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# Exogenous factors of the creative process and performance in the culinary profession

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## 1. Background information

The economic growth of China has contributed to the growth of hospitality and tourism in Hong Kong. A well-known cuisine paradise, Hong Kong has more than 14,000 restaurants (Hong Kong Tourism Board, 2017). The catering industry has a pivotal role in a hospitality and tourism context, which is one of the pillars of industry, having contributed more than US$ 166 billion in 2015 to Hong Kong's economy (Census and Statistics Department, 2017). Hong Kong is one of the few cities in Asia which has many Michelin-starred restaurants, a clear sign of a strong catering business. The quality of food and services are key factors to a successful restaurant operation. To maintain a competitive position in the catering industry, a chef's ability to appeal to diners' palates is crucial, and that ability depends on the chef's culinary creativity. Developing, encouraging, and supporting culinary creativity is essential to business strategy. The chef is a contemporary commercial artist who has to develop his/her creations to meet market demand as well as to achieve profitability (Lin and Baum, 2016). Thus, the level of a chef's culinary creativity is closely related to the working environment, the work demand, and the individual.

The literature on individual and organizational factors of the culinary creative process (CCP) is limited (Horng and Hu, 2009); also, the conceptualization and measurement of factors that influence creativity lack consistency. Scholars tended to identify the stages of the creative process (Horng and Hu, 2009; Ottenbacher and Harrington, 2007) or considered the creative process as a systematic model (Stierand, Dörfler, & MacBryde, 2014). Horng and Hu (2009) indicated a five-step process for creating food products or new dishes, especially for chefs with experience in competitions. Few scholars have studied the CCP (Shalley et al., 2009), and their studies did not fully address the interrelated factors of the five stages within the CCP. Albors-Garrigos, Barreto, García-Segovia, Martínez-Monzó, and Hervás-Oliver (2013) argued chefs engaged in their creative work more simply in two-stages: idea generation and implementation. This study adopted the model by Horng and Hu (2009) to explore the influences of creative environment, the work demand and the individual over the process.

Creative climate (CC) is an aspect of psychological climate theory, and it is known to influence employee behavior (James, James, & Ashe, 1990). CC consists of 2 items: company support for creativity (CCSC) and tolerance of difference (CCTD) (Scott and Bruce, 1994). Both items support creativity and ensure that novel ideas are generated across the company. Similarly, Knight and Harvey (2015) argued that different tensions (knowledge, learning and motivation) arise in creative organizations between the exploration and exploitation stages of innovation. Lane and Lup (2015) also mentioned that chefs need to develop their own creative products. Therefore, the working environment directly influences employee behaviors. In addition, there has been a lack of consensus on the most reliable scale for measuring creative climate (Hunter, Bedell, & Mumford, 2007).

Customer demand and consumption habits are constantly changing, so production methods have to change as well. Chefs confront the challenges of sustaining and creating innovative cuisine by adopting various cooking methods. To some extent, work demand (WD) affects individual creative performance, such as autonomy, pressure (Mansfeld, Hölzle, & Gemünden, 2010), and job control (Wong and Pang, 2003). Although WD influences the effectiveness of creativity, previous studies did not yield consistent findings (Chiang, Birtch, & Cai, 2014; Young and Corsun, 2010), and they have not investigated the influences of each stage of the creative process.

Furthermore, individual factors are also important aspects of creativity, such as creative self-efficacy (CSE) and creative role identity (CRI). Employees' CSE drives their intention to utilize their advanced culinary expertise and technical skills, in menu creation and staff training. CSE means that an individual believes in their ability to create (Redmond, Mumford, & Teach, 1993). CRI refers to one's perceptions of oneself regarding whether they are creative persons. A unique menu is crucial to making the product distinct and consequently maintaining a competitive advantage for a catering company.

Studies of creativity have been conducted from different perspectives with a variety of frameworks in fields as diverse as manufacturing, medical, paramedics, and technology development. Only a few scholars have investigated the factors that affect the CCP of chefs (Horng and Hu, 2009). In addition, the individual effects of CSE and CRI on the CCP of chefs have not been sufficiently examined for each stage of the CCP. Both have positive effects on creativity in general, but their relationships to each underlying step of the creative process have not yet been recognized (Farmer et al., 2003; Wang, Tsai & Tsai, 2014).

