
<td>X2</td>
<td>.169</td>
<td>.077</td>
<td><strong>146</strong></td>
<td>2.206</td>
<td>.029</td>
<td>.018</td>
</tr>
<tr>
<td>X3</td>
<td>.184</td>
<td>.087</td>
<td><strong>155</strong></td>
<td>2.114</td>
<td>.036</td>
<td>.012</td>
</tr>
<tr>
<td>X4</td>
<td>.241</td>
<td>.076</td>
<td><strong>209</strong></td>
<td>3.173</td>
<td>.002</td>
<td>.091</td>
</tr>
<tr>
<td>X5</td>
<td>.323</td>
<td>.068</td>
<td><strong>317</strong></td>
<td>4.746</td>
<td>.000</td>
<td>.188</td>
</tr>
</tbody>
</table>

The results of regression analysis showed the factors affecting fresh flower consumption strategy of Da Lat and expressed the following impact levels: (1) Development policy: $\beta = 0.317$; (2) Technology Engineering: $\beta = 0.209$; (3) Quality management: $\beta = 0.193$; (4) Sales promotion: $\beta = 0.155$; (5) Supply capacity: $\beta = 0.146$. 
The regression equation is: \( Y = 0.193X_1 + 0.146X_2 + 0.155X_3 + 0.209X_4 + 0.317X_5 \). If we increase investments in these factors, it will increase the power of consumption according to the proportion. Of all the important factors, “Development policy” (\( \beta = 0.317 \)) proved to have highest impact of the consumption strategies. Therefore, Dalat Fresh Flower Industry should invest more effort in enhancing the factor in order to improve the consumption of Dalat fresh flowers. This finding is the basis for proposing solutions to improve strategies for the consumption of Dalat fresh flowers in foreign markets.

**CONCLUSIONS**

This study shows that there are five factors affecting fresh flower consumption strategy of Da Lat in foreign markets each element is different. According to the analysis, five factors have impact positively correlated to fresh flower consumption strategy of Da Lat in foreign markets in order respectively: development policy, technology engineering, quality management, sales promotion và supply capacity. This is an important basis for proposing solutions to improve fresh flower consumption strategy of Da Lat in foreign markets. The results of this study conclude as following:

- There is a positive relationship between “Development policy” and fresh flower consumption strategy of Da Lat with significance level 5%.
- There is a positive relationship between “Technology Engineering” and fresh flower consumption strategy of Da Lat with significance level 5%.
- There is a positive relationship between “Quality management” and fresh flower consumption strategy of Da Lat with significance level 5%.
- There is a positive relationship between “Sales promotion” and fresh flower consumption strategy of Da Lat with significance level 5%.
- There is a positive relationship between “Supply capacity” and fresh flower consumption strategy of Da Lat with significance level 5%.

**RECOMMENDATIONS**

**Solutions for "Development policy" factor**

Da Lat flower industry in particular and Vietnam in general need regional flower planning, types of flowers relying on regional advantages. Farmers need directing to follow the zoning to build strength which is suitable for each crop, each household, avoiding the production of small-scale and spontaneous consumption during the last time. Business models needs creating for replicating sample typical models to market, creating oil slick and spreading and expanding
export markets. Flowers, flower product associated with the tourism industry need planning and orienting.

**Solutions for "Technology Engineering" factor**
Breeding techniques, tissue culture cells need developing. It is suggested to invest automatic irrigation system, a greenhouse, pest control. Changing breeds degraded by the new breed of high quality imported. Applying scientific and technical progress of high technology strong to help shorten the production, harvest, post-harvest technology, preservation technology to ensure performance, quality, and increase the value of exports in markets with high demand (The US, EU and Japan).

**Solutions for "Quality management" factor**
Constructing flower standards codes according to international standards (long, big, no stick insects on stems, leaves). Creating flower varieties connects to Vietnamese characteristic brands; Linking farmers to produce quantity and quality to meet export demand. Strengthening inspection and supervision, and requiring the parties to supply chain in DaLat and Vietnam committing to ensure flower quality, hygiene and absolute safety before reaching consumers.

**Solutions for "Sales promotion" factor**
Flower trading center needs organizing to connect supply and demand, enabling growers access market, capture the market demands. Market segmenting, boosting trade promotion activities are to promote Da Lat Flower into foreign markets and actively seeking new markets. Registration protection trademarks, geographical indications, traceability of origin of flowers, flower varieties, and farmers involved in producing must be clear. Enhancing the role of the flower Association, working closely with international partners such as inviting experts from the US, EU and Japan to Vietnam to guide planting, harvesting standard and storage of export goods.

**Solutions for “Supply capacity” factor**
Enterprises need optimizing the production process, harvesting, storage and processing to ensure increased productivity, quality and reduce production costs compared to many competitors in the TPP. Investments to improve cold storage and preservation system to ensure product quality to meet the requirements of demanding markets such as the US, EU, Canada and Japan. Investment in training, enhancing and fostering trade promotion team is to invite
experts of the EU trade promotion to impart knowledge and practical skills. Sending trade promotion team of Vietnam to the EU for training.

REFERENCES


