

Market actor's response towards flower colours in determining the economic value of Chrysanthemum flowers

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Abstract

Chrysanthemum flowers are a commodity with a chance to be developed. The colour of chrysanthemum flowers determines its economic value, thus becoming a major factor in choosing which types of flowers to be cultivated. This is a survey research. This research was carried out on market actors in Special Region of Daerah Istimewa Yogyakarta (DIY) and Central Java to obtain the preference of chrysanthemum flowers market in supporting Daerah Istimewa Yogyakarta (DIY) as the centre of chrysanthemum seeds and cut flowers. Market survey is also used to know the types of chrysanthemum flowers that consumers need. Research results showed that the largest consumer of cut flowers come from office workers that happen to be loyal customers. Yellow and white chrysanthemums are the most commonly selected flowers by consumers as they are believed to create a sense of social energy and hope, as well as being able to stimulate mental activities and are generally attractive.

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1. Introduction

Agricultural development in green areas is expected to have a strategic role in improving a sustainable development, creating harmony and balance in the process of economic empowerment, and transferring environmentally friendly technologies (Muafi et al., 2016; Muafi, 2016a; 2016b; Muafi, 2017). Ayandibu and Houghton (2017) stated that in developing countries, the contribution of SMEs towards employment generation is significant because they: (a) nurture entrepreneurship, (b) it helps to reduce risks (reduce crime rates), (c) support the building up of systemic productive capacities and the creation of resilient economic systems, through linkages between SME, (d) tend to use more labour intensive production processes than large enterprises, boosting employment and leading to more equitable income distribution and (e) value adding processing activities in agriculturally based economies". Chrysanthemums are floriculture crops that have a high economic value and are cultivated by many farmers on narrow lands. Hargobinangun region, Pakem, Sleman, Special Region of Daerah Istimewa Yogyakarta (DIY), Indonesia is coordinated area of cultivation of chrysanthemums to anticipate the public demands of cut flowers. The outlook of chrysanthemum flowers market is quite encouraging, especially with the development of tourism industries, florists, wedding decorators, and catering services in the country. Market opportunities abroad are also

promising. According to Amarta Regional Agribusiness' Competitions Specialist, under USAID, the opportunity of chrysanthemums agribusiness is very interesting to be developed as a land of investment. This is the important stage of uncovering market opportunities faced by an organization. Kotler (2003) has identified five strengths that determine the attractiveness of a long-term intrinsic profitability of a segment, namely: industry competitors, potential newcomers, substitutes, buyers or customers, and suppliers.

Business opportunities of chrysanthemums should still be developed. One of ways to do it is to see the level of market satisfaction towards the cut flowers produced by SMEs in Hargobinangun, Sleman, DIY, Indonesia. Marketing survey of this research aimed to fulfil and serve the demands of consumers. The colours of chrysanthemum flowers determine its economic value considering colour varieties they offer, thus becoming a major factor in choosing which types of flowers to be cultivated. The customers' behaviour is influenced by cultural, social, personal and psychological factors. Their selection process is the result of a complex interplay of these factors. Such factors are useful to identify customers who may have the greatest interest or demand to a product (Kotler, 2003). The cultivation technology that has been applied at chrysanthemum cultivation sites in Hargobinangun has met the national standard (Wijayani et al., 2015). However, the nature of cut flowers being very fragile remains the same; therefore, the location of marketing chrysanthemum products is strongly associated with the location of cultivation sites. Flower production centres with marketing location will determine the types of flowers sent, post-harvest handling, transportations, and shipping distance. Up until now, product marketing of cut flowers from Hargobinangun is limited in the areas of DIY and Central Java, considering the flower production is enough only for those regions.

