

## **Business Operations of Wine-Specialized On-Trade SMEs: The Case of South Korea**

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### *Abstract*

◦*Purpose: This paper explores the performance of small to medium sized South Korean on-trade businesses and how their performance could be improved through a thorough understanding of service management issues*

◦*Design/methodology/approach: A field study with six businesses in South Korea was carried out. The data obtained was methodically analyzed to understand the influences of different variables within their business model. Then, we employed a simulation model to identify key factors responsible for their performance and define improvement strategies.*

◦*Findings: Customer satisfaction, number of customers and profit have been identified as key performance indicators for the South Korean on-trade business. However, it was found that the length of wine list, category management, had the most significant effect in their performance and the number of sommeliers in the business have a non-linear impact on profits.*

◦*Practical implications: The management of wine lists, category management, is a key area where wine producers should work together with on-trade to improve the performance of the whole wine supply chain. It was also confirmed from the research that on-trade businesses can take advantage of system dynamics modelling to improve their performance by testing out strategies that affect customer behavior.*

**Key words:** On-trade business, South Korea, Customer behavior, On-trade KPIs

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## **1. INTRODUCTION**

Surprisingly, the wine industry is an important actor in the service sector. While harvesting and bottling processes are placed under the manufacturing industry and off-trade selling in retailing industry, serving wine on-trade is a major part of hospitality and restaurant industry that offer hedonic, experiential services. In terms of wine consumption, scholars have extensively investigated the wine industry, both in global and local scale, in terms of consumer behavior and decision making, e.g. Lockshin and Rasmussen (1999); Locksin and Spawton (2001); and Schiefer and Fischer (2008). Other authors have also focused on consumer decision making process (Alvelos and Cabral, 2007; Dodd et al, 2005; Perrouy et al, 2006) and wine tourism (Getz and Brown, 2007; Bruwer, 2003; Sparks, 2007). Since wine consumption is a typical consumer experience-oriented activity, hence sales being affected by such characteristic, it is understandable the extensive set of consumer studies published in the topic. However, there are fewer studies in how to manage the businesses that provide the wine consumption experience and how they can be managed to improve wine consumption. This study intends to contribute to address this research gap.

This paper studies SMEs operating in the on-trade wine channel such as wine bars (on-trade channels that specialize in wine and offer snacks as secondary revenue source), wine-specialized restaurants (on-trade channels that offer a la carte and offer an extensive wine list as available alcoholic beverage), and the bars and restaurants in independent hotels. The study involves SMEs from South Korea, more specifically Seoul and its proximity. In the South Korean wine industry, 31.6% of the market volume is accounted for in on-trade distribution (Marketline, 2013). These include wine specialized bars and restaurants. According to the latest statistics for South Korea, over 654,000 premises were registered in restaurant and on-trade businesses, of which 99.9% were SMEs. These businesses accounted for 20.2% of total SMEs in South Korea. On the one hand, over 100 new businesses open in the restaurant and on-trade business segment and approximately 33% open in the Seoul region every year. On the other hand, 60 businesses close down nationally every year, where 50% of them are in the Seoul region. As the statistics show, on-trade business is not a business without risks and with an important failure rate. The aim of the paper is to analyze the performance of on-trade wine distribution businesses in Seoul and understand performance drivers through a set of case studies supported with mathematical modelling (Kunc, 2009). Our contribution is in two areas. First, we expect to contribute to on-trade management area by highlighting the issues and key drivers determining the performance of businesses. Secondly, we contribute to the wine industry detecting best practice to incentivize wine consumption in a key region in the world for wine consumption: Asia.

