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To see an introduction to the conference hotel and region, see the following video - it will convince you to attend!!

https://www.youtube.com/watch?feature=player_embedded&v=MfnsB31RFgc
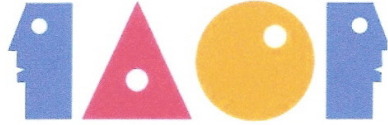For more information on the conference location, please visit http://www.yogyes.com/

# International Journal of Organizational Innovation
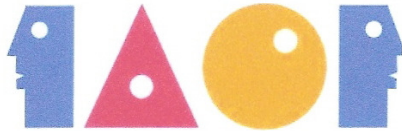
## THE 2014 BOARD OF EDITORS

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SENIOR ENTREPRENEURSHIP IN AUSTRALIA:
AN EXPLORATORY APPROACH

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Abstract

The population and labour force in Australia are ageing, and this paper explores the role of senior entrepreneurship in active ageing. Senior entrepreneurship is the process whereby people aged 50+ participate in business start-ups. The phenomenon is explored from two prominent arguments: (1) as populations age, the number of older business founders will increase, and (2) on the promotion of entrepreneurship in older age segments as a prospective policy option. We adapt an institutional framework to guide the study, with particular emphasis on entrepreneurial attitudes, activity and aspirations. We highlight unique Australian entrepreneurship activity and prevalence rates, scope of senior entrepreneurship, entrepreneurial activity and age, barriers and advantages to senior entrepreneurship, motivation, skills and opportunities for entrepreneurs and finally policy implications and recommendations to enhance active ageing, extending working lives and senior entrepreneurship.

Keywords: Senior entrepreneurship, Australia, ageing population

Introduction

"Rarely, if ever, have people thought of Ageing as a time of opportunity, but, with the advent of 20-30 years of life, todays seniors are determined to add meaningful life to those years, to remain self-reliant, and to give back to their communities and the world" (Isele, 2014).

There is a growing population of healthy older people with skills, financial resources and time available to contribute to economic activity through extending their working lives, including through entrepreneurship (OECD/EC, 2012). There is also the opportunity to enhance entrepreneurial activity in older people who do not necessarily portray entrepreneurial skills and attitudes (Hatak et al., 2013). In essence, entrepreneurial inactivity in older age groups increases the strains on social security and pensions systems, not discounting the current Australian economic platform of redundancies, social welfare cuts and ageing population (Steffens et al., 2012). Ageing workforces and the increasing dependency ratios found in developed economies attract prominent policy interest and research towards older workers, including the promotion of busi-

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ness start-ups and self-employment (jointly referred to as entrepreneurship in this research) as a late-career alternative (Kautonen, 2012). This is, however, not prevalent in the Australian context, whereby only limited policy and research is available regarding senior entrepreneurship. We define senior entrepreneurship as the process whereby people aged 50+ participate in business start-ups (Hart et al., 2004). The senior entrepreneur is often referred to as the seniorpreneur (Mayhew, 2014).

Two lines of argumentation explain the recent surge of interest in senior entrepreneurship (Kautonen et al., 2014). The first is the argument as populations' age; the number of older business founders will increase. Business start-ups by ageing populations are thus a result of either being pulled or pushed into self-employment. The former argument is when mature individuals choose self-employment as a late-career option, often referred to as opportunity entrepreneurship (Maritz, 2004). This choice may be motivated by factors such as an attractive work-life balance, flexible work environment, or as a means to supplement a preferred lifestyle (Walker and Webster, 2007). The latter argument is, however, based on terminology of necessity entrepreneurship, whereby individuals, to resume economic activity, have no other option but to engage in entrepreneurial activities (Maritz, 2004). In such cases, older employees may be pushed from traditional labour markets by factors such as employment equity, age discrimination, promotion and training, as well as a lack of attractive employment options.

The second line of argumentation for increasing interest in senior entrepreneurship is of particular interest to this research. This argumentation is based on the promotion of entrepreneurship in older age segments as a prospective policy option (Kautonen, et al., 2014). The objective

here is to increase entrepreneurial intentions; one's desire to own one's own business or to start a business (Bae et al., 2014). Here the objective is to prolong working lives of older people, reduce older-age unemployment, and increase the social inclusion of older individuals (Kautonen et al., 2008). Botham and Graves (2009) expand the objective to enhance the innovative capacity of the economy by employing the human and social capital of mature individuals (Terjesen, 2005) through new innovative start-ups. In Australia, the first line of argumentation bears well (push and pull arguments), yet the latter argumentation of policy implications is distinctively lacking.

One of the most important determinants of business start-up activity by older people not captured by this push-pull model is health (Halabisky et al., 2012). As people age, the risk of their health deteriorating increases, which impacts their lifestyle and desire to put energy into starting a business (Curran and Blackburn, 2011). Health insurance also plays a significant role and being covered by a spouse's insurance scheme increases the likelihood of moving into self-employment (Karoly and Zissimopoulos, 2004).

The aim of this paper is to provide an overview of the research on senior entrepreneurship and propose initiatives to enhance entrepreneurial activity in this age group within an Australian context. The purpose is to enhance entrepreneurial intentions and self-efficacy in mature-aged individuals (Maritz & Brown, 2013a). This is of particular interest to policy providers, the supply chain and entrepreneurship ecosystem (Isenberg, 2011) of the proposed initiatives. We proceed with an overview of entrepreneurship activity in Australia.

Entrepreneurship in Australia

Entrepreneurship has been regarded as crucial for economic well being, and entrepreneurial activity in new and established firms drives innovation and creates jobs (Maritz and Donovan, 2014). Entrepreneurship is not only a driving force for job creation, competitiveness and growth, but it also contributes to personal fulfilment and the achievement of social objectives (Flash Eurobaramoter 354, 2013). Within Australia, entrepreneurship fuels competitiveness thereby contributing indirectly to market and productivity growth along with improving competitiveness of the national economy (Steffens et al. 2012). With a total entrepreneurial activity rate (TEA) of 10.5% in 2012, Australia ranks second only to the United States among the innovation-driven (developed) economies (GEM 2013). The reasons for such high levels of activity are predominantly founded as a combination of business opportunities and entrepreneurial skills. Furthermore, a large proportion of the Australian population report that high media attention for entrepreneurship provides successful role models for prospective entrepreneurs (Steffens et al., 2012). Figure 1. represents TEA in 54 participating countries, between factor-driven, efficiency-driven (developing) and innovation - driven (developed) economies. Australia activity rates are depicted 2nd from extreme right.

Despite relatively high TEA rates, Australia's Global Innovation Index Ranking (2013) is somewhat lagging at 53%, significantly below innovation - driven econ-omies such as Switzerland, Sweden, UK, Netherlands, UK, Finland, HK, Singapore, Denmark and Ireland (GII, 2013). Cognisance of entrepreneurship and innovation being two distinctively different disciplines (Maritz and Donovan, 2014), reasons for Australia's variation between the two is primarily due to lower levels of wealth creation and investment in innovation (Stephens et al., 2012).

Entrepreneurship and Age

Whilst early-stage entrepreneurship is more common in the mid-career ages of 25-54, there are notable differences between other innovation-driven economies.

The Australian TEA rate is relatively low between young adults (18-24 years), but sharply increases in the 25-34 year old age group. The TEA rate for middle-aged groups (35-44 years and 45-54 years) is surprisingly constant across these age groups. This is positive for Australia, as it signals low age discrimination with respect to entrepreneurial pursuits (GEM 2013). Australia has an 8% TEA rate for the age group 55-64, approximately 3 percentage points above the average of innovation-driven economies. Interesting on an international and Australian front, is that this sector represents the fastest growing segment of entrepreneurship (Mayhem, 2014). Overall, this is a good indication of senior entrepreneurship activity, yet opportunistic when we consider, for example, higher rates in the UK and USA. In Chile, Republic of Korea, Singapore, Netherlands, UK and USA, the 35-44 year olds had the highest level of participation in entrepreneurship amongst all age groups; testimony of their initiatives to promote entrepreneurship and enterprise behaviour in mature age groups (Xavier et al., 2012). Australia's ageing population is of relevance, and discussed in Section 3.

Australia has a significant lack of entrepreneurship policy and initiatives aimed at the 50+ market, which further provides opportunity to enhance this activity even further. Higher rates in the UK, for example, may well be as a result of sustained entrepreneurship initiatives aimed at this

Figure 1: Total early-stage entrepreneurial actiity
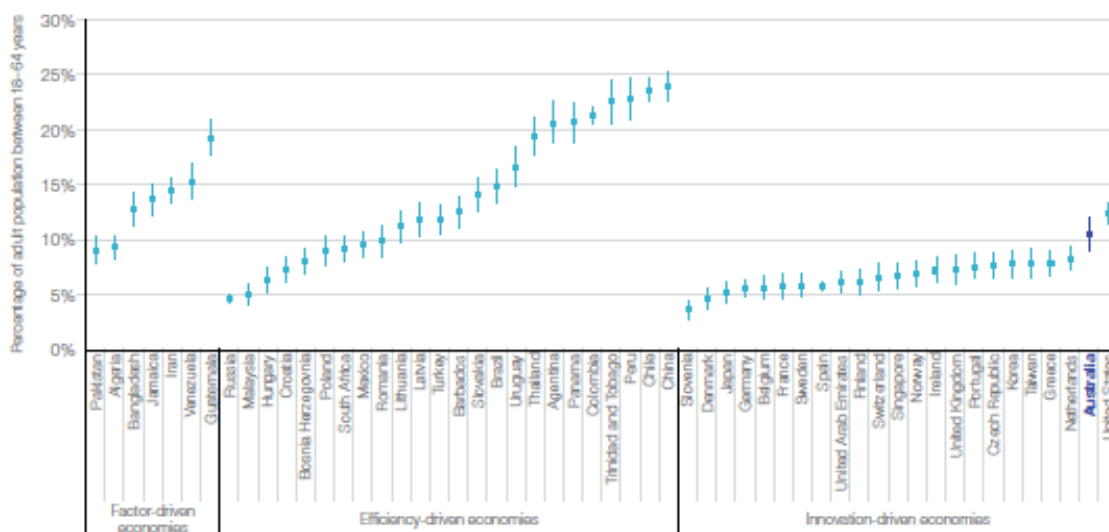


Note: Vertical bars mark the 95 per cent confidence interval of TEA, the horizontal line marks the mean of TEA.
Source: Adapted with minor changes from GEM 2011 Global Report.

Source: Steffens et al., 2011

market. Examples include (1) Best Agers, (2) the fe:male scheme, and (3) PRIME (Halabisky et al., 2012). Of significance is PRIME, an initiative aimed at unemployed people over the age of 50 who want to find a way back to work through self-employment (www.prime. org.uk).  A social entrepreneurship endeavour; designed to engage, empower, connect and celebrate seniors who choose to become entrepreneurs was developed by Senior Entrepreneurship Works at the Lawrence N. Field for Entrepreneurship, NY. In particular, this social entrepreneurship platform developed entrepreneurship education and training specifically targeted at the 50+ age group (Isele, 2014).

Figure 2 represents age distribution of TEA activity in Australia. Please refer to Figure 5 for a more specific notation by age and gender.

Australia Framework Conditions

The Global Entrepreneurship Monitor (GEM 2012) conceptual model identifies 9 institutional or framework conditions, con

sisting of  (1) finance and entrepreneurship; (2) entrepreneurship policies; (3) national policy regulation; (4) government programs; (5) entrepreneurship education (primary and secondary); (5) entrepreneurship education (post school); (6) R&D transfer; (7) professional and commercial infrastructure; (8) internal market dynamics, openness and physical infrastructure; and (9) cultural support for entrepreneurs. These conditions in turn impact on the quantity and quality of entrepreneurial activity (Xavier et al, 2012).

Exploratory studies have been conducted in Australia using these conditions, however such findings require validation. Compared to other innovation - driven economies, Australia scores high in entrepreneurship education, cultural support for entrepreneurship and internal market openness (Steffens et al. 2012). This study proposes validation of such conditions in a senior entrepreneurship context; including entrepreneurship profile factors such as attitudes, activity and aspirations. Figure 3. depicts the GEM Model, to be conceptualised and developed for this research. The

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institutional conditions resonate well with the unique caveats of senior entrepreneurship highlighted in this report. Of particular significance within as Australian context, is the study of entrepreneurial employee activity (EEA). This refers to the fact that entrepreneurial activity is not restricted to new firms but can also be attributed in already established firms. Australia's EEA rates highly, similar to the US, but well behind the levels of Sweden, Denmark and Finland.  From a corporate venturing perspective, these Scandinavian countries exhibit prominent innovation index measures; hence rank high in employee entrepreneurial behaviour (GEM 2012). Nonetheless, High EEA rates within Australia present a dynamic and diverse nature of entrepreneurial activity within the Australian economy. The Flash Eurobarometer (2013) is a similar entrepreneurship measurement frame-work, significant to the European Commission. Australia has unique characteristics regarding its ageing population, discussed in the next section.