Another problem frequently encountered in marketing chrysanthemum flowers is that producers do not yet fully apply the GAP/SOP principles of chrysanthemums (Muafi et al., 2016). The real condition in the field shows that the unavailability of high quality chrysanthemum seeds greatly affect the quality of the flowers produced. This is mainly due to that the high quality of chrysanthemum seeds are the kind of plant introduction that is relatively more expensive compared to the seeds produced in the country. The demands of homemade chrysanthemum seeds are, at first, quite high, but because of its availability does not last very long, sellers and producers tried to cultivate their own plants, resulting in making the seed quality to continuously decline (BAPPEDA DIY, 2003). On the other hand, introducing high quality domestic products surely needs a professional marketing campaign, so homemade chrysanthemums can be the host in their own country. The management in the field should also be done in an integrated manner, including a "field day" within the management to introduce new seed varieties in the country to attract cut flower producers who, in turn, are expected to shift chrysanthemum plant introduction (Sirohi and Behera, 2000; Wijayani and Amiaji, 2014).

Market survey was conducted to obtain preference of chrysanthemum market to support Yogyakarta as the center of chrysanthemum seeds and cut flowers. In addition, market survey was necessary as it would give a reference for regulating chrysanthemums development in Yogyakarta and to also identify customers. Moreover, market survey can determine the types of chrysanthemums needed by customers, the most preferred flower colour, price, and the best time to sell them.

2. Theoretical Review

To explain consumer behaviour, it is necessary to examine the theory that reinforces the responses of consumer behaviour. Consumer's purchasing decisions are a response to previously received stimuli. This research is reinforced by the *Theory of Reasoned Action* and *Theory of Planned Behaviour* that shape a person's behaviour.

Theory of Reasoned Action

Alport (1935) stated that attitude is a state of mental and nerve from readiness which was previously arranged through experience that gives dynamical or directional influence towards

individual response on every related object and situation (in O'Seas, 1985). Krech & Crutchfield (1948) added that attitude as a permanent organization formed from motivational, emotional, perceptual and cognitive processes regarding individual aspect (in O'Seas, 1985; Muafi, 2012; Muafi, 2016b).

A person's attitude has been studied intensively, but companies tend to pay more attention to real consumer behaviour, especially the behaviour of their work. Therefore, it is not surprising if a large number of researches try to establish the relationship between attitudes and behaviour. Consumer behaviour happens for a reason, especially for consumers who are in the following conditions: (1) have the freedom to choose, and (2) are not dominated by emotional aspects when making a decision-making process (Dharmmesta, 1998).

Ajzen and Fishbein (1980 in Dharmmesta, 1997) have developed a *theory of reasoned action* to associate the attitude of intent/interest and continued to behaviour. Ajzen and Fishbein's research has been the basis of their understanding of the relationship between attitude and behaviour. Most researchers of behaviour believe, and work under the assumption that the better a person's attitude towards an object, the more likely that person behaves. Fishbein realized that a person's attitude towards an object does not have to be strong or estimated to be associated with his behaviour. On the contrary, the direct determinant of whether someone will engage in behaviour is their own desire to engage in such behaviour. Fishbein modified and expanded the model of multi-characteristics attitude and associated beliefs and attitudes to the desires of their behaviour. Fishbein Model states that the purpose seen directly as a direct antecedent of behaviour is determined by the attitude component or by personal and social normative components.

Sometimes, behaviour is more influenced by the pressure of social environment rather than by personal attitudes. We all may have experienced a situation where we do things not because of our personal desires, but because of social influences (e.g., smokers attempting not to smoke when accompanied by non-smokers). Therefore, in the model of intended behaviour, attitude measurement is accompanied by social influence measurement to predict behaviour. Behavioural variables have been placed as an "estuary." That is, anything that is achieved by the model is a predictive behaviour. Employee behaviour can be predicted accurately from their attitudes and norms of subjectivity through intention variable. The result of this process of reasonable behaviour is a desire to engage in behaviour. The desire to behave is the best predictor of a real behaviour. In essence, the *theory of reasoned action* states that a complicated intentional behaviour (like buying a pair of shoes) is determined by a person's desire to express this particular behaviour. The *theory of reasoned action* is irrelevant to any simple and unintentional behaviour, such as winking, turning his head when the phone rings, or snoring. *Theory of reasoned action* will be able to accurately predict behaviours, but only under specific conditions. The main benefit for researchers is that there is a possibility that the measures of behavioural intentions would estimate actual behavioural choices or that predicted behaviours are determined by intentions (Dharmmesta, 1992: 44; Muafi, 2016b).