## **2. LITERATURE REVIEW**

The consumption of wine in South Korea is rather young and it is showing continuous growth in recent years (Marketline, 2013), with France being the lead supplying country (30.3% market share) followed by Chile (22.3%) and Italy (16.9%). Although wine consumption started in the early 1990's, it is still considered a luxury good, accounting for only 2% of total alcoholic beverage sector in South Korea. The majority of wine distribution occurs through off-trade premises, such as supermarkets and hypermarkets, accounting for 54.9% of total market volume. On-trade distribution (i.e. restaurants and bars) accounts for a further 31.6% of market volume (Marketline, 2013). The majority of the firms in such distribution channel are SMEs, consisting of independently owned wine bars or 'wine & dine' restaurants. The South Korean wine market is highly fragmented, where wine distributors compete strongly against each other

as well as other alcoholic beverages, namely beer and soju (distilled sweet potato spirit) that account for 74% of total alcoholic beverage sales in South Korea (Wine Market Brief, Global Agricultural Information Network, 2012). In such an aggressive climate, it deems crucial, especially for SMEs to strategize and understand what influences the business performance in order to survive the competition. We employed two theoretical streams to analyze the on-trade businesses in South Korea: on-trade business literature and service management.

## **2.1. Managing On-trade Business**

Traditionally, the most common parameters for judging a restaurant's quality have been the existence of a supply of fine wines and the display of certain information such as the vintage (Asenjo, 2000). Currently the Michelin Guide uses the exceptionality of the presence of outstanding wine vintages and the wine service as a standard to evaluate restaurants (Michelin Guide, 2008). Gil et al. (2009) suggest a difficult balance between tradition, demand and risk in wine lists but it is a critical management instrument that provides value and prestige to the restaurant when it offers customers a complete emotional experience with plenty of surprise as well as information. Berenguer et al. (2009) found that the length of wine list differentiated top-quality fine dining establishments from others.

Despite the importance of maintaining a lengthy wine list with fine wines for the establishment's reputation, it is also a managerial issue stocking wines on the list. Many studies found that wine inventories are a substantial investment in wine-specialized businesses and the managers must consider the wine inventory turnover with care in order to maximize the financial performance of the enterprise (Reynolds, 1999). Wine inventories are usually very expensive, especially as fine wines have limited availability over time and must often be purchased by the case (Barth, 2011) and turnover can be slow. A study by Coad (2009) confirmed that, in fact, wine inventories follow the Pareto principle (Phillips-Donaldson, 2004), which suggest that 80% of sales come from 20% of items offered, meaning that extensive wine lists involve a high proportion of items that do not sell in significant quantities. While customers are more attracted by a wide selection of different items with a range of prices (Dhar et al., 2001), managers in on-trade businesses recognize that there is a trade-off between the holding cost of inventory, order costs, lead times and the demand (Barth, 2011). Often, businesses use pricing to minimize negative trade-offs. Most common method found in wine businesses was to set the price equal to two or three times the cost using a progressive mark-up, where higher margins are set to lower priced wines and lower margins to higher priced wines (Chung, 2008). An additional issue related to inventory management is that some fine wines can be cellared for years as investment, while regular wines have to be opened within a year of their purchase. It is a sensitive organizational matter for managers to control the balance of the wine inventory whilst meeting the demand of customers. This is where the crucial role of sommeliers comes to effect.

### **2.1.1. The Sommelier Effect**

The existence of sommeliers are vital to on-trade businesses (Gil et al., 2009), where trade journals suggest that they can be responsible for increasing beverage sales by 25 percent (Hochstein, 1994). Many studies show the extent of a sommelier's responsibilities within an on-trade premise. For example, Aspler (1991) states that a sommelier can be responsible for creating and updating the wine list, ordering and cellar management, ensuring accurate inventory turnover, identifying current consumer consumption trends, attending trade tastings, participating in wine promotion and merchandising, and assisting consumer in selecting the appropriate wine to pair with meal selection. Gil et al. (2009) state the expertise of sommeliers is reflected in a highly extensive, varied, heterogeneous and innovative wine list. On the other

hand, Green (2003) suggests that a sommelier's position should provide marketing and wine education to both employees and restaurant patrons. Manske and Cordua (2005) propose sommeliers should use their product and market knowledge to directly influence wine sales by establishing credibility, employing a selected sales technique and closing the sale of wine. Training is highlighted in Granucci et al. (1994) who found that service staff increased wine sales by an average of 44% after they completed a professional wine training program.