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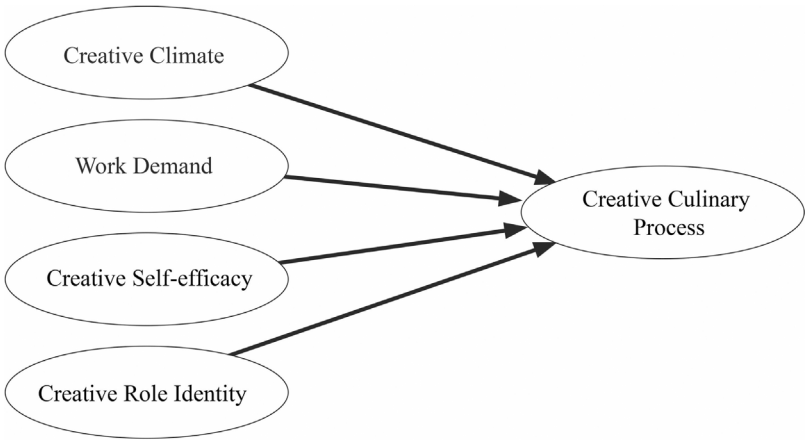


**Fig. 1.** Hypotheses model for the study.

This study proposes and tests an integrative conceptual model of the CCP (Fig. 1). The model proposes that work factors (i.e., CC and WD) and personal factors (i.e., CSE and CRI) should influence the five steps of the CCP (i.e. IP, II, ID, VA and CP). The following sections concentrate on research questions regarding causal relationships in the CCP, as well as their proposed antecedents and consequences. Specifically, the research questions are as follows:

1. How does creative climate (CC) influence the creative culinary process (CCP)?.
2. How does work demand (WD) influence the CCP?.
3. How do creative self-efficacy (CSE) and creative role identity (CRI) influence the CCP?.

## 2. Literature review

### 2.1. Stages of the creative culinary process

"Creativity" is a defining element of the occupational culture of chefs (Cameron, 2001). It is a development of ideas concerning products and services that are original and potentially useful to an organization (Oldham and Cummings, 1996; Shalley et al., 2004). Similar CCPs were developed for food service employees in Taiwan, Singapore and United States (Horng and Hu, 2009) as well as for Michelin-starred chefs in Germany (Ottenbacher and Harrington, 2007). Stierand et al. (2014) argued that creativity is a systematic view rather than a sequential development process by investigating the world class chefs from Europe. Chefs continuously work with collaborators such as customers and restaurant guides. Furthermore, chefs in Spain conceive of creative work as a two-stage process based on the generation and implementation of ideas that lead to innovation (Albors-Garrigos et al., 2013). Although extensive has been carried out on creative process, there is no general agreement about one exact creative process for chefs. According to the purpose of this research, CCP from Horng and Hu (2009) was adopted for investigation of general chefs' creatve process instead of a specific model for Michelin starred chef. The process consists of idea preparation (IP), idea incubation (II), idea development (ID), verification of artwork (VA) and creative performance (CP) (Horng and Lee, 2009).

The development of ideas on products and services that are useful to an organization illustrates the creative behavior of employees (Shalley et al., 2004). Several researcher studying creativity pointed out work engagement (Gilson, 2008) and creative process (Horng and Hu, 2009; Tierney and Farmer, 2004) were both associated with performance. Such findings support the notion that when jobs are complex and when creativity is an important aspect of the job, CP should positively influence overall job performance (Chang and Teng, 2017; Gilson, 2008). Different knowledge dynamics were found as drivers of each innovation process for chefs by Albors-Garrigós, Monzo, and Garcia-Segovia (2017); those drivers are symbolic, synthetic, and analytical knowledge. For instance, idea generation is a type of symbolic knowledge during the stage of exploration. Chefs employ their creative skills to create special cuisines to grow their business. The process is rewarding when chefs create unique dishes. Newly created dishes benefit not only restaurant operations; they also create awareness and attract new diners.

### 2.2. Creative climate

CC is a cognitive interpretation of an organization's situation, it comes from psychological climate theory, and it has been shown to influence employee behaviors (James et al., 1990). Parnes and Noller (1972) reported that the probability of generating creative ideas increases when employees are exposed to other related ideas. Encouragement to take risks and generate ideas in the organization contribute to the value of innovation for the entire organization (Kimberly and Evanisko, 1981). Sundgren, Dimenäs, Gustafsson, and Selart (2005) further looked into creative climate by using Ekvall (1996) ten-dimensional model, namely, trust/openness, idea support, freedom, playfulness, debates, dynamism/liveliness, challenge, risk taking, conflicts, and idea time. However, most of the samplings were based on a group of pharmaceutical professionals, and not culinary chefs in particular. A positive relationship was found between creativity and creative working environment (Presbitero and Teng-Calleja, 2017; Yeh and Huan, 2017). Recently, Yeh and Huan (2017) found that the work environment strongly impacted the creativity of food service employees who worked in fine dining restaurants in Taipei. The workplace environment included social support, resources provided, freedom, and regulations. However, they investigated the relationships to creativity in terms of quantity and quality instead of different stages. Therefore, the following hypothesis is proposed:

**Hypothesis 1.** *CCSC and CCTD have a positive relationship on CCP in terms of IP, II, ID, VA and CP.*

### 2.3. Work demand

WD refers to the quantity of assigned work by the company to the employees, or the expected workload for the staff during a specific period (Spector and Jex, 1998). When employees feel that they cannot deal with the WD, their performance is likely to weaken. Pousette and Hanse (2002) found that when WD is determined according to business demands instead of staff capabilities, the required performance may exceed their ability to exert more effort and meet that demand. In Hong Kong's hospitality industry, useful ideas are not always implemented for various reasons, such as limitations of time and resources (Wong and