Theory of planned behaviour

Efforts to predict behaviours more accurately are continued to be developed by experts in various researches. *Theory of Planned Behaviour* (Ajzen, 1987, 1988: Madden, Ellen, Ajzen, 1992 in Dharmmesta., 1998), which is the development of the *theory of reasoned action*, has emerged as an alternative to predict behaviour more accurately. Typically, the behaviour of certain employees will be made if the related conditions are possible, such as:

- The employee's attitude is positive or beneficial.
- Social norm of the employee is also beneficial.
- The study of perceived behavioural control is quite high (this is what distinguishes it with the theory of reasoned *action*. This also makes it the focus of the theory of planned behaviour).

The theory of reasoned action not only emphasizes the rationality of someone's behaviour but it

also stresses that targeted actions are within the consciousness control of that person. An example is "I know I can stop smoking if I really want to." But, some behaviour is not in full control of that person. Therefore, Ajzen (1987, 1988, 1989 in Dharmmesta., 1998) enhanced the basic model by expanding or adding new variables to give attention to the concept of their own accord. *Perceived behavioural control* is a condition where people believe that an action is easy or difficult. This includes experience, in addition to the existing obstacles, which is considered by the person. Ajzen and Madden (1986, in Dharmmesta., 1998) pointed out their research, which found that students always want to get an A in every subject they take. Grade A is the value that is highly appreciated by them (*attitude*), and that grade is the value that their family and friends demands (*subjective norm*). However, the predictions of grade A in real terms may be misunderstood if the students' perceptions about their own abilities are considered and considered. Ajzen has stated that perceived behavioural control may affect intention or directly on the behaviour itself. Ajzen named this modified model by the term: *theory of planned behaviour*. Dharmmesta (1998) described several things to note in this intention variable, namely:

- Intention is considered to be a "catcher" or an intermediary of motivational factors that creates an impact on behaviour.
- Intention shows how hard someone dares to try.
- Intention also shows how much effort a person plans to do.
- Intention is most closely associated with subsequent behaviours.

Specifically, the *theory of planned behaviour* suggests the existence of three conceptually independent determinants of intentions, namely:

- Attitude towards behaviours that indicates the degree to which a person has a positive or a negative evaluation about certain behaviours.
- Subjective norms, as social factors, indicate perceived social pressure to perform or not to perform certain actions/behaviours.
- Perceived behavioural control, a variable that is not included in the *theory of reasoned action*, shows how easy or difficult a particular action is and is considered as a reflection of experience, in addition to the anticipated obstacles.

3. Methodology

The method of data collection is done by doing a two-phased survey method: pre-survey and formal survey. Pre-survey was conducted to determine the field conditions of research locations and by also collecting secondary data to support the research. Formal survey was conducted through interviews and distributing questionnaires to the respondents. The research locations are flower markets in Yogyakarta and Central Java. The selection of respondents is determined intentionally and the sample size is determined based on a *Formula Stovin* method with an error of 10%. Respondents are determined intentionally based on the data collected during pre-survey. Respondents are consisted of producers/farmers, traders, cut flowers consumers, and the public who happened to be at the cut flowers markets, with a total number of 60 respondents. The collected data is processed descriptively and was analysed in non-parametric according to the type of data collected.

4. Results and Discussion

Consumers prefer cut flowers in a bouquet (95%), rather than pieces. The majority of the main customers of cut flowers are still regular customers and at the same time are loyal customers to a particular merchant. The distribution of cut flowers regular customers are shown in Table 1.