Australia's Aging Population

Australia and many other OECD countries have an ageing population. The older population provide a wealth of skills, knowledge, wisdom and mentorship. Challenges associated with the ageing population include Australia's widening retirement savings gap and rapidly escalating healthcare expenditure. This will change their lifestyles, the services they demand and the structure and function of the labour market (Hajkowicz et al., 2012).

Australia's population, like that of most developed countries, is ageing as a result of sustained low fertility and increasing life expectancy. The median age of the Australian population has increased by 4.7 years over the last two decades,

from 32,4 % in 1991 to 37.1 years in 2011 (ABS, 2011). The future growth, distribution and age structure of the population are key factors underpinning many analyses of long-term policy issues in Australia (ABS, 2009). In addition to the future size of the population, the most profound change that is projected to occur is the ageing of the population. This is characterised by an upward shift in the age structure, so the proportion of younger people declines as the proportion of older people increases. The increase in an ageing population will be accompanied by a sharply increasing number of older people. These changes have a vital economic effect, particularly on the future provisions of income support, health and aged care services (Productivity Commission, 2012; Adair et al., 2013; Schofield et al., 2013; Kelly, 2011). These studies identified a central part of the Australian governments' strategy to manage the anticipated costs of an ageing population. Hood (2014) further suggests there will be a real issue with taxation and future healthcare funding as Australia's working age population will be outnumbered by retirees and those close to retirement. Collectively, it is projected that Australiangovernments will face additional pressures on their budgets equivalent to approximately 6% of national GDP by 2060, principally reflecting the growth of expenditure on health, aged care and the Age Pension (Productivity Commission, 2013).

Between 2012 and 2030, Australians between the age of 0-49 will decline by 4,1%, representing 63,5% of the population. Those aged 50+ will increase by 4,2% over the same period, representing 36,5% of the population (Productivity Commission, 2013a). This paces emphasis on the necessity to increase the working lives of this increasing aged population.

Figure 2: Age distribution of early-stage entrepreneurs
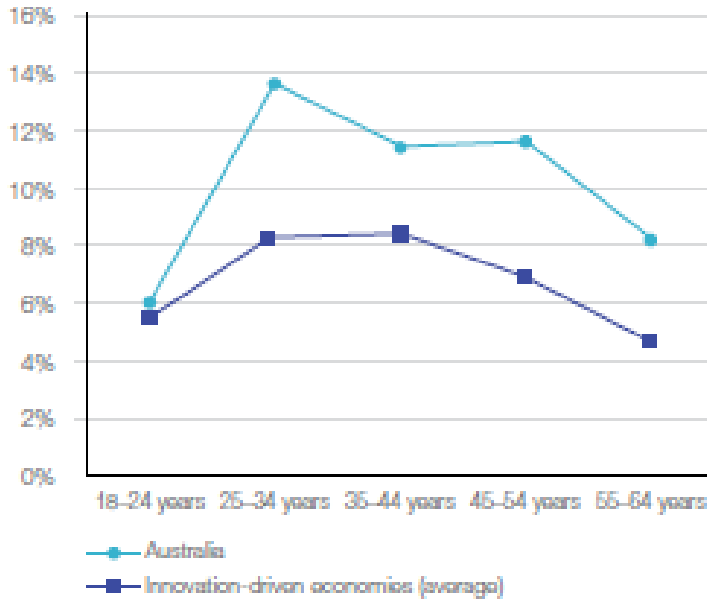


Source: Adapted with minor changes from GEM 2011 Global Report.

Source: Steffens et al., 2012

Figure 3: The GEM Institutional conditions Model
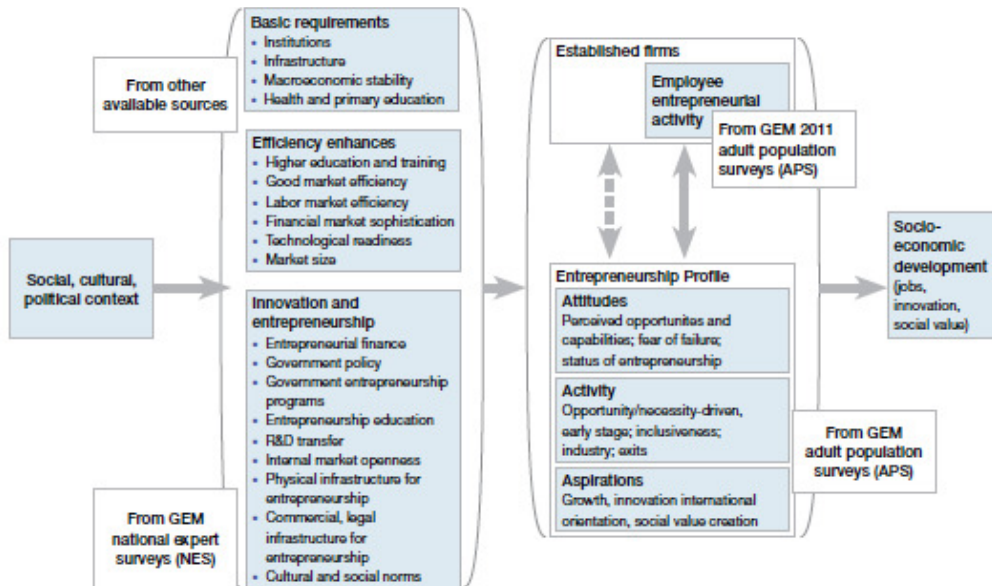


Source: Steffens et al., 2012

Labour participation rates decline significantly after the age off 55 years; for example, a 10% reduction between the age of 55 and 60; and 20% reduction over the next five-year range (Productivity Commission, 2013). As such, their requirements for increasing social benefits will increase over this period, necessitating alternate income sources. Senior entrepreneurship is proposed within this context (Kautonen, 2012). Even though there are financial benefits of older worker participation in the workforce, some people over 61 may not be able to work because of chronic health conditions (Schofield, et al., 2014) and other social capital issues of ageing members (Menyen and Adair, 2013). Figure 4 provides a demographic profile of the population structure (1991 and 2011). Noteworthy is the increase of the ageing population of 50+ year olds, and the decrease of the younger population, those below 44 years old.

Within the broader policy context, several policies aim to make labour markets more receptive to older workers. The Governments have implemented various policies to increase training and employer demand for such workers, and to discourage age discrimination (Hajjkowicz et al., 2012; Productivity Commission, 2012). An example includes the Experience + program, which provides advice and financial support to employers to assist them in the recruitment of mature age workers (DEEWR, 2013). Other initiatives include flexible working hours APEPSA, 2011), increasing the age limit for voluntary concessionary superannuation (AHRC, 2012) and statutory workers' compensation schemes (AHRC, 2012). The effectiveness and efficiency of such programs are however uncertain (Productivity Commission, 2013). Relevance to senior entrepreneurship may be similar incentives for aged entrepreneurs involved in start-ups.

An interesting international initiative; that of the OECD and European Union, is the declaration of 2012 as the European Year of Active Ageing and Solidarity between Generations. Three dimensions of active ageing included (1) active ageing in employment, (2) participation in society and (3) independent living (EC, 2012).

This initiative provided the ageing population the opportunity to (1) stay in the workforce and share their experiences, (2) keep playing an active role in society and (3) live as healthy and fulfilling lives as possible (Halabisky et al., 2012).

Another important issue related to the ageing population, are the implications of reach and communications with the over 50 year olds. It is a fallacy that this age group are not internet and technology savvy, with the following Australian statistics as examples, (1) the 50+ age group constitutes over 38% of the Web's use (WSL), (2) two-thirds of Australians 50+ by from e-retailers online (ThirdAge), (3) 89% of senior 65+ have personal emails and use them regularly (Nielsen), (4) 36% of adults 50+ own a smartphone (Pew), (5) 44% of smartphone owners 50+ access the internet or check email daily from their devices (Pew), (6) adults 50+ account for 34,7% of current tablet users (ComScore), and (7) 71% of all 50+ internet users engage in social media (WSL). This information is particularly useful when adopting policy initiatives directed at this age group, notwithstanding unique and niche initiatives to reach senior entrepreneurs (Walker, 2004). Such initiatives may further be challenged by senior engagement in the communities in which they reside and/or work (Menyen and Adair, 2013).

Despite these distinctive characteristics of the ageing population, there is a wealth of research that reflects on specifics attributable to senior entrepreneurs. These

nuances are discussed in the following section.

Senior Entrepreneurship Nuances

Senior entrepreneurship is a significant phenomenon across the globe, with activity rates of 8-16%, depending on the indices used (GEM 2012; OECD/EC. 2012). Terms indicative of senior entrepreneurship include third-age individuals (Kautonen et al., 2014), mature age (GEM 2012), late career (Zissimpoulos and Karoly, 2007) and older entrepreneurs (Weber and Schaper, 2004). There is also senior entrepreneurship significance regarding gender and social imperatives (Terjesen, 2005), albeit outside the ambit of this research. We now explore a few prominent nuances from the literature.

Scope of Senior Entrepreneurship

The depth of entrepreneurship activity and prevalence research has shown that older people are significantly less likely to engage in entrepreneurial activity than younger people. GEM (2012) identifies such prevalence, as depicted in Figure 2. Maritz (2004) identified that necessity entrepreneurship prevalence rates for entrepreneurs in the 55-64 year old range in New Zealand were less than half the prevalence rates of entrepreneurs in the other age groupings (25-34 years and 45-54 years). Xavier et al. (2012) identified similar findings across different stages of economic development, and Kautonen (2008) found that business start-up rates among the 50-64 year olds in Finland were approximately half of those in the 20-29 year age group in the period 2000-2006. In the UK, Curran and Blackburn (2001) revealedthat a fairly small percentage of the respondents expressed any interest in business start-ups; indicating a negative relationship between economic activity and age. The Eurobarometer (2009) dataset revealed the entrepreneurial activity rates

in the European Union (35 countries). Third-aged (senior) early-stage activity entrepreneurs represented less than half of the other age groups. Despite the inverse relationship between entrepreneurship activity and age, many seniors still participate in start-ups. This is particularly so in serial entrepreneurs (Kautonen, 2008). The implication of labour market declines after the age of 55 indicates that policy makers should target those in the 50s age group in particular because this group has high labour market participation and will be easier to convert into self-employment than trying to bring people back into the labour market after retirement (Halabisky et al., 2012).

The bell shaped curve in Figure 5 resonates well with Figure 2 (age distribution) and Figure 4 (population structure), despite using participation rates from the European union. In essence, the Figure shows the decline in entrepreneurial activity after age 50+. It is however important to be mindful of the gender differences in labour market participation (Figure 5), particularly the largest gap between men and women in the 55-59 and 60-64 age groups (17%). Although the gap closes in the older age groups, the participation rate for men is nearly double that of women. Halabisky et al. (2012) suggest that older men are more likely to consider entrepreneurship because they have a stronger attachment to the labour market.

We now further explore reasons why entrepreneurial activity rates decline with age.

Entrepreneurial Activity and Age

Many researchers have studies that empirically examined the effect of age and entrepreneurial activity (Kautonen and Down, 2012; Levesque and Minniti, 2006; Small, 2011; Halabisky, 2012). Cognisance is taken that it is difficult to isolate

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Figure 4: Population Structure, Age and Sex (1991 and 2011)
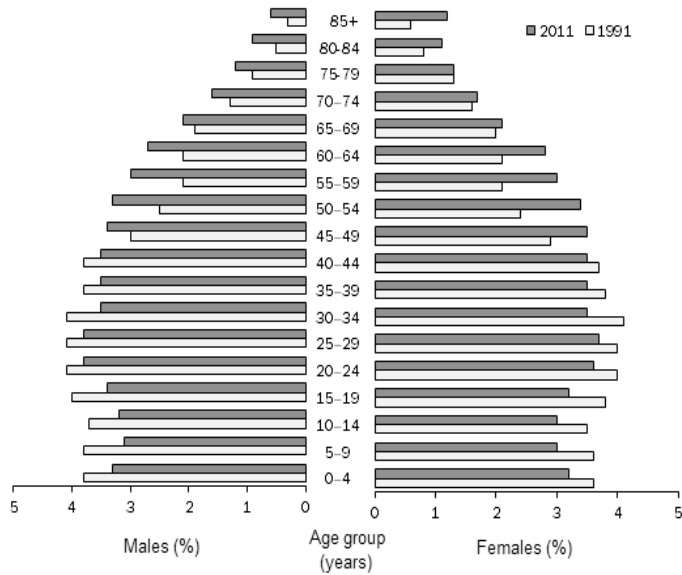