## **2.2. Service Management**

The elements of service management are crucial to implement and design services, in order to maintain customer satisfaction which is vital to the survival of service firms. Concentrating efforts on influential factors such as 'servicescape' and front line employees enable service firms to have successful service encounters, which can generate positive word of mouth. Other than free advertising by word of mouth, firms can benefit from repurchases and customer loyalty as customer satisfaction influences purchasing behaviors (Chen et al., 2009). The trustworthy and positive image a firm gets due to continuous satisfaction ratings serves as a form of market-validated information (Hansen et al., 2008) that can signal the underlying quality of a firm's products or services to customers (Rose and Thomsen, 2004), and directly affect customer satisfaction and lead to customer loyalty in the end (Loureiro and Kastenholz, 2011). It serves as a virtuous cycle: higher reputation companies are more likely to gain customer trust as good reputation strengthens customer confidence and reduce perception of risk (Loureiro and Kastenholz, 2011).

### **2.2.1. Customer Satisfaction**

At the heart of service management literature is the Expectation Disconfirmation theory (Oliver, 1977). The theory states that consumers use their own subjective pre-consumption expectations to compare the post-consumption experiences of a product or service to form an attitude of satisfaction or dissatisfaction towards the product or service consumed. Disconfirmation, here, is the psychological comparison of the gap between expectation and service delivery (Oliver, 1997). As it can be inferred, managing expectations is one of the two key elements as it plays a significant role in the formation of disconfirmation as a comparison benchmark. The degree of expectations varies depending on many factors between individuals, such as past experiences, word of mouth reports, susceptibility to advertisements and price (Parasuraman et al., 1985; Zeithaml et al., 1993). The other element is the performance or the service delivery, where the consumers will obtain the experience. The experience comes from the "service encounter", defined as the period of time during which a customer directly interacts with a service (Shostack, 1985, p.243). Pizam and Ellis (1999) confirmed in their study that hospitality and tourism industries' survival mainly depends on satisfied customers, where the degree of satisfaction for those customers is derived from the success of the service encounters. This is mainly due to the fact that these industries provide experiential products and services, which cause higher physiological and emotional arousal during the encounter – and those arousals heighten the degree of experiences the customer obtains (Smith and Ellsworth, 1985). Let's review in more detail the factors affecting service and the expectations.

### **2.2.2. Servicescape and Front Line Employees**

Of the many factors that influence customers' satisfaction, 'servicescape' and front line employees are highlighted in literature. Servicescape is defined as the physical surroundings fashioned by retailers to facilitate the service offering to consumers (Bitner, 1992). In her earlier study, she states that servicescape and employee responses significantly influence consumer experiences and hence emphasize the need to consider these factors in predicting and explaining consumer behaviors (Bitner, 1990). Ryu and Han (2011), in their study of upscale

restaurants, also concluded that the servicescape and front line employees were the most contributing factors in generating disconfirmation, where disconfirmation showed a high degree of positive correlation to customer satisfaction and satisfaction to loyalty. In particular to servicescape, Bitner (1992) found that a firm's servicescape has a direct relationship with cognitive responses, such as customer beliefs and perceptions. With respect to the hospitality industry, many researchers state that the creation and maintenance of a distinctive atmosphere is a key factor in attracting and satisfying customers, which in turn increases financial performance (Dube and Renaghan, 2000; Hertenstein et al., 2001). Sulek and Hensley (2004) found that a pleasant servicescape determines a large extent to the degree of customer satisfaction and loyalty in a restaurant visit, and Nguyen and Leblanc (2002) state that in the restaurant context, the physical environment provides customers with cues that deliver expected service quality and in turn, perceived value. As previously discussed, servicescape is proven to have an influence on obtaining disconfirmation.