Table 1. Distribution of cut flowers regular customers

Customers	Response (%)
Office complex	40
Individuals	30
Florist	25
Others	5

Table 1 shows that the end customers of chrysanthemums are dominated by office workers. Usually, they need to buy cut flowers for formal occasions such as seminars, workshops, training, etc. Customers of office workers are dominated by civil servants. Sellers prefer office workers customers even though they do not always pay immediately. This is because they are loyal customers and regular buyers. This also applies to the florists; most of them are loyal customers and regular buyers, even though they buy those flowers at a cheaper price, and this is because they will re-sell those flowers in a bouquet. A two-way communication between sellers and buyers should always be made to ease the payment. This condition is in line with Kotler's theory (2003), which states that to communicate effectively, sellers need to understand the fundamental elements underlying an effective marketing communication. The two elements that make up the primary function of communication are the sender and the recipient.

Chrysanthemum flowers are a commodity with a lot of colour variations, but not every colour is liked by consumers. Yellow chrysanthemum flowers are the most preferred choice by consumers. The survey results can be seen in Table 2.

Table 2. Rate of demands of chrysanthemum flowers by colour

Colour	Demand (%)	Other Criteria
White	40	Sharp/strong flower colour, strong stems,
Yellow	50	safe from pests and diseases, and has a
Green	5	long lifespan.
Other Colours	5	

Table 2 shows that the favourite colours of chrysanthemum flowers are yellow and white. Yellow chrysanthemum flowers, like Puspita Nusantara and Sakuntala, are considered national varieties and are very popular. Puspita Nusantara represents the type of "spray" (one stem contains few flowers); while Sakuntala represents the standard type of chrysanthemum flower (one stem contains one flower stalk). The other criteria selected by customers are generally flowers with sharp colours, the size and shape of flowers are proportional, strong stems, safe from pests and diseases, and have a long lifespan.

Although sometimes customers will mix different types of flowers in the bouquet, chrysanthemums remain the most dominant. Puspita Nusantara and Sakuntala have a sharp yellow colour, the colour of which is able to spread an aura of happiness. The yellow colour is also considered to create a social energy and hope, as well as stimulating mental activities and is generally attractive. Some plant introduction varieties are also looked for by the consumers,

especially yellow and white, with green as another colour liked by the consumers (Yiyao et al., 2002; Fukai et al., 2002; Wijayani et al., 2015). Marketing chrysanthemum cut flowers depends on the number of activities/events at the time. During "busy" months of a particular occasion, chrysanthemum cut flowers come with a great demand, which results in a shortage of flowers. According to florists in Kotabaru, Yogyakarta, flower colour determines the kinds of activities demanded by customers. For example, wedding parties and receptions will likely demand bright colours like red, yellow, and green. As for words of sorrow and condolences, the colour purple and yellow are dominant. According to Diener (2001), lack of knowledge will lead to forming negative attitudes from consumers. Cut flowers are commodities that are appreciated for their beauty and freshness. Post-harvest handling to maintain the freshness of cut flowers is a very important effort. Wijayani's research (2015) about flowers phase-life found that a yellow Sakuntala chrysanthemum is capable of maintaining freshness for up to 15 days, while a green Samrok chrysanthemum has a phase-life of 7 days. The increasing demand of cut flowers from time to time is a business opportunity with great prospects. Process and product diversification strategy should consider the customer loyalty in every region so it will be unique. This research finding is also supported Terblanche (2017) findings that "*customer loyalty as an outcome holds various advantages for a retailer. Retailer provides the type and level of retail mix elements for interaction that customers' desire and which results in customer loyalty*". Consumers admire yellow and white chrysanthemums because they are more durable than other colours. This research gives practical implication that SMEs performance which has a basic on centres can be achieved with increasing Local Economic Development (LED) (Ayandibu and Houghton, 2017) and green area competitiveness (Muafi et al., 2016). Future research should consider other aspects that are also important to increase SMEs performance which is the empowerment of Green IT, creativity, innovation, social capital and pro social behaviour (Muafi, 2015a; Muafi et al., 2016; Muafi, 2015b).

5. Conclusion

Based on data analysis, it can be concluded that the market for chrysanthemum cut flowers is still very broad. The largest consumers of cut flowers come from office workers that happen to be loyal customers. Yellow and white chrysanthemums are the most commonly selected flowers by consumers as they are believed to create a sense of social energy and hope, as well as being able to stimulate mental activities and are generally attractive.

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