Source: 31010.0 Australian Demographic Statistics, June 2011

Figure 5: Labour force participation rates by gender and age, 2011
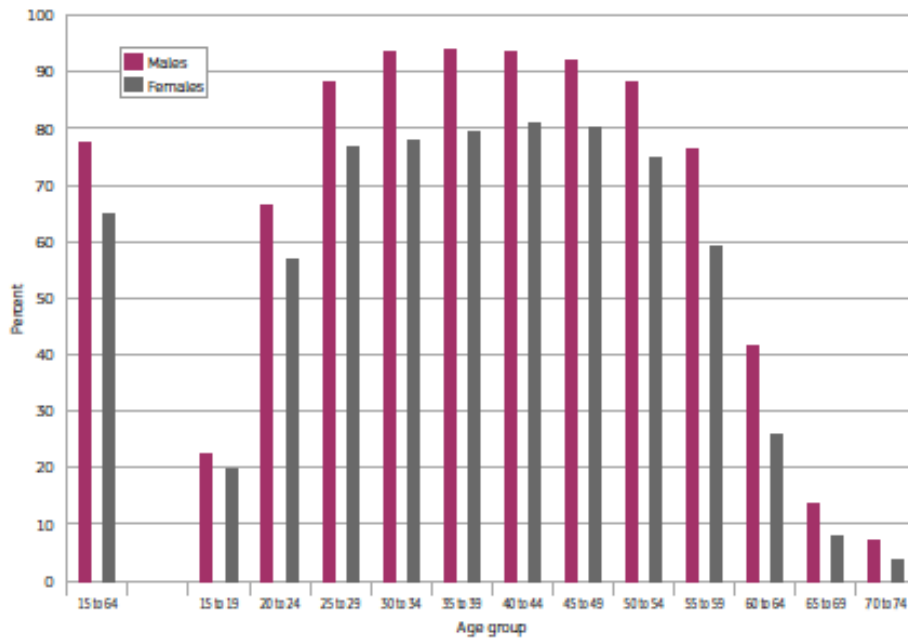


Source: Eurostat, Labour Force Survey.

age as an indicator, as broader socio-economic factors play a substantial role.There is always the notion of future payments and income over time, risk associations, opportunity cost of time and function of age when comparing various life stages and activities. Such activities include retirement, entrepreneurial endeavours and waged labour (Levesque and Minniti, 2006). A further implication of entrepreneurial activity declining with age is that senior entrepreneurs tend to proportionally employ less staff than other age groupings (Kautonen and Down, 2012). Weber and Shaper (2004) identified the age and socio-economic conundrum; whereby socio-cultural factors such as advanced age is culturally perceived as an asset or a burden. Such factors are likely to affect older individuals' interest in entrepreneurship. A Canadian study (Uppal, 2011) identified that higher-income seniors are more likely to be self-employed; a clear reflection on funding requirements for senior start-ups. An interesting finding was that senior's self-employment is often a family affair, in itself unique to this sector of entrepreneurship activityThe promotion of entrepreneurship among older age segments is a prospective policy option to prolong the working lives of older people, reduce older-age unemployment and enhance the social inclusion of older individuals (Kautonen et al., 2008). Older people are now living longer than previous generations and have different decisions to make about their career and lifestyle. Many older people may wish to remain economically active in order to maintain a lifestyle (Walker and Webster, 2007) or choose self-employment as a flexible alternative to organisational employment (Curren and Blackburn, 2001). The potential for continued or increased earnings is particularly important for the ageing population with lower levels of investments and savings (Halabisky et al., 2012). Remaining active and contributing to society has the additional benefit of improving an

older person's quality of life and reducing their risk of landing in poverty (Jayo et al., 2010).

From an economic perspective, maintaining labour market attachment or promoting start-ups of the ageing population may be able to, in the short-run, offset expected labour and skill shortages in certain regions in Australia and facilitate a transfer of human capital between generations. Other benefits include increased tax revenues to potentially offset rising social and health care costs (Halabisky et al., 2012). Whilst the inverse relationship between age and entrepreneurial activity in not disputed, we find it appropriate to explore barriers and advantages for senior entrepreneurship.

*Barriers to Senior Entrepreneurship*

There is a lack of empirical data that address barriers to older people staring new businesses (Kautonen, 2012). Computations based on the Eurobarometer (2009) captured respondents' perceptions concerning barriers to starting a business. The three prominent barriers included lack of financial support, lack of information on how to start a business and complexity of administrative procedures. Senior entrepreneurs perceive all three barriers less frequently than the other-age entrepreneurs. The reason may be higher levels of human, social and financial capital among older individuals accumulated over their long working careers (Hatak et al., 2013). In a study by Kautonen et al. (2008), social benefits were found to be a barrier. In such cases, when senior entrepreneurs received income from their ventures, social benefits often diminish. In addition, older entrepreneurs required unique and specific types of support and information; not meeting generic local government support initiatives. This includes communication, media, message and mentorship initiatives. From a human capital perspective, senior entre-

preneurs skills may be out-dated, and they may have lower levels of digital literacy (Halabisky et al., 2012).

A qualitative study by Kibler et al. (2012) identified barriers to senior entrepreneurs, including ageism, information and regulations, resources and social environment. Regarding ageism, many respondents felt that society still has the perception that older people should not be involved in start-ups and entrepreneurial activity. Perceived age discrimination was seen as an abstract barrier and a series of discrete external practices. This often impeded the ability of senior entrepreneurs to develop a market and to sieze new opportunities, further hampering development of their business. Regarding information and regulations, respondents advised of limited access to benefits and clarity on regulations was requested. From a social capital perspective, they also found that older entrepreneurs that have already retired can find it more difficult to rebuild the networks that they had during their career, particularly when they operate small home-based businesses. Communication and media was perceived another hurdle, whereby new media avenues (such as internet and online media) were geared up to new tech-savvy young entrepreneurs. Regarding resources, there was no surprise that financial resources were perceived as one of the main barriers to establishing and managing businesses. Financial institutions were also reported as being sceptical to provide finance to older entrepreneurs.

Acquisition of social capital was also seen as a deterrent, particularly when entering a new industry or innovative business. The majority of respondents identified finding suitable mentors as a barrier to starting a new business. From a social perspective, it was found that family and friends were more supportive of young entrepreneurs. In many cases, starting up a new business by older entrepreneurs was

seen as a risky and foolish alternative by the social environment.

Halabisky et al. (2012) identified a unique set of barriers to entrepreneurship given their age, inclusive of (1) declining health, (2) financial disincentives, (3) age discrimination, (4) opportunity cost of time and (5) lack of awareness.

When it comes to managing the growing business, there are many questions regarding the ability of senior entrepreneurs to maintain and grow their businesses. Many of the barriers reported above come to play in this stage of the entrepreneurial process. Evidence on business performance by senior entrepreneurs is ambiguous (Halabisky et al., 2014), with evidence from the UK that firms run by older people have higher survival rates (Cressy, 2006), but other evidence from Finland suggests that they have lower survival rates (Kautonen, 2008). Other studies find that firms run by senior entrepreneurs are less profitable, have lower levels of sales and income and generate less employment growth (Halabisky et al., 2012).

Another interesting avenue is how older people can support entrepreneurship in other ways beyond business start-ups. Due to the social capital gained over a long working career, many older people have significant skills and value to add. Roles include that of business coach, mentor and in the case of wealthier individuals, as business angels (Kautonen, 2012). There is again limited research regarding the extent and effectiveness of such activity, but anecdotal evidence suggests that many governments have programs whereby they promote older aged individuals as mentors and coaches (Kibler et al., 2012). From this positive perspective, we explore advantages for older entrepreneurs.

*Advantages For Senior Fntrepreneurship*

Despite entrepreneurial activity rates for senior entrepreneurs being less than half that of other age groups, prior research suggest that mature individuals are actually more capable of starting and managing a business than their younger counterparts (Weber and Schaper, 2004). A recent empirical study by Kautonen and Minniti (2014) found that ageing well has the potential to influence the market for labour by altering the employment behaviour of individuals approaching retirement. Older entrepreneurs can posses advantages such as more developed networks, substantial industry experience, superior technical and managerial skills and most often, a stronger financial position (Kautonen, 2012). Lechner and Dowling, 2003) postulate that networks may assist senior entrepreneurs in mobilising resources, obtaining support, creating legitimacy during start-up and growth, and establishing viable business relations. Technical, managerial skills and industry knowledge not only enhance human and social capital, but also may be an avenue to identify opportunities and make creative and innovative decisions (Maritz and Brown, 2013). Wealth in senior entrepreneurs may allow resource to fund ventures, but can just as well be used to fund retirement, serving as a disincentive to entrepreneurship (Singh and DeNoble, 2003). Overall, anecdotal evidence points that older people are in a better position to start a business than younger individuals. Furthermore, senior entrepreneurs place significant value on non-pecuniary benefits of self-employment, such as lifestyle and health preferences (Platman, 2004).

Halabisky et al. (2012) postulate that older entrepreneurs can possess advantages when starting a business such as (1) more developed networks, (2) a higher technical and managerial skills level, (3) more work and industry experience and (4)

a stronger financial position. The paradox, however, is that these advantages diminish over time while older people are out of the labour market. Despite barriers and advantages to senior entrepreneurship, there is an opportunity to enhance entrepreneurial activity in this age group. We now discuss such policy implications.

Conclusions and Policy

*Implications/Considerations*

GEM (2012) findings suggest that a combination of business opportunities and entrepreneurial skills drive the quantity and quality of senior entrepreneurs. The visibility (particularly media) of entrepreneurship is likely to serve as a catalyst for strong rates of entrepreneurial activity in Australia (Steffens et al., 2012).

We apply Lundstrom and Stevenson's (2005) framework of three factors that influence entrepreneurial activity, relevant from a policy perspective. These include motivation, skills, and opportunity. Motivation refers to the social value placed on entrepreneurship and its desirability and feasibility as a career and employment option; Skills refer to the technical, business and entrepreneurial skills and know how; and opportunity refers to the favourability of the business environment for entrepreneurship (Kautonen, 2012). Entrepreneurship policy needs to recognise that there are some factors in the decision to start a business that cannot be changed, such as the age of a person, their health or an individual's preference for leisure over work. Therefore, policy should focus on contextual factors that influence an older person's decision to enter into self-employment (Halabisky et al., 2012).

*Motivation*

Australia, has recently experienced major economic reforms; particularly in

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the manufacturing industry. Examples include the discontinuation of production of motor vehicles by Ford, Holden and Toyota. Another significant economic blow is the imminent redundancy of 3000 Qantas employees. These huge redundancies will have a significant negative economic effect on productivity and lifestyle. Anecdotal evidence points that at least 40% of these redundancies come from ageing employees (inclusive of early retirement initiatives). It would thus be high on policy agenda to ensure that these individuals remain economically active (Adair et al., 2013; Schofield et al., 2013; Kelly, 2011). One avenue is to enhance senior entrepreneurship; to increase the number of older people engaged in entrepreneurship.

An objective for motivation-oriented policy is increasing older peoples awareness of entrepreneurship as a late-career option (Kautonene et al. 2014). Another potential specific target group for motivation-oriented measures are older women, whose entrepreneurial activity rates are significantly lower than those of older men (GEM 2012; Kautonen, 2012; Terjen, 2005). Another motivation-related objective concerns removing ageist bias in senior entrepreneurship; which requires the promotion of the economic potential of older workers in general. PRIME is an industry example of such proportion (Kautonen et al., 2011).
Skills

Empirical and anecdotal evidence maintains that older people are generally more capable of starting and running a business than their younger counterparts (see section 4). The examples provided above indicate that there may be thousands of skilled technical workers soon to be made redundant. Honing on their skills may bear significant fruit for entrepreneurial activity. Research suggests that training and education may give mature individuals the skills to start and remain self-

employed (Uppal, 2011). . Skills-oriented measures are common in policy initiatives worldwide, including training and mentoring as integral components. Examples of skills-oriented initiatives include PRIME, SCORE, NEIS and female (Kautonen, 2012).

*Opportunity*

A positive entrepreneurial environment provides an appropriate regulatory framework relevant for (potential) senior entrepreneurship. Such a system does not punish entrepreneurs for business failure and government should review regulations to make sure that they do not set disincentives to enterprising activity (Kautonen, 2012). There is only one program in Australia targeted at opportunity-oriented senior entrepreneurship. The New Enterprise Incentive Scheme (NEIS) features a dedicated course targeted at socially disadvantaged older people. From a finance perspective, PRIME is an example of an opportunity-oriented initiative, whereby the scheme provides micro-finance loans (Kautonen et al., 2011).

Halabisky et al. (2012) postulate initiatives and schemes designed specifically to support older people in Business start-up activities. These include, (1) to promote the benefits of entrepreneurship, (2) improve entrepreneurship skills with training, (3) develop and support networks, (4) improve access to funding, and ensure there are no disincentives for entrepreneurship in social support systems.