Front line employees are the employees that customers interact directly in a service firm. While customers have tangible cues to what they should be expecting (i.e. through the product displays) in retail stores, customers lack the tangible aspect where they can significantly reduce the perception of risk involved in committing to a transaction in a service organization. Front line employees are found to be one of the major influences in customer satisfaction in services because they are the tangible cue for customers. Chapman and Lovell (2006) confirms the importance of the front line employees as the success of a service encounter depends on the "availability of aware, service oriented, competent employees who understand the context in which they work, and are well versed in the specific organization's strategic objectives and culture" (page 79).

### **2.2.3. Word of Mouth**

Word of mouth is a tool used by both service providers and customers to manage expectations. The intentional verbal communications responsible for word of mouth are employed by customers when they pursue goals (Hennig-Thurau et al., 2004). For example, customers who are dis/satisfied with a particular service encounter reciprocating their bad or good experiences by talking negatively or positively about the provider in order to help or hinder attracting new customers respectively (Blazevic et al., 2013). Customers also employ word of mouth for self-enhancement purposes (De Angelis et al., 2012) as using a brand as self-representation tool allows the brand to be a symbol of status (Wilcox et al., 2009). A study by Sundaram et al. (1998) shows that typically 20 percent of customers initiate online word of mouth behavior only to fulfil a self-enhancement goal. It is observed that dissatisfied customers generate more negative word of mouth than satisfied customers generate positive word of mouth (Anderson, 1998). The degree of involvement of the customer is positively correlated to the likelihood of positive word of mouth generation following a satisfactory experience (Wangenheim and Bayon, 2007), and the degree of knowledge and interest that the customers take in the product category is also positively correlated to generating deliberate recommendations of the product or service (Berger, 2011). Word of mouth is an effective tool that customers tend to use as a trustable information source, especially the Generation Y's, where they make frequent use of social media to display such behavior (Bolton et al., 2013). Whilst word of mouth has advantages to both consumers, by reducing perceived risk and uncertainty for new customers (Tarn, 2005), and service providers, by reciprocation of additional word of mouth from the recipients of word of mouth after a positive service encounter (Sheth, 1971); it is observed to have many limitations as well. For example, the receiver's previous attitude towards the brand or service provider significantly affect the extent of effect a recommendation has (Blazevic et al., 2013).

Table 1 presents a summary of the key elements affecting the on-trade business from the perspective of service management.

<b>Service Management</b>	<b>On-trade wine business</b>
Servicescape	→ Place, location
Front line employees	→ Sommeliers
Word of mouth	→ Wine consumption experience, wine list

**Table 1. Key Issues in On-trade Business**

### **3. RESEARCH METHODOLOGY**

The research methodology involves the combination of two methodologies: case study research (Eisenhardt, 1989) and system dynamics modelling (Morecroft, 2007). Case study research was conducted to gather insights and data from a set of case studies of on-trade business about on-trade business model and performance issues. Then, the insights of the case study research were employed to construct a system dynamics model to gain a deeper understanding of the business model and performance issues of the on-trade businesses. System Dynamics is a methodology to understand the behavior of complex systems over time. The main concepts employed in System Dynamics are feedback loops, time delays and stocks and flows which are assumed to be responsible for the behavior of organizational systems (Kunc and Morecroft, 2007). System dynamics modelling in organizations have many applications such as identifying strategic objectives, exploring potential strategic behavior modes and formulating improved organizational policies to achieve strategic advantage (Snabe and Größler, 2006; Gary et al, 2008). System dynamics modelling also supports decision makers to understand the dynamics of resources, and ultimately serves as a learning process to enable decision makers to better frame the relevant questions related to the performance of businesses (Morecroft, 2007).