*Policy Recommendations*

A principal concern for policy makers is to appreciate the scale of the policy issue and the appropriate scale of an intervention. To do so, policy makers need to understand the target groups; not only who and how many, but also the variation between the different segments within the

target group (Halabisky et al., 2012). Strong policy recommendations regarding senior entrepreneurship require caution and careful formulation. The phenomenon of senior entrepreneurship is still under-researched and there is a lack of empirical evidence on the subject matter (Kautonen, 2012). However, policy intervention could make a positive difference in the following areas:

- Creating positive awareness of entrepreneurship as a late - career option with the aim of educating and training senior entrepreneurs, as well as different stakeholder groups in order to remove negative age-biased or gender-based bias as a potential barrier to senior entrepreneurship
- Enhance entrepreneurial intentions and self-efficacy in the 50+ age-group
- Developing specific entrepreneurship education and training interventions specific to the needs of senior entrepreneurs
- Avoiding excessive jargon in communication and information and the way procedures and regulations are communicated and targeted to this age group
- Training mentors, facilitators and enterprise support officials in appropriate communication skills; acknowledging older entrepreneurs experience and skills; and avoiding unnecessary red tape
- Encouraging skilled and experienced older individuals to partake in mentorship and coaching activities. They often have the human and social capital, business experience, empathy and skills to add significant value to entrepreneurs; whilst being senior entrepreneurs themselves
- Ensuring that start-up financing schemes do not discriminate against older entrepreneurs
- Reviewing the regulations relating to tax systems and social benefit systems

to ensure that they do not set a disincentive to senior entrepreneurship
- Legislative support mechanisms for start-up senior entrepreneurs, along the lines of employment incentives similar to AHRC and APRA (2012).

Cognisance must be taken what such policy initiatives can actually achieve. In this instance, it is important to distinguish between economic and social objectives. An economic objective should be to provide a positive and supportive environment where those older people with more entrepreneurial ambitions can thrive. This includes moving people from social support to self-employment, or prolonging ageing employees' working careers through business start-up, generating added value to society (Halabisky et al., 2012). A social objective may be to get economically inactive people over the age of 50 into work, to remain economically active in ways that suit them best whilst exploiting their potential for entrepreneurship. This may include engagement in community and social activities as an important component of productive ageing (Menyen and Adair, 2013). Promoting senior entrepreneurship may be part of the portfolio of activities to tackle the problem of older un- and under-employment as a broader social and education issue.

In considering the introduction of potential inclusive senior entrepreneurship initiatives, it is important to consider their relevance to the needs and barriers to aged people (Thompson et al., 2013). An example would be using appropriate media and integrated marketing communications to appropriately communicate with potential senior entrepreneurs. Furthermore, entrepreneurship education and training should deliver outcomes around specific pedagogy, audience, objectives, content and context (Maritz and Brown, 2013).

Limitations of this study are linked to the absence of a depth of knowledge and lack of substantial empirical studies in the senior entrepreneurship domain. To the best of our knowledge, there are no empirical studies in Australia regarding this phenomenon; which gives rise to future research collaboration and avenues. It is deemed essential to conduct empirical validation of this phenomenon in Australia. Phase 2 of this research will involve multi-methods of quantitative and qualitative analyses using prominent databases to signify senior entrepreneurship in Australia. The research is, however, governed by an overriding aim to recommend and develop policy recommendations to active ageing, extending work lives and enhancing senior entrepreneurship. Further investigation is required to enhance the entrepreneurship ecosystem (Isenberg, 2011). within the senior entrepreneurship context in Australia.

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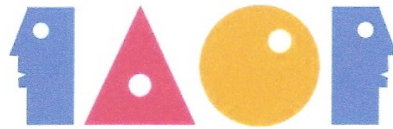
# INNOVATION CAPABILITIES, SERVICE CAPABILITIES AND CORPORATE PERFORMANCE IN LOGISTICS SERVICES

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## Abstract

This study aims to identify the factors that contribute to innovation capabilities, service capabilities and corporate performance in logistics services. The author proposes a model, in which innovation capabilities and service capabilities are assumed to increase the extent to which corporate performance in logistics services. Furthermore, innovation capabilities may increase service capabilities. From the results, the major findings of this study are as the following: Firstly, innovation capabilities and service capabilities, relate positively to corporate performance. Secondly, innovation capabilities enhance service capabilities. Thus, the findings provide managers in the logistics services with valuable insights that firms can increase their competitive advantage through enhancing logistics capabilities.

Keywords: innovation capabilities, service capabilities, corporate performance, logistics service providers.

## Introduction

In today's dynamic and time-based competition marketplace, global operations require the integration of global manufacturing with logistics service capabilities and transport support for efficient and effective business performance (Bowersox and Closs, 1996). That is to say, they require integrated transportation providers that offer one-stop shopping for multimo dal capacity linking all regions of the world. The changing structure of global markets and consequently demands of shippers have forced service providers to rethink their business processes to better satisfy shippers' needs. They have had to become involved in logistics management in order to more effectively manage and control transport chains and seamlessly integrate global production systems.

Though cooperative operating strategies may be viewed by shipping firms as a means to internally generate corporate growth, they may not always be applicable to shipping firms wishing to improve their market share and competitiveness (Panayides, 2003). Furthermore, the concentration resulting from both horizontal and vertical integration in the logistics service industry has also led to poor financial results and increased the pressure (Notteboom and Winkelmans, 2001). As a result, the increasing competition will continue to drive logistics firms to emphasize their organizational capabilities in order to survive and grow in the markets (Lu, 2007). Therefore, it is increasingly important for logistics service firms to build logistics service capabilities that are inimitable and durable to reduce cost and increase service satisfaction (Lai, 2004; Tseng et al., 2005).

Logistics capability which encompasses a number of aspects relating to supply of services, particularly has been recognized as a crucial source to lead superior performance (Bowersox and Closs, 1996; Kim, 2006; Shang and Marlow, 2005; Tracy et al., 2005). Further, the application of logistics management has been reported to contribute to logistics service firms' more efficient, effective and economic operations and, more importantly, to provide value-added services to customers (Warusavitharana, 2004). However, firms' logistics service offering and quality are relatively easily imitated by competitors (Slater, 1996). Thus, in today's dynamic marketplace, it is imperative for logistics service firms to integrate innovation capabilities into their logistics service activities. Through learning-by-doing, logistics service firms can build their core capability which will be extremely difficult for competitors to buy and imitate. In addition, Langley et al.'s (2006) report has indicated that service offering and innovation capabilities are key challenges for the logistics industry in future.

Many studies have explored logistics service attributes in the shipping industry. Such studies have identified several important customer service dimensions, namely: price, transit time, value-added services, equipment availability, carriers' reputation, responsiveness, and cargo tracing. However, few studies have assessed logistics service attributes from a capability-based perspective. The competitiveness of a logistics service firm is determined not only by its services offering to shippers but also its capabilities to add value to clients. Although an understanding of firms' capabilities is crucial for logistics service firms to achieve superior performance and sustainable competitive advantage, to our knowledge, apart from Jenssen and Randøy (2006), and Lu (2007), who investigated application of the capability concept in the shipping industry, no other study has empirically explored logistics service capabilities and innovation capabilities in the logistics service context. Accordingly, this study focuses on the integration of innovation capabilities in the logistics service activities of Taiwanese logistics service firms and develops a conceptual model to examine the effects of service capabilities and innovation capabilities on firm performance based on the resource-based view (RBV) of the firm.

Literature Review and
Development of Hypotheses

*Innovation Capability*

A large number of empirical studies have found innovation capability to be a crucial source of firms' competitiveness. In particular, innovation capability can improve logistics firms' service differentiation and increase knowledge of customer logistics requirements. Though innovation capability contributes to firm performance and competitive advantage, its success appears to depend upon the resources and the capabilities in the organi-

zation to manage them. Typically, resources include tangible and intangible resources, such as technology, equipment, knowledge, organizational culture, strategic orientation, and relationship network (Bessant and Tidd, 2007; Chapman and Soosay, 2003; Han et al., 1998; Hult et al., 2004).

Undoubtedly, innovation capabilities can make logistics service firms' logistics service capabilities extremely difficult for competitors to imitate. While many studies have demonstrated the effects of innovation capability on service quality (Panayides, 2006), few have examined the relationship between innovation and service capability and firm performance. Hence, it is worthwhile examining the relationship between innovation capability and logistics service capability.

Some studies indicate that different firms focus on different types of innovation and this is associated with differences in their performance. This implies that innovation capability is a multidimensional concept. Some studies focusing on the manufacturing area have used object data such as patent or R&D expenditure to measure innovation capability (Sher and Yang, 2005), while others have used perceptual measures (Hurley and Hult, 1998; Panayides, 2006). A scale commonly used to measure innovation capability is drawn from Hurt et al. (1977) and slightly revised.

*Service Capability*

Logistics service is to add value directly by providing a number of service attributes to shippers, such as storage, cargo tracking, inland transport service, customs clearance service, consolidation, packing, labeling, assembly and documentation service (Lu, 2004). Lai (2004) defined logistics service capability as the ability of logistics service providers to cre-

ate and deploy to satisfy the logistics needs of their customers in pursuit of better service performance. According to the resource-based view of the firm, logistics service capability can be regarded as a potential source of superior performance and sustainable competitive advantage. In this study, logistics service capabilities are viewed as complex bundles of individual skills, assets and accumulated knowledge exercised through organizational processes that enable firms to co-ordinate logistics activities and make use of their resources. In other words, logistics service capability refers to the ability of logistics service firms to manage and integrate processes within transport chains to provide one-stop logistics services for enhancing competitive advantage and superior firm performance.

Lu and Yang (2007) evaluated key logistics service capabilities for international distribution center operators in Taiwan. Four key logistics capabilities were identified, namely, customer response, innovation, economic scale, and flexible operation and logistics knowledgeability. The customer response capability was perceived as the most important logistic capability, followed by flexible operation and logistics knowledgeability capability, innovation capability, and economic scale capability. Results also showed that logistics capabilities had significantly positive impacts on international distribution center operators' competitive advantage and organizational performance.

The development of logistics management has forced logistics services firms to develop their logistics service capabilities to meet customers' requirements and enhance competitive advantage. Further, the literature review has indicated that logistics service-related capabilities are recognized as a key source of superior performance. Such review also provides this

study with a theoretical foundation for measuring logistics service capability.

## Logistics Performance

Logistics models have predominantly utilized two different performance measures: cost and customer responsiveness (Beamon, 1999; Morgan, 2004). Costs may include inventory costs and operating costs. Customer responsiveness measures include lead time, speed and quality of shipped, and fill rate. In addition, the link in a supply chain that directly impacts customers is delivery (Gunasekaran et al., 2004). It is a primary determinant of customer satisfaction; hence, measuring and improving delivery is always desirable to increase competitiveness. According to Stewart (1997), an increase in delivery performance is possible through a reduction in lead-time attributes. Another important aspect of delivery performance is on-time delivery. On-time delivery reflects whether perfect delivery has taken place or otherwise and is also a measure of customer service level. A similar concept, on time order fill, was used by Christopher (1998), describing it as a combination of delivery reliability and order completeness. Another aspect of delivery is the percentage of finished goods in transit, which if high signifies low inventory turns, leading to unnecessary increases in tied up capital. Various factors that can influence delivery speed include vehicle speed, driver reliability, frequency of delivery, and location of depots. An increase in efficiency in these areas can lead to a decrease in the inventory levels.

## Research Hypotheses

Innovation capability stresses the organization's ability to turn inventions or new ideas into practice in the new product, service, or process fields. By integrating innovation capabilities into logistics service activities, an effect of learning-by-doing can make liner shipping firms' logistics service capabilities extremely difficult for competitors to imitate (Slater, 1996). Several studies have concluded that innovation in service or processes can create high service quality and better value to customers, which, in turn improves firm performance (Panayides, 2006; Richey et al., 2005; Tuominen and Hyvönen, 2004).

Clayton and Turner (2000) asserted that process innovation can create better relative value to firms via the achievement of low relative cost and high relative quality, which, in turn increases market share. Petroni and Panciroli (2002) and Richey et al. (2005) indicated that innovation capability is positively related to firms' operation service quality such as flexibility of production and delivery times. Panayides (2006) also found that firms' innovation capability had a significantly positive impact on logistics service quality. Hence, logistics service firms can use innovation to improve their service process or to differentiate their logistics services. Based on the preceding review of the literature on innovation capability, this study hypothesizes that:

H1: The innovation capability has a positive effect on logistics service firms' logistics service capability.

H2: The innovation capability has a positive effect on logistics service firms' performance.

The logistics capability concept has been discussed in several logistics studies based on the resource-based view and its effects on firm performance have also been demonstrated (Autry et al., 2005; Kim, 2006; Lai, 2004; Lu and Yang, 2007). As regards logistics service capability, it is the ability of logistics service providers to create and deploy to satisfy the logistics needs of their customers in pursuit of better service performance (Lai,

2004). It has been argued in the logistics and transportation literature that capabilities in services and operational dimensions, such as reliability of sailing, customer response, service reliability, value-added services, and information system, are drivers for firm performance (Lai, 2004).

The performance of these service capabilities has been found to be positively related to firm performance. For example, Innis and La Londe (1994) found customer service capability positively impacted on customer satisfaction, customer loyalty, and market share. Lai (2004) pointed out that differences in service performance existed between different logistics service provider types. In addition, Song and Panayides (2008) reported that information integration, relationship with shipping line, and value-added services had a significantly positive impact on firm performance. Hence, based on the resource-based view and the preceding review of the literature on logistics capabilities and shipping service attributes, a logistics service firm with the ability to create and deploy resources to satisfy customers' logistics service needs will achieve superior performance. Accordingly, this study hypothesizes that:

H3: The logistics service capability has a positive effect on logistics service firms' performance.