#### **3.1. Participants**

A total of 28 premises were successfully contacted through telephone calls, where either the head sommelier or the owner was briefed of the research objectives. Only four head sommeliers, who have day-to-day contact with customers, plan the wine lists and order supplies, and two owners of the businesses accepted to be involved in the research. Unfortunately requests for direct contact with customers were denied for all participating businesses. The locations of the participating businesses are all in affluent areas in central Seoul and its proximity. The firms participating in the study are typical examples of on-trade businesses in South Korea given their size (more than 10 employees and less than 10 employees), servicescape (location of the business), front-line employees (number of sommeliers and owner-manager) and recognition based on word-of-mouth. Therefore, the sample of firms achieves theoretical saturation as indicated by Eisenhardt (1989). Table 2 shows a brief description of the firms interviewed.

Firm	Size (Employees)	Type	Location	Interviewee
A	16	Wine & Dine	Seocho, Seoul	Head Sommelier
B	7	Wine & Dine	Chungdam, Seoul	Owner
C	9	Wine Bar	Sorae-Maeul, Seoul	Head Sommelier
D	11	Wine Bar	Chungdam, Seoul	Head Sommelier
E	18	Wine & Dine	Jungja, Bundang	Owner
F	9	Wine Bar	Jungja, Bundang	Head Sommelier

**Table 2. Participants**

### 3.2. Data collection and model development

Data collection was performed in two stages. In the first stage, in-depth open interviews were conducted with the six participants to gain insights about their existing processes from forecasting demand and sourcing the inventory to marketing of the wine list; and to discuss any strategic issues the firms were facing. The interviews were analyzed together to find similarities among business processes and performance issues in the six individual businesses in order to achieve theoretical saturation (Eisenhardt, 1989). The insights of the set of case studies were compiled in a generic causal loop diagram (Morecroft, 2007) of the on-trade business model (see figure 1 in section 4.1). The second stage involved additional interviews to validate the representation of the on-trade business model and obtain quantitative data such as turnover, costs and margins to develop the model (see appendix for an explanation of the variables employed in the model).

## 4. RESULTS

### 4.1 On-trade business dynamics

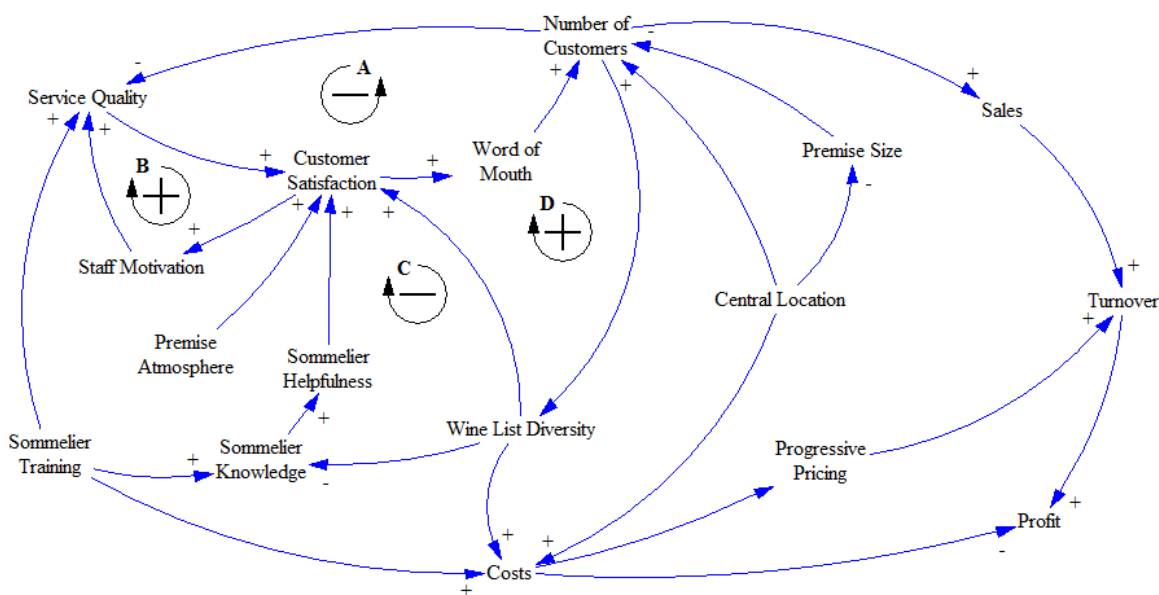
The on-trade business model comprises three areas: customer behavior, front-line employees and servicescape, which are strongly interconnected.

**Customer behavior.** An increase in high service quality leads to positive customer satisfaction and subsequent positive word of mouth increasing the number of customers. If there are too many customers to serve, with a fixed number of staff, the service quality will fall leading to a decline in customers in the long term. A negative feedback loop (A) reflects customers' behaviors.

**Servicescape.** Servicescape is a self-fulfilling prophecy, driven by a positive feedback loop (B), where a rise in service quality achieved by training staff will positively affect customer satisfaction. Higher customer satisfaction increases staff motivation improving service quality even further. It is also possible that the effect may be the opposite, where a fall in service quality will decrease the customer's experience in the service encounter, which will increase dissatisfaction subsequently reducing staff motivation, and harm service quality even further. Central location affects positively the number of customers but reduces the size of the premises and increases costs. Higher costs affect the price which influences turnover.

**Front-line employees.** A negative feedback loop (C) reflects the limitations in service firms due to the limits in the front-line employees. It is widely observed that sommelier helpfulness in recommendations to customers is paramount to customer satisfaction. The positive effects of

customers' satisfaction, expressed as positive word of mouth, increase the number of customers and contribute to increasing the wine list length and diversity augmenting inventory and costs. However, a balancing effect occurs as the level of knowledge and how well versed the sommeliers are in the extended wine list reduces their helpfulness affecting customers satisfaction. Finally, the wine list diversity and length increases customer satisfaction as they have more choices reinforcing the positive dynamics of wine list (the positive feedback loop – D–). As described in the previous feedback loop (C), customer satisfaction positively influences word of mouth and increases the number of customers. This contributes into increasing the wine list length and diversity, and this virtuous cycle creates the positive feedback loop.



**Figure 1. On-trade Korean Business Dynamics<sup>1</sup>**

#### 4.2 On-trade business performance analysis

Customer loyalty is one of the factors that influence any firm's performance and survival. It is evident that attracting new customers carry more costs than retaining customers, and it is costly to lose customers. Hence, one of the strategic paths for small businesses, which cannot afford to invest marketing to attract new customers, is to focus on its customer retention. In on-trade businesses, customer losses are dependent on the level of service quality, which is affected by the total number of customers and the number of sommelier available to assist those customers. In order to increase the service quality, an on-trade business portrayed in figure 1 has to either decrease its total customer numbers or optimize the number of sommelier employed. The former is not a viable option as the purpose of any business is to retain its customers not to lose them. However, the on-trade business has to keep in mind that an overemphasis on retaining its

<sup>1</sup> Causal loop diagrams are used to illustrate feedback systems (Morecroft, 2007). The main components are arrows, polarity and feedback processes. Arrows indicate the direction of causality between two variables. Positive (+) or negative (-) signs at arrow heads indicate the polarity of relationships between two variables: a '+' indicates that an increase or decrease in a variable causes an increase or decrease in the related variable. If the sign is '-', a change in a variable will cause a change in the opposite direction in the related variable. The nature of the feedback processes is represented using 'loop identifiers', such as + or -, which indicate the type of feedback process. '+' denotes a positive (self-reinforcing) feedback, or '-', which indicates a negative (balancing) feedback process (Morecroft, 2007).



customers should not affect its financial performance.