Methodology

*Quantitative Data Collection*

Participants.

We identified a total of 500 LSPs from the Directory of the Taiwan Logistics Almanac, database of Taiwan Yellow Pages, and members of the Taiwan Association of Logistics eover, Management in 2013. We also cross-checked the survey samples to avoid double mailings. In the end, we yielded 272 finished questionnaires. Out of these, 251 were usable.

Measuring Tools.

The measurement instrument was designed based on various previous studies. All the questionnaire items were measured on a five point scale. Respondents were asked to indicate their level of agreement toward each statement, from 1 (strongly disagree) to 5 (strongly agree).

Innovation Capability.

As regards LSPs, innovation capability in this study was defined as the ability of LSPs to turn inventions or new ideas into practice in the new product, service, or process fields. We use and adjust the measuring scales developed by Hurt et al. (1977), Lu and Yang (2007), and Panayides (2006). The measurement of innovation capability comprises 6 items.

Service Capability.

As regards LSPs, service capability in this study was defined as the ability of LSPs to create and deploy to satisfy the logistics needs of their customers in pursuit of better logistics performance. We use and adjust the measuring scales developed by Kim (2006), Lai (2004), and Lu and Yang (2007). The measurement of service capability comprises 9 items.

Corporate Performance.

Since the widely used operationalizations of logistics performance is mainly "soft" (e.g. self-reported perceptual data) by nature, in contrast, the use of "hard" logistics performance measures (e.g. financial reports-based figures) is much less common (Stank et al., 2001). Therefore, the evaluation of cost and customer re-

sponsiveness in this study is from respondents' (i.e., LSPs) perceptions of their logistics performance. We use and adjust the measuring scales developed by Coyle et al. (2003), and Voss et al. (2005). The measurement of logistics performance comprises 6 items.

*Purification and Reliability of Measurement Variables*

To purify the measurement scales and to identify their dimensionality, principal components reliability test with Varimax rotation was applied to condense the collected data into certain factors. After reliability test, we used item-to-total correlation and internal consistency analysis (Cronbach's alpha) to confirm the reliability of each research factor. According to Robinson and Shaver (1973) if α is greater than .7, the variable has high reliability, and if α is smaller than .3, it implies that there is low reliability. The reliability of four latent variables was investigated by calculating Cronbach's alpha. The range of the values was between .81 and .90, which indicated all measures were quite reliable.

*Structural Equation Model*

In order to find out the relationship in the whole research model in this study, a structure equation model (SEM) was used. The criteria of Chi-square, GFI, AGFI, CFI, RMR, and RSEMA were used to evaluate the overall goodness of fit of the model. According to Hair et al. (2010), the

value of overall fit of a hypothesized model can be regarded as appropriately significant when each criteria Chi-square is small (p value>.05), and fit indices such as the ratio of Chi-square to degrees of freedom (Chi-square/d.f.≤2); goodness of fit index (GFI>.9), and adjusted goodness of fit index (AGFI>.9); root mean square residual (RMR<.1), and root mean square error of approximation (RMSEA<.08) are all fulfilled. The result of confirmatory factor analysis (CFA) produced evidence of an acceptable fit of the model (Chi-square= 462.92; df =284; p=.00; Chi-square/df=1.63; RMR=.04; GFI=.91; AGFI = .90; RMSEA = .08). Parameter estimates of the final model were inspected and no problematic occasions were found. And the correlations between latent variables ranged from .41 to .56 (see Table 1).

Results

*Quantitative Data Analysis*

Returned valid questionnaires are female (78.4%) and male (21.6%), mostly range from 41 to 50 years old (37.5%), next are 31 to 40 years old (29.8%). Next, about 30.3 % responding firms had been in operation for 21 years or more, 33.9 % had been operating between 11 and 20 years, 22.9 % between 6 and 10 years, and 12.9 % less than 5 years. The majority of respondents' firms were local companies (66.1 %), followed by foreign-owned firms (21.1 %). LSPs generally include freight

Table 1. Correlation matrix and discriminant validity analysis of latent variables

| Constructs | M | SD | 1 | 2 | 3 | 4 |
|---|---|---|---|---|---|---|
| 1. Innovation capabilities | 3.92 | 0.55 | 0.84 | | | |
| 2. Service capabilities | 4.03 | 0.40 | 0.56** | 0.85 | | |
| 3. Corporate performance | 3.96 | 0.53 | 0.43** | 0.41** | 0.86 | |

M: Means, SD: Standard deviations, *p＜0.05, **p＜0.01, n=251

The square roots of average variance extracted (AVE) are given on the diagonal. The correlation coefficients of constructs are given under the diagonal. transport services, and warehousing and storage services, 50.5 % of respondents were from freight transport services, and 45.8 % from warehousing and storage services. 14.6 % of sampled firms had over 1000 employees, whereas 42.2 % of sampled firms had less than 100 employees. In the modal class most sampled firms employed between 101 and 500 (29.4 %) full-time workers, 13.8 % employed between 501 and 1000. 27.5 % of respondents reported that their firms' annual revenue was between NT$ 101 million and NT$ 1,000 million, while 50.5 % of respondents' firms' annual revenue was NT$ 100 million or less.

Assumption Tests

The hypotheses in this study were tested by using Structural Equation Modeling. The resulting measurement model has X2/df equal to 1.63 and all values in the model reflect acceptable fit of the data. For finalized model, standardized path coefficients and significance are as below: First, we find support for H1-H2. Antecedents of ccorporate performance, including innovation capabilities (β=0.36, t-value=3.27, p=.001 < .01), and service capabilities (β=0.33, t-value=1.94, p=.001 < .01), both positively relate to ccorporate performance. Regarding the decedents of ccorporate performance, the hypotheses H3 is also confirmed. Service capabilities (β=0.41, t-value=5.17, p=.001 < .01) was found to be positively related to ccorporate performance. Conclusion and Future Research

The findings of this study provide some guidance for logistics service firms to develop logistics service capability and innovation capability. Research findings reveal that logistics service capabilities and innovation capabilities are crucial sources of superior performance. It is therefore necessary for shipping managers to assess strengths and weaknesses in their capabilities relative to their competitors and to deploy resources and constantly enhance their firms' logistics service capabilities and innovation capabilities to gain competitive advantages.

Further, logistics service capability has found to have a positive effect on firm performance. This study finding thus suggests logistics service firms have to improve their logistics service capabilities in terms of logistics value-added service capability, service reliability capability, relationship building capability, and information integration and flexibility capability. More specifically, logistics service firms could first to improve knowledgeability of sales personnel, cargo safety, accuracy of documentation, reliability of advertised sailing schedules. Mor logistics service firms should not only build good relationships with customers and downstream companies but integrate their information systems with their supply chain partners.

Finally, this study provides a general framework for identifying key resources and logistics service capabilities based on firms' logistics service activities. Such framework can help shipping managers to improve their understanding of logistics service capability and innovation capability and identify how such capabilities may affect firm performance, hence develop effective logistics strategies.

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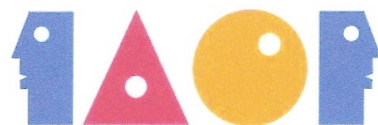
# EXPLORING THE EFFECTS OF PSYCHOLOGICAL CAPITAL AND SOCIAL CAPITAL ON TEAM CREATIVITY IN ISD TEAMS

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Abstract

For an information system development project to be successful, all team members must work together to solve problems. Creativity is the most important driving force underlying the problem-solving process. Information system development (ISD) team members will contribute to the expression of team creativity if the capital they possess is diversified and rich. Therefore, the objective of this study is to investigate factors that affect team creativity from the perspectives of the individual's intrinsic cognitive psychological conditions (psychological capital), and interaction among team members (social capital). Drawing on data from a study of 81 teams (394 members), our statistically significant findings supported all of our hypotheses. The results are discussed and implications for academics and practitioners are provided.

Key Words: Psychological Capital, Social Capital, Team Creativity, Information System Development, Partial Least Squares.

## Introduction

Leonard & Sensiper (1998) pointed out that the information system development (ISD) team is an essential architectural structure for established, knowledge-based enterprises. ISD teams are characterized by high flexibility. Thus, the composition of the ISD team can be made up of members from different departments. This composition can be adjusted in order to accomplish different tasks. When a new pattern of unstructured problems emerges, the enterprise must draw upon a deep understanding of the different kinds of knowledge possessed by the company.

Knowledge management, efficient knowledge integration, and mutual cooperation between ISD teams can promote ISD team performance and enhance the company's competitiveness (Griffith et al. 2003). As the ISD team executes its tasks, it must respond to external changes effectively and rapidly to solve new problems which arise continuously. These problems may involve one or more risks caused by organizational factors (e.g., support from high level supervisors), structural factors (e.g., staffing structure), and project factors (e.g., control and management of timing) (Wallace & Keil 2004; Gemino et al. 2007). To summarize, the quality of an

ISD team depends on its level of creativity (Cerveny et al. 1990; Aladwani 2002; Lee & Xia 2005; Khatri et al. 2006). Because of their scale and complexity, the ISD projects of today cannot be completed by individuals. Team members must brainstorm cooperatively to solve problems and challenges, collecting each individual's professional knowledge and ideas in order to propose a variety of creative solutions (Korpela et al. 2002). All members must work together to solve problems to achieve a successful outcome. Creativity is the most important driving force during the problem solving process (Senge 1990; Cooper 2000; Hoegl & Gemuenden 2001; Ocker 2005). Since cooperation among team members to facilitate each individual's creativity is a requirement for success, the level of team creativity can actually determine the success or failure of an ISD project (Tiwana & McLean 2005). According to existing literature, the ISD process is also a process by which team members express creativity. Creativity can facilitate a smooth process by which project objectives can be achieved (Cooper 2000; Ocker 2005). Therefore, the investigation of the factors which affect team creativity and enhance the development of team creativity is both important and valuable.

The frequent application of information technology to enterprise operations and the rapidly changing technological environment require the members of contemporary information project teams to respond effectively by sharing their diverse expertise and professional knowledge. Drazin et al. (1999) considered team creativity to be a process of achieving project objectives by applying many novel methods during team operations. Creative processes can coexist at both the individual and team levels. Team-level creativity is also a process of socialization (Perry-Smith & Shalley 2003). Each individual member's contribution is a fraction of the entire team's creativity, nevertheless, this socialization process involves the integration of individual team members' creativity to achieve the project objectives.

Therefore, both individual- and team-level creativity are involved in this socialization process. This study also investigates factors affecting team creativity from the perspectives of different levels and types of capital, including individual capital (e.g., psychological capital) and team capital (e.g., social capital). The members of an information system development team will contribute to the expression of team creativity if their capital is diversified and rich. Therefore, the objective of the study is to investigate factors that affect team creativity from the perspectives of the individual's intrinsic cognitive psychological conditions (psychological capital), and the interaction between team members (social capital).

Literature Review and Hypotheses

*Individual and Team Creativity*

Creativity is the first step of innovation. For an organization to gain a competitive advantage, each employee's creativity must be strengthened (Amabile 1988; Devanna & Tichy 1990; Shalley 1995). To a certain degree, an employee's level of creativity reflects his or her value to the company. Therefore, creativity contributes significantly to the innovation, performance and survival of an organization (Amabile et al. 1996). Individual creativity refers to a single person's ability to create novel and useful products (Amabile 1983). Ford (1996) proposed a refined view of creativity which not only includes the novel and useful conditions proposed by Amabile (1983), but also emphasizes the temporal, spatial and domain specificity of creativity. Ford (1996) definition on creativity was later adopted by other researchers (e.g., Tierney & Farmer (2002)). Therefore, this study adopted Ford (1996) view and defined individual creativity as

an individual's ability to produce a novel and useful product in a specific domain. Information technology project team performance has always been an important topic in the field of project research because this type of team faces a rapidly changing environment, and the quality of such teams depends on their problem solving competence (Cerveny et al. 1990; Henderson & Lee 1992; Aladwani 2002; Khatri et al. 2006). Problems occur when the information technology project team faces a reality which differs from the ideal situation which was originally expected (Newell & Simon 1972). Problem solving competence refers to the ability to decrease the discrepancies between the ideal situation and reality (Cerveny et al. 1990). With problem solving competence, an information technology project team can quickly reduce the discrepancies between the ideal situation and reality, subsequently facilitating the growth of and enhancing the performance of the team (Aladwani 2002). According to the interactive theory of creativity by Woodman et al. (1993), creativity is an expression of problem solving ability. Guilford (1964) considered creativity and problem solving to be similar intellectual phenomena. Newell et al. (1959) considered creative activities to be a special type of problem solving activity which includes features such as novelty, uniqueness, persistence and difficulty.

Therefore, the process of developing creativity is to learn to explore multiple ways of solving problems. Team creativity refers to the interactions among team members as they use their collective imagination to come up with new thoughts and ideas for solving problems faced by the team (King & Anderson 1990; Tiwana & McLean 2005). Drazin et al. (1999) considered team creativity to be a pro-cess of achieving project objectives by applying novel methods during team operations. Creative processes can coexist at the individual and team levels. Team creativity is

a process of socialization (Perry-Smith & Shalley 2003), and is the integration of each individual team member's creative contribution over time to achieve project goals (Pirola□Merlo & Mann 2004). In summary, since team creativity plays such an important role in the ISD process, a deeper investigation of the factors which affect team creativity is in order. This study investigates related factors affecting team creativity from the perspective of various types of capital. Psychological and social cap-ital are described in the following sections.

*Psychological Capital*

The concept of psychological capital came from positive psychology. According to Seligman & Csikszent-mihalyi (2000), positive psychology is a discipline concerning individuals' psychological health, as opposed to disease. It is a new domain of psychology that, rather than focusing on psychological problems, focuses on the establishment of the strengths and virtues that allow individuals and social groups to live happy lives. Common schools of psychology concern psychological and mental diseases, such as personal anxiety and low self-esteem, with the mandate of treating and repairing various psychological problems. Traditional schools of psychology rarely investigate the strength individuals gain from optimism, positive characteristics and emotions, and positive organizational structures. Selig- man (2002) explicitly pointed out that the discipline of psychology has invested far too many research resources investigating people's negative psychological activities. Seligman proposed that this imbalanced situation be corrected. He suggested that future psychological studies should emphasize aggressive prevention activities and the nurturing of positive factors. Positive factors can be divided into two levels, individual level factors (including optimism, positive characteristics such as resilience, and emotions) and organization level fac-

tor (i.e., positive organization such as social support).

Psychological capital is a high level construct which was proposed by Luthans & Youssef (2004) and Lut- hans et al. (2007), based on the concept of positive psychology. They noted four types of psychological resources: hope, resilience, optimism and self-efficacy (Luthans & Youssef 2004; Luthans et al. 2007). Psychological capital refers to the individual's positive psychological states which can be developed, measured and changed. This means that an individual's motivational inclination can be cumulative, and can be developed via positive psychological factors (e.g., hope, resilience, optimism and self-efficacy). Psychological capital has four characteristics: (1) confidence in one's ability to invest proper effort to accomplish challenging tasks (i.e., self-efficacy), (2) positive attributions regarding current and future misfortunes that one may encounter (i.e., optimism), (3) persistence in order to achieve goals, and continuous progress toward those goals (i.e., hope); and (4) the ability to bounce back even when encountering misfortune, difficulties or frustration during the process of achieving success (i.e., resilience) (Luthans et al. 2007).

*Social Capital*

The operation of an ISD team is also a socialization process. Many specific interests exist in the relationship structure of a team. To their own benefit, team members will exchange information through mutual interactions leading to the formation of social relationships. These social relationships are also a type of social resource (Coleman 1988). Team members will also appropriately use social resources within the team to solve problems they face. Therefore, this study attempts to understand factors that can affect team creativity from the perspective of social capital.

The concept of social capital was first proposed by Bourdieu (1977). Generally, social capital is evaluated in three dimensions: cognitive, relational and structural (Nahapiet & Ghoshal 1998). The cognitive dimension refers to the team's common attitudes, and how the team commonly explains and interprets things. Cognition facilitates discussion, communication, and problem solving, which generates higher social capital. The cognitive dimension can be divided into two parts: shared language and codes, and shared narratives. Past scholars have determined the dimensions of cognitive social capital to be self-rated expertise (Wasko & Faraj 2005), tenure in the field (Wasko & Faraj 2005; Chou & Chang 2008), common language (Chiu et al. 2006; Sherif et al. 2006), shared vision (Chiu et al., 2006), shared narrative (Sherif et al. 2006), and shared goals (Chow & Chan 2008). In this study, we adopted goal similarity, as proposed by Jehn (1995), to evaluate the cognitive dimension of social capital.

The relational dimension refers to the interpersonal relationships developed among team members after a long period of interaction. Examples of such relationships include mutual respect, friendship, and trust. Team members' behaviors are influenced via the establishment of these relationships. The relationship dimension can be divided into four parts: trust, norms, obligations, and identification. Past scholars have determined the dimensions of relational social capital to be commitment (Wasko & Faraj 2005), reciprocity (Wasko & Faraj 2005; Chiu et al. 2006; Chou & Chang 2008), social regulation (Sherif et al. 2006), obligations and expectations (Sherif et al. 2006), trust (Chiu et al. 2006; Sherif et al. 2006; Chow & Chan 2008), and identity (Chiu et al. 2006; Sherif et al. 2006; Nambisan & Baron 2010). This study adopted relational capital, as proposed by Tiwana & McLean (2005), to evaluate the relational dimension of social capital.

The structural dimension refers to the analysis of links between team members, and the overall network configuration formed by these links. The structural dimension can be divided into three parts: network ties, network configuration, and appropriate organization. Past scholars determined the dimensions of structural social capital to be centrality (Wasko & Faraj 2005; Chou & Chang 2008), connectivity of network ties (Sherif et al. 2006), density (Sherif et al. 2006), social interaction ties (Chiu et al. 2006; Chen 2007; Chen et al. 2008), social network (Chow & Chan 2008), and strength of linkage (Chi et al. 2009). This study adopted social interaction ties, as proposed by Chiu et al. (2006), to evaluate the structural dimension of social capital.

The research framework of this study is inferred based on the above investigation of related literature. This study explores the factors that affect the creativity of an information project team, based on the perspective of different types of capital: psychological capital (hope, resilience, optimism and self-efficacy), and social capital (the cognitive, relational and structural dimensions). Our scope covers both personal and team capital.

Research Methodology

*Hypothesis Development*

Past studies have shown that resilience can be nurtured through the interaction with people who understand ones' experience, and through sharing perceptions with these individuals. When providing consolation to others, one can also gain rewards. Therefore, empathy plays a very important role in this type of interpersonal interaction. In the workplace, empathetic employees can relate to their work partners and put themselves in the shoes of their partners to provide timely support and encouragement when their partners encounter difficulties. At the same time, these empathetic employees gain strength and motivation as they support others. Similarly, employees who tend toward altruism also benefit themselves and others, with similar effects. Assisting others to succeed induces empathetic and/or altruistic employees to believe that they are also capable individuals. This process of helping others can effectively promote resilience and self-efficacy (Flach 1988; Wheatley 2002). Peterson & Seligman (1984) noted that a depressive mood and a narrow, pessimistic thinking style can trigger a vicious cycle leading to further deterioration of the bad mood and, eventually, severe depression. Seligman (2002) pointed out that by generally interpreting good things as permanent and common, and treating bad events as temporary and specific (as do optimists), an individual with an optimistic view can recover quickly after encountering frustrations. Similarly, under normal conditions, happy people will use past positive experiences to judge things while unhappy people will be generally doubtful.

Therefore, a happy person is more likely to judge things positively, in contrast to an unhappy person. Previous studies have noted that psychological capital is composed of four types of psychological resources: hope, resilience, optimism and self-efficacy —all of which can significantly benefit the nurturing of individual's creativity (Ambrose & Kulik 1999). Based on the above statements, we see that a higher level of psychological capital at the individual level will increase personal creativity. Therefore, we propose Hypothesis 1.

H1. Psychological capital is positively associated with individual creativity.

Social capital has three dimensions: cognitive, relational and structural (Nahapiet & Ghoshal 1998). The cognitive dimension refers to the team's common attitudes, and how the team explains and interprets things. Cognition can facilitate

discussions, communication, and problem solving to generate higher social capital. The relational dimension refers to the interpersonal relationships developed among team members after a long period of interaction. The structural dimension refers to the organizational mechanisms and structure that can help and support team members to pursue individual performance and maximize overall enterprise performance. Structural capital is the organizational members' collective mentality that constitutes the organizational culture and atmosphere. Previous studies have also pointed out that social capital has significant influence on team creativity (Merlo et al. 2006; Chen et al. 2008). In summary, team level social capital and individual creativity have direct effects on the team's creativity. Thus, we propose Hypotheses 2 and 3.

H2. Individual creativity is positively associated with team creativity.

H3. Social capital is positively associated with team creativity.

In accordance with extant literature and existing theories, this study developed the research model shown in Figure 1.

*Subjects*

We conducted a study with measurement items to test the proposed model. ISD team members were targeted as the major subjects. Questionnaires were filled out by members of ISD teams in the information management departments of Taiwanese universities. These ISD teams belonged to a senior graduation project development effort. Respondents were primarily team members from teams which had been working on year-long projects. Subjects were rewarded with gifts in order to increase accuracy and return rates. The exclusion of incomplete questionnaires resulted in a net total of 81 teams (394 members). Team sizes ranged from 3 to 6 members.
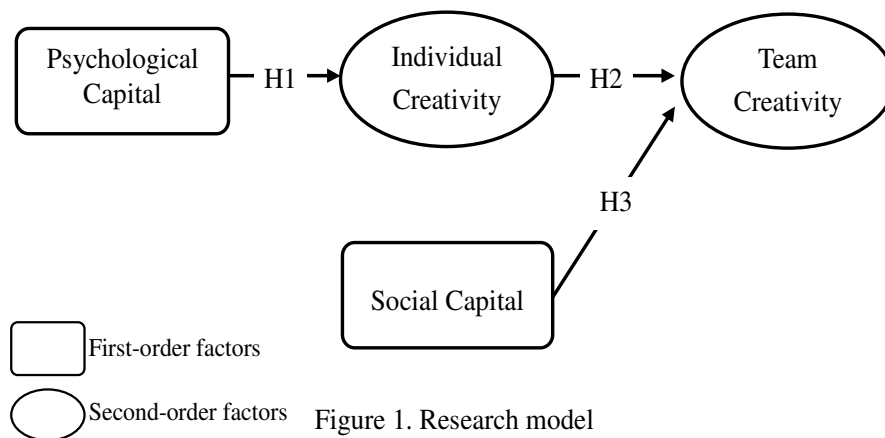


Figure 1. Research model

*Measurement Development*

All items used five-point Likert scales ranging from "strongly disagree (=1)" to "strongly agree (=5)." The constructs "hope", "resilience", "optimism", and

"self-efficacy" were referenced from Kankanhalli et al. (2005) and Luthans et al. (2006). The constructs "cognitive", "relationship", and "structural" were referenced from Jehn (1995), Tsai & Ghoshal (1998), Kale et al. (2000), Tiwana &

McLean (2005) and Chiu et al. (2006). The constructs "individual creativity" and "team creativity" were referenced from Scott & Bruce (1994), Denison et al. (1996) and Tiwana & McLean (2005).

The partial least squares (PLS) model was employed to test our measurements and proposed hypoth-eses. This study employed SmartPLS 2.0 M3 (Ringle et al. 2005). Reliability can be ensured through composite reliability (CR>0.7) with all the CR values fall between 0.88-0.94, Cronbach's alpha (>0.7) with all the alpha values fall between 0.82-0.91, and factor loading (>0.7) with all the factor loading values fall between 0.68-0.93. The convergent validity should be tested when multiple indicators are used to measure one construct. This can be examined by testing the CR (>0.7) and average variance extracted (AVE>0.5) by constructs. For the required discriminant validity, the correlation between construct pairs should be lower than 0.90 and the square root of AVE should be higher than the inter-construct correlation coefficients. The all values indicate that all minimum requirements were met.

### Psychological Capital and Social Capital as Second-Order Formative Constructs

We modeled both psychological capital and social capital as second-order constructs. Our conceptualization of psychological capital follows Luthans & Youssef (2004) and Luthans et al. (2007); thus, it includes four sub-dimensions: hope, optimism, resilience and self efficacy. Our conceptualization of social capital follows Nahapiet & Ghoshal (1998), so it includes three sub-dimensions: cognitive, relational, and structural. Following guidelines provided by Jarvis et al. (2003), we modeled psychological cap-ital and social capital as second-order formative constructs. In measurement model analysis, SmartPLS can produce weight and loadings simultaneously. In general, weight can explain

formative indicators and t-values can be used to test the convenience of the indicators. The impacts of all first-order constructs on psychological capital and social capital are significant (p<0.05). In addition, the low VIF values of psychological capital (hope=2.595, optimism=1.582, resilience=1.933 and self efficacy=1.764) and social capital (cognitive=1.932, relationship=2.184, and structural=1.7) indicate the possibility of a collinearity problem is minimal. This evidence indicates that a more parsimonious second-order representation is able to fully capture the predictive power of those first-order constructs (Chin 1998).