Table 3 shows the calculated figures from a simulation. The table shows the percentage change in customers (net growth rate) and profit when there are different numbers of sommeliers employed, which are key front-line employees. Profit sees an extreme increase when sommelier numbers are reduced due to the savings in training costs and salaries, which are a large proportion of total costs. However, the business is not sustainable given the high level of customers' losses. Since businesses do not want losses or a decrease in total number of customers, the employment of one or seven sommeliers is not an option. In order to minimize the average customers' losses and maximize profit, employing two sommeliers in on-trade business seems to be the most viable option for business of similar size.

	Number of Sommelier Employed						
	1	2	3	4	5	6	7
Average Customer Loss	61.6	4.7	7.1	9.5	11.8	14.2	0.0
% Change In Customers	-7.23%	0.52%	0.78%	1.04%	1.30%	1.56%	3.76%
% Change In Profit	537.0%	453.4%	349.3%	245.2%	141.0%	36.9%	-81.4%

**Table 3. Impact of number of sommeliers on customer growth and profits**

Whilst the importance customer loyalty is emphasized for any firm, the importance of front line employees to maintain customer loyalty is highlighted in the service business context. The front line employees have a great influence on customer satisfaction. In on-trade context, the front line employees are the sommeliers but the wine list also influences the reputation of restaurant. The performance of sommeliers is influenced by the length of wine list and the training every sommelier employed receives. The performance of sommeliers feeds into the number of good recommendations to customers. In one scenario, the number of sommeliers is kept fixed on six sommeliers. It should be noted that the financial performance is reliant not only on customer satisfaction but also on staffing costs that includes cost of training. Table 4 shows the performance based on varying training costs and wine list. The results are counter-intuitive since reducing the wine list has a positive effect in the number of recommendations at different levels of training, as well as reducing inventory costs. The customer satisfaction increases as the investment in training increases good recommendations leading to fewer customers losses. The combination of both drivers leads to more profits.

	% Change In Parameter: Training Effect (Wine List)				
	+25 (-50)	+25 (+50)	Base	+50 (-50)	+50 (+50)
Number of Recommendations	2194	1616	1483	3292	2424
Customer Satisfaction	0.015	0.011	0.010	0.022	0.016
% Change In Profit	37.8%	44.4%	36.9%	50.9%	65.3%

**Table 4. Impact of training and wine list on customer satisfaction and profits**

## **5. DISCUSSION**

Customer loyalty is one of the factors that influence any firm's performance and survival. Customer loyalty is mainly driven by customer satisfaction. However, customer satisfaction is affected by a set of non-linear feedback processes (see figure 1). For example, staff motivation affects service quality, which is one of the factors affecting customer satisfaction, together with the knowledge of sommeliers about wine. Success breeds success since customers' experience generates positive word of mouth increasing the popularity of the place (Kunc, 2009). Simultaneously, the same success is generating future issues because more customers reduce service quality and impose more demands in the wine list. Managing an on-trade business over time is a complex problem due to the multiple trade-offs (Barth, 2011).

In on-trade literature, one of the most common parameters to judge a restaurant quality is the existence of a large wine list (Berenguer et al, 2009). However, Coad (2009) suggests that wine inventories follow the Pareto Principle: 80% of sales are obtained from 20% of wines. Our field research on South Korean on-trade shows that the Pareto Principle is valid for improving customer satisfaction as sommeliers can provide better recommendations. Therefore, it is important for on-trade to avoid being tempted to expand the wine list as customers demand it (see table 4). This insight is clearly related to the issues reflected in the category management literature. The existence of sommeliers is significant for on-trade businesses as they can increase beverage sales by 25% (Hochstein, 1994) given a better service quality. However, our analysis shows a non-linear relationship between the number of sommeliers and the profits associated. More sommeliers may provide better service quality increasing number of customers but the main limitation is not only the costs involved (as table 3 shows) but also the servicescape. Highly successful on-trade businesses may not be able to expand their location to cater for more customers if it is located in a central location.