### Data Analysis and Results

We assessed our hypotheses via structural equation modeling, which is able to validate multiple causal relationships simultaneously. We used SmartPLS 2.0 M3 with bootstrapping as a resampling technique (500 random samples) to estimate the structural model and the significance of the paths (Chin 1998). Path coefficients (t-value) and R2 values were used jointly to evaluate the model. Statistical tests were assessed at the 5% level of significance using a two-tailed t-test. As shown in Figure 2, all hypotheses were supported. First, Hypothesis 1 proposed a link between team members' psychological capital and individual creativity. Based on our findings, psychological capital is significantly associated with individual creativity (β=0.647, t-value=19.56). Psychological capital explains 41.8% of the total variance of individual creativity. Hence, H1 is supported. Second, we found that both individual creativity (β=0.149, t-value=2.816) and social capital (β=0.615, t-value=13.296) have an impact on team creativity. Therefore, H2 and H3 are supported. These two variables explain over 40% of the variance in team creativity (R2=47.9%). Finally, the explanatory power is considerably greater than the recommended level of 10%

Figure 2. Results of PLS analysis

* p<0.05
**p<0.01
***p<0.001
(t-values in parentheses)
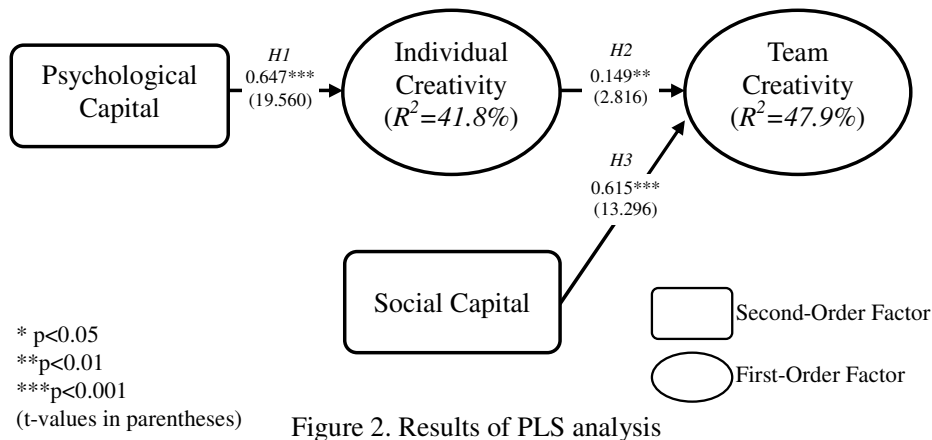
(Falk & Miller 1992; Phang et al. 2006). Figure 2 shows that all minimum requirements were met.

Discussion and Conclusion

This study focused on under-standing how ISD teams' psychological capital and social capital affect team creativity. Data from our survey of 394 ISD team members supported all of our proposed hypotheses. Psychological capital and social capital are further deconstructed as first-order factors in Figure 3. The results for psychological capital show that hope (β=0.155, t-value=2.292), optimism (β=0.126, t-value=2.115), resilience (β=0.099, t-value=2.068), and self-efficacy (β=0.451, t-value=7.771) each have a positive impact on individual creativity. The impact of self-efficacy on individual creativity has a relatively strong weighting, compared with that of hope, optimism and resilience. We also found that individual creativity (β=0.149, t-value=2.816), the cognitive dimension (β=0.468, t-value=7.7591), the relational dimension (β=0.177, t-value=2.834) and the structural dimension (β=0.088, t-value=1.944) each have an impact on team creativity. The impact of the



†p<0.1, * p<0.05, **p<0.01, ***p<0.001
(t-values in parentheses)

Figure 3. Results of psychological capital and social capital as first-order factors
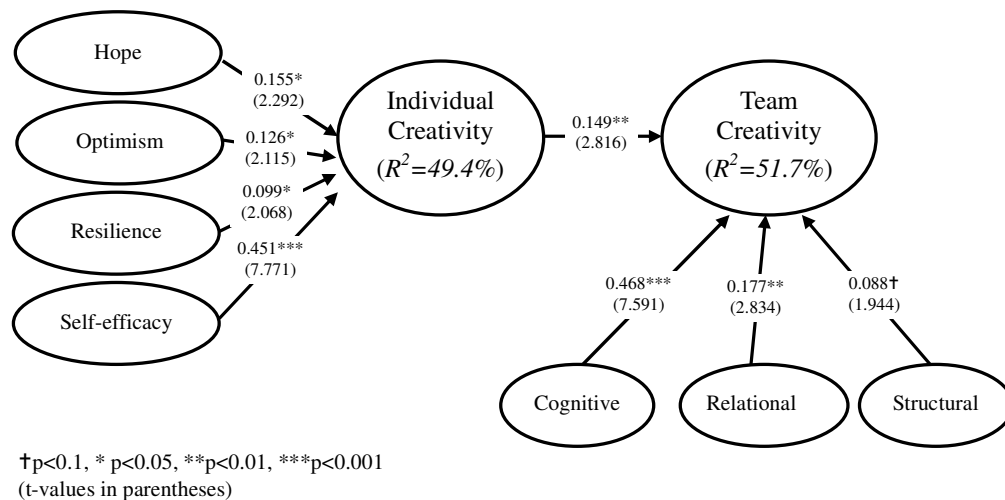
cognitive dimension on team creativity has a relatively strong weighting, compared with that of the relational and structural dimensions.

## Implications

Academically, this study contributes to the capital research stream by examining the creativity and the performance of ISD teams. We took the initial step to introduce positive psychology into the field of creativity study by appropriately introducing the spirit of positive psychology and psychological capital to the study of team creativity. In this study, from the perspective of psychological capital at the individual level, we included psychological characteristics such as hope, resilience, optimism and self-efficacy as important factors affecting individual creativity. In addition, we investigated how the cognitive, relational, and structural dimensions affect creativity at the team level. We also integrated psychological capital at the individual level and social capital at the team level to construct a model of team creativity. Finally, results from our study can provide a theoretical foundation for follow-up studies, thus avoiding wasted effort fishing for factors affecting creativity without a theoretical basis.

Our study contributes to practitioners by having constructed a framework which increases our understanding of how these positive factors contribute to individual creativity. From our research model, enterprises also learn that nurturing personal positive psychological characteristics, especially self-efficacy, can facilitate individual creativity. Furthermore, both personal creativity and social capital have a positive influence on team creativity. As for social capital, tour results suggest that enterprises should aggressively cultivate agreed-upon attitudes, explanations, and viewpoints among team members. For example, it is important from the perspective of social capital that team members share a consistent understanding of team goals during team operations.

## Acknowledgements

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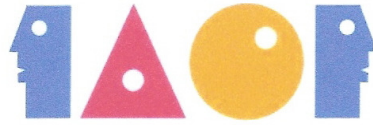
# TEETHING PROBLEMS IN LITIGATION AND REGULATION OF E-COMMERCE

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Abstract

This paper identifies some of the significant teething problems in the litigation and regulation of e-commerce as they relate to laws and rules of contract and the sale of goods and services. Laws such as the Uniform Computer Information Transactions Act (UCITA), the Uniform Electronic Transaction Act (UETA) and the Electronic Signatures in Global and National Commerce Act (E-Sign) are reviewed. The paper also discusses the issues of jurisdiction, contract formation, and the statute of frauds.

Key Words: UCITA, UETA, E-commerce, Internet, Internal Jurisdiction, Cyber-jurisdiction, Website plus, passive website, contract formation, mutual assent, clickwarp agreement and digital signature.

## Introduction

E-commerce began about thirty years ago as an online ordering system. Today it has advanced to a highly sophisticated electronic ordering and payment system on "smartphones." The paper identifies some of the significant teething problems in the litigation and regulation of e-commerce as they relate to laws and rules of contract and the sale of goods and services. Laws like the Uniform Computer Information Transactions Act (UCITA), the Uniform Electronic Transaction Act (UETA) and

the Electronic Signatures in Global and National Commerce Act (E-Sign) are reviewed. It also discusses the issues of jurisdiction, contract formation, and the statute of frauds. The paper should be of interest to consumers, businesses and policy makers as they try to understand and formulate new rules to contain emerging global legal conflicts in e-commerce.

## Jurisdiction

### Jurisdiction in the United States

Justice Holmes wrote, "The foundation of jurisdiction is power…" (McDonald v Mabee, 1917). The United States Supreme Court's seminal decision in Pennoyer v. Neff (Pennoyer v. Neff, 1878), which imposed the power theory on American States, choosing as its source of authority, the ""Due Process Clause"" of the Fourteenth Amendment, explains this theory more vividly. While the United States' jurisdiction is shaped by power ideas, civil law countries followed the Roman idea of jurisdictional restraint, which reflects a spirit of fairness (Schlesinger & Herzog, 1998). Generally, civil law subscribes to the "Justinian maxim of actor sequitur forum rei", which requires the plaintiff to go to the forum at the defendant's domicile, and that the forum could entertain any cause of action against the defendant irrespective of where it arises (Juenger, 1984). In contrast, Article 14 of the French Civil Code grants personal jurisdiction for any action concerning a plaintiff of French nationality. Article 15, on the other hand, has the effect of making excessive any foreign state's exercise of jurisdiction over an unwilling French defendant (Loussouarn & Bourgel, 1991). Without these excesses, the civil tradition differs from the U.S. tradition of tying to the power existing inside the sovereign's territorial boundaries. Differences like these pose big challenges to the growth and potential of e-commerce internationally.

The ability to reach potential customers beyond conventional geographical boundaries of business is, of course, one of the greatest advantages of e-commerce. It also offers the opportunity to remain "open for business" at all times regardless of time zones. Nevertheless, the extended customer reach and a continuous commercial presence mean a greater exposure to the various and conflicting rules and regulations of different jurisdictions. The question of jurisdiction in e-commerce remains unsettled. Cases arising from Internet transactions are proving that establishing jurisdiction in Internet disputes may be more difficult than appears at first blush. This is partly so because e-commerce disputes tend to focus on the quality of the defendant's presence in the forum state but the Internet is both ubiquitous and elusive in nature.

As the Internet is everywhere; does it then mean that jurisdiction should follow? The US Second Circuit Court has stated that "attempting to apply established … law in the fast-developing world of the Internet is somewhat like trying to board a moving bus (Bensusan Restaurant Corp v. King, 1997)." Before a court can undertake a civil adjudication, the court must have "territorial authority to adjudicate: the authority of a local court to entertain cases and events (Clermont, 1999)." In Civil Procedure, determining the existence of personal jurisdiction involves a two-step process. The court first determines the defendant's contacts with the forum's long-arm statute. If the contacts satisfy any of the categories set forth in the statute, the second step of the analysis is triggered: Does the exercise of personal jurisdiction over the particular defendant comport with constitutional principles? It comprises the law of both territorial jurisdiction and venue. Generally, in commercial disputes, there are two types of jurisdictions: general and specific jurisdictions.

General jurisdiction exists when a defendant's contacts with a state are so extensive, continuous and on-going that it is deemed present as a matter of law. Several recent court decisions have held that merely having a website that is accessible by residents of another state is insufficient to establish jurisdiction (Hurley v. Cancun Playa Oasis International Hotels, 1999). For example, the court determined that because New York's Anti-cybersquatting Consumer Protection Act did not provide jurisdiction over out-of-state defendant and that the defendant's contact with New York State consisted merely of sending an email to the plaintiff, the court granted the defendant's motion to dismiss (Phoenix-Dolezal v. Lili Ni, 2012). Courts examine whether the defendant has "purposefully availed" itself of the privilege of doing business in different states. This means determining whether a company maintains "continuous and systematic" contacts with the forum state but is headquartered in foreign jurisdiction. General jurisdiction may be found given the breadth of the company's presence in the forum. The test has been whether consumers domiciled in a state have accessed the contents of the site or purchased its goods or services. Meanwhile, other courts have concluded that successful solicitation of local residents passes the "minimum contact" test to exercise personal jurisdiction.

By comparison, specific jurisdiction is established when the defendant has deliberately availed himself of a forum's laws and the dispute arises from the defendant's actions within the state. In applying these standards, courts have tried to stay within the bounds of the constitutional requirements of the "Due Process Clause". Before a finding of general or specific jurisdiction, the court must engage in a three-pronged analysis: first whether the defendant has purposefully availed himself/herself of the benefits of the forum state, second, whether the defendant's conduct within the forum state is such that

he/she should reasonably anticipate being haled into court there and finally, whether the defendant carries on a continuous and systematic part of its general business within the forum state.

*International Jurisdiction*

In international law, a state is subject to limitations on its ability to exercise jurisdiction in cases that involve foreign interests or activities within its territorial jurisdiction (Third Restatement of the Foreign Relations Law of the U.S. 401). Although international law does not impose hard and fast rules on States in delimiting spheres of territorial jurisdiction, the existence of limits is undisputed. States are, therefore, expected to exercise moderation and restraint while invoking jurisdiction over cases that have a foreign element, and avoid undue encroachment on the jurisdiction of other States (Barcelona Traction, Light and Power Co (Belgium v. Spain), 1970). Three kinds of jurisdiction are distinguished in international jurisdiction. First, jurisdiction to prescribe, (legislative jurisdiction) refers to a State's authority to make substantive law applicable to persons and circumstances (Third Restatement of the Foreign Relations Law of the U.S. 401). Second, jurisdiction to adjudicate which is defined as a State's authority to subject persons or things to the process of its courts or administrative tribunals, and finally, jurisdiction to enforce which deals with a State's authority to induce or compel compliance or to punish noncompliance with its laws or regulations.
United States Exercise of International

*Jurisdiction*

The main characteristic in United States' law of territorial jurisdiction has generally been the persistence of the power test. The power test has remained undefined with unclear and uncouth examples like transient jurisdiction over a defendant flying through the forum airspace

(Grace v. MacArthur, 1959). The power test has also been difficult to apply and it has never achieved exclusive jurisdiction. Nevertheless, with time especially in the international arena, the courts have come to think of power as an odd label for the rough pursuit of some amorphous doctrine of reciprocal sovereignty and comity. What is crucial and troubling is that beyond this uncertainty and shifting doctrines is the worry that outsiders cannot rest secure in knowing when they are safely beyond jurisdictional reach. Accordingly, it is hard to shape their behavior with certainty that they will not travel to defend themselves in foreign jurisdiction. A number of cases help to trace the United States' constant and shifting approach in its exercise of jurisdiction over foreign defendants.