## **6. CONCLUSION**

Our research in South Korean on-trade can contribute to reduce the number of on-trade business that exit the industry every year. The model demonstrates the importance of trade-offs in on-trade businesses between the multiple set of factors responsible for driving customers satisfaction, e.g. wine list, sommeliers, servicescape, and their impact on profitability, embedded in non-linear relationships. From the perspective of wineries, our findings contribute to their product portfolio planning, marketing efforts and training for on-trade channel. It is important to recognize wine consumption occurs in hedonic, experiential services that can be optimized through analytical tools (Kunc, 2009) as our research has shown.

Additional avenues for research should consider comparative studies in other countries to validate the on-trade business model found in our research as well as develop a finer grained model including more detail on specific factors.

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## Appendix

Variable	Description	Values												
Central Location	Centrality of location of the business. It determines the accessibility of the premise and the market reach it has to potential customers.	This variable affects the number of customers in the model. On average, there are 8000 customers												
Costs	The total costs including rent, staff salary and training, variable costs of wine ordering.	Salaries in pounds for sommelier, training costs, costs of the wine.												
Customer Satisfaction	The overall customer satisfaction derived from experiences at service encounter. Satisfaction is dependent on the difference between the customer's perceived service quality and the degree of expectation.	It is measured through the level of service quality (based on number of sommeliers which is six) and good recommendations (knowledge)												
Number of Customers	Total number of customers, past, current and future.	On average there are 8000 customers per year.												
Premise Atmosphere	The servicescape comprising but not exclusively to the décor, ambience and mood as well as food	This variable has been quantified as type of food: snack or a la Carte.												
Premise Size	Premise size is the number of seating and tables available to customers. The more central the location gets, the size tends to decrease as a result of higher rent.	This variable affects the number of customers in the model. On average, there are 8000 customers												
Profit	The operating profit consisting of purely turnover and costs, before any taxes or interest payments.	Basic accounting profit calculation												
Progressive Pricing	Progressive pricing is where the margins applied to the range of wines are done inversely. More expensive, fine wines are priced with significantly lower margins than the cheaper, everyday wines.	<table border="1"> <thead> <tr> <th>Price</th> <th>Margin</th> <th>% sales</th> </tr> </thead> <tbody> <tr> <td>High price (£77)</td> <td>1.20</td> <td>5%</td> </tr> <tr> <td>Medium price (£27)</td> <td>1.35</td> <td>55%</td> </tr> <tr> <td>Low price (£13)</td> <td>1.45</td> <td>40%</td> </tr> </tbody> </table>	Price	Margin	% sales	High price (£77)	1.20	5%	Medium price (£27)	1.35	55%	Low price (£13)	1.45	40%
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High price (£77)	1.20	5%												
Medium price (£27)	1.35	55%												
Low price (£13)	1.45	40%												
Sales	Total units of sales	Mix of sales units by type/price												
Service Quality	Service quality in a wine on-trade business setting predominantly depends on the qualities and skills of the sommelier.	Number of sommeliers per customer.												
Sommelier Helpfulness	The quality of recommendations and hence, the number of good recommendations the sommelier gives to customers.	Number of good recommendations is derived from training and size of wine list.												
Sommelier Knowledge	Knowledge about wine and the wine list: general knowledge from the origin, vintage and tastes to what accompaniments make a good marriage with the selection.	Partial quadratic curve based on the size of the wine list.												
Sommelier Training	Formal training academies are available for trainee sommeliers, and periodic tasting courses for the qualified.	Cost per person per year to attend a sommelier academy.												
Staff Motivation	The degree of motivation for the staff to work productively and without excess stress.	Not included in the model. Very difficult to measure.												
Turnover	Turnover that derives from units sold and the consequent price.	Basic accounting turnover calculation												
Wine List Diversity	The length of wine list and the diverse price ranges available resulting from the origin, type and vintage.	Number of wines in the wine list on average is 250.												

**Table A. Description of the variables and values obtained from our research**