The landmark case of Pennoyer v Neff (Pennoyer v. Neff, 1878) developed the law to reflect the increasing ability of businesses and others to "reach out" into distant areas of the nation. It was an action of a state court in excess of its jurisdiction brought before the U.S. Circuit Court in Oregon to recover possession of a tract of land in Oregon. The plaintiff Neff claimed under a patent issued him by the U.S. in 1866. The defendant Pennoyer claimed the land by virtue of an execution of sale made by a local sheriff pursuant to a judgment of an Oregon State court rendered in 1866. Neff, the plaintiff in the federal suit, the defendant in the state suit and a nonresident of Oregon was attacking validity of the Oregon state court's judgment. He had been served with process by publication of notice pursuant to Oregon law. The Court held that the State judgment was void because the defendant had not been personally served with process while present in Oregon and the property had not been seized prior to the judgment. Thus, the state judgment violated the international rules of jurisdiction. Two lessons can be distilled from this case. First, the Supreme Court established that a state's assertion of

judicial jurisdiction is subject to the ""Due Process Clause"" of the Fourteenth Amendment and second, that an action in personam against a nonresident defendant not served with an initiating summons from the forum violates due process. The court went ahead in the ensuing two thirds of a century and confirmed that suit in the state of defendant's domicile was acceptable even if he was served with initiating process outside that state (Milliken v. Meyer, 1940).

Having established a baseline rule of personal jurisdiction, the Court proceeded to International Shoe Co. v. State of Washington (International Shoe v. State of Washington, 1945) with an expansive rule to reflect the realities that automobiles permitted companies to extend their business into distant forums and by that rendered companies subject to the power of courts beyond their home ports. By establishing the "minimum contact" doctrine, International Shoe permitted courts to exercise personal jurisdiction over businesses or other persons not residing in the forum state if they engaged in continuous activities in the forum. The Court exercised this doctrine so long as "modern transportation and communication … made it much less burdensome for a party sued to defend himself in a State where he engages in economic activity (World-Wide Volkswagen Corp. v. Woodson, 1980)." Essentially, the Supreme Court meant that personal jurisdiction need not be predicated on physical presence in a state, but may be constitutionally exercised if the nonresident defendant has "minimum contacts" with the state. The lesson from International Shoe (International Shoe v. State of Washington, 1945) is that power exists in exchange for the defendant's purposeful availment of the benefits and protections of the state's laws.

Although the court continued to adjust the scope of personal jurisdiction by recognizing the fluidity of national trans-

portation, it also began to modify its approach to jurisdiction somewhat. Accordingly, the Court held in World-Wide Volkswagen Corp. v. Woodson that, although technology had permitted increased access to distant places; personal jurisdiction was not substantial enough for the defendant to "reasonably anticipate being hauled into court there (International Shoe v. State of Washington, 1945)." The case arose out of an accident in Oklahoma, in which an Audi automobile in which the plaintiffs were traveling from New York to Arizona was struck in the rear, causing a fire that severely burned several of the car's passengers. The plaintiffs brought a product liability suit in Oklahoma under the state's long-arm statute. The Court reasoned that although it was foreseeable that a car purchased in New York would end up in Oklahoma, mere foreseeability of possible contacts with the forum was insufficient to assert personal jurisdiction.

By deciding for the defendant the Court refused to follow the "stream of commerce" doctrine seen in Gray v. American Radiator and Standard Sanitary Corp (Gray v. American Radiator & Standard Sanitation Corporation, 1961). In Gray, a safety valve manufacturer in Ohio that sold a valve to a heater manufacturer in Pennsylvania that sold the heater with valve to a consumer in Illinois, who was injured there by the product exploding, sued the valve maker in Illinois for negligence. Illinois asserted jurisdiction because the valve maker put its product into a stream of commerce flowing to Illinois. While all these cases did not involve foreign defendants, the true test came in 1984 with Helicopteros Nacionales de Colombia, S.A. v. Hall (Helicopteros Nacionales v. Hall, 1984), which involved a foreign defendant.

The Helicopteros case involved a Colombian defendant in a wrongful death action that resulted from an accident that occurred in South America. The plaintiff brought suit in Texas, asserting that the defendant's purchase of several helicopters and its contract negotiations in the state sufficed for personal jurisdiction. The Court found that the defendant's contacts with the Texas were both unrelated to the cause of action and insufficient. Three years later, the Court, faced with a "stream of commerce" argument, reasoned that merely placing an item into the stream of commerce with the ability to foresee that product ending up in a particular forum was insufficient to confer personal jurisdiction in that forum. Asahi Metal Indus. Co. v. Superior Court California (Asahi Metal Indus. v. Superior Court, 1987) involved a Japanese manufacturer, which sold valves to a Taiwanese tire company, which then sold its tires equipped with these valves to a California distributor. In a fatal accident resulting from a defective valve, the plaintiffs attempted to assert personal jurisdiction over the Japanese manufacturer in California. While Helicopteros noted the Court's aversion to general jurisdiction, Asahi Metal ushered in the "stream of commerce" argument that limits personal jurisdiction even if it is foreseeable that the defendant's products will likely end up in the forum. It is in the backdrop of this ambiguous guidance and the amorphous doctrine of reciprocity and comity that lower courts are left to wrestle with the elusive nature of cyber-jurisdiction in the ever-contentious arena of international commerce.

Cyber-Jurisdiction

Amidst the pervasive inconsistency in results, three broad principles and dominant trends have emerged in the United States when courts analyze the issue of jurisdiction. They are "website plus" framework, "passive" websites and a vast middle ground website with some interactivity. In addition, the court's refinement of traditional concepts like "minimum contacts," "stream of commerce," and "purposefully availment" have generating a

number of issues for e-commerce litigants like "additional conduct" and "actively engaging in business." Although many websites are available around the world, as a general rule only active websites can confer sufficient presence under "Due Process Clause" to trigger jurisdiction.

Courts have ruled that jurisdiction is appropriate where a defendant engages in business transactions on the Internet and enters into contracts to furnish goods and services to customers. Such additional conduct meets the Supreme Court's requirement of purposeful availment, doing business and minimum contacts concepts. Eric Sneiderman and Ronald Kornreich have constructed a six-tiered hierarchy of different types of contacts (Sneiderman & Kornreich, 1997). Typically, the most basic contact is when a user views a "business card" site, a simple, static home page with no interactive qualities. The second level of contact is when a viewer is able to click on different parts of a website, choosing information to download. The third level involves sites that solicit and obtain information about a user who answers to questions posted on the website.

The fourth level involves the purchase and delivery of information in the form of Web pages through the Internet, for example a magazine or a subscriber service. The fifth level goes further than the fourth level in that it involves the purchase and delivery of computer software as opposed to a Web publication. Finally, the sixth level involves an actual financial transaction is consummated.

1.  Website Plus

Unlike the "passive" website and the vast middle ground approach, the "website plus" framework, requires both an interactive website and some form of minimum contact or additional conduct with the forum state to confer jurisdiction over a foreign defendant. Essentially, in conducting

a jurisdictional analysis, courts give weight to the interactivity between the user and the website. Interactive sites are typically sites where business is actually conducted, where users can download the offered services and otherwise transact business with the website operator and get feedback. Such cases in any forum where the users accessed and used the site consistently confer jurisdiction of the defendant.

In a trademark infringement action brought by a Pennsylvania manufacturer of tobacco lighters against a California-based Internet news service, Zippo Manufacturing Co. v. Zippo Dot Com Inc. (Zippo Manufacturing Co. v. Zippo Dot Com, Inc, 1997), a Pennsylvania federal court upheld the exercise of jurisdiction. Although the defendant held no offices, employees or agents in Pennsylvania, the court reasoned that, advertising its service on its website coupled with its additional contacts in Pennsylvania, the defendant had done more than advertise on the Internet in Pennsylvania. In another trademark infringement action brought against a charitable organization, Heroes Inc. v. Heroes Foundation (Heroes, Inc. v. Heroes Foundation , 1996), the court factored in the defendant's additional contacts with the forum, Washington D.C., in reaching its conclusion to exercise jurisdiction. The court reasoned that by listing its toll-free number on its home page, placing an advertisement in the Washington Post, and explicitly soliciting donations online, the defendant purposefully availed itself of Washington D.C. The court said that: "The home page is certainly a sustained contact with the District; it has been possible for a District resident to gain access to it at any time since it was first posted (Heroes, Inc. v. Heroes Foundation , 1996)."

2.  Passive Websites

Passive websites are websites which contain general information and/or advertisement. Courts have generally ruled that

such sites are insufficient to grant personal jurisdiction because they can be likened to national advertising and maintaining a toll-free number. This approach was originally adopted by the U.S. District Court for the Southern District of New York in Bensusan Restaurant Corp. v. King (Bensusan Restaurant Corp v. King, 1997), expanded and fine-tuned in Hearst Corp. v. Goldberger (Hearst Corp. v. Goldberger, 1997). The publisher of Esquire magazine brought a trademark infringement action against a New Jersey defendant who operated a website for attorneys called "esqwire.com." The defendant's website, which briefly described its services, as "electronic law offices," did not offer any services or products. But instead it contained a hyperlink to court filings and other documents. The defendant also sent and received E-mail from New York via the Internet. In its decision the court held that "upholding jurisdiction over the defendant would, in effect, create national (or even worldwide) jurisdiction, so that every plaintiff could sue in plaintiff's home court every out-of-state defendant who established an Internet website."

In rejecting the plaintiff's claim, the court reasoned that the defendant was not transacting business in New York for purposes of the state's long-arm statute. The court compared the website to an advertisement, and concluded that advertisements in national publications, even those targeted at the New York market, are insufficient to confer personal jurisdiction over a nonresident defendant. The court further explained that because the defendant did not commit any tortious act in New York and he did not derive any revenue from New York, specific jurisdiction was out of the question.

3. The "middle ground" Approach

Unlike the interactive websites where there is a lot of activity, websites that are defined as such have some interactivity but not the full-fledged transaction. Given that this area is very broad, courts have subscribed to a fact specific approach concerning the nature of contacts with the forum and the exchange of information that occurs between the user and the website itself. Characteristically, jurisdiction may be appropriate based on the Internet contact alone. Courts go as far as evaluating the "hits" to a website and the number of forum state citizens making hits to the site. A hit is the accessing and down-loading of a file from the Web to the drive on a viewer's computer (Sneiderman & Kornreich, 1997). In other cases, where both the quantity and quality of Internet contact is low, some additional contact may be required. Some courts, however, consider the availability of E-mail contact at a website sufficient to move it from the "passive" category to the middle category.

In a trademark infringement case, Cybersell, Inc. v. Cybersell, Inc. (Cybersell, Inc. v. Cybersell, Inc., 1997), the court held that the alleged use of a service mark in a defendant's website was insufficient to confer personal jurisdiction in the state where the holder of the mark has its principal business. The court's analysis hinged on the broad principles adopted by many district courts around the country which gives weight to the presence – or lack – of interactivity between the user and the websites itself. The court reasoned that, even though the defendant's website did offer some interactivity where users could submit their name and address and indicate their interest but they could not sign up for services, it was "essentially passive" and that alone could not confer jurisdiction.

In a similar situation, the Ninth Circuit considered another case with a passive website in Panavision Int'l, L.P. v. Toeppen (Panavision International v. Toeppen, 1998). The complaint alleged trademark infringement and extortion. The court in finding jurisdiction held that the defendant

had not "simply registered someone else's trademark as a domain name and posted a website [sic] on the Internet." The court reasoned that the extortion supplied the missing element: The defendant was accused of acting tortuously with the knowledge that his actions would have an effect in California where Panavision carried its business. The emerging rule is that courts will confer jurisdiction when a defendant knew effects of his intentionally tortious activity would be felt in the forum state even if the website is passive.

## Contract Formation

### Overview

From the start, contracts negotiated online have presented sticky and sometimes novel issues of contract law that courts and legislators are only beginning to address. As the world of electronic commerce expands, there is an increasing demand for clarity in the rules which apply to the participants and their transactions. Obviously, existing statutes and case law do not address related questions whether agreements entered into electronically are enforceable; how operative terms of Internet agreements will be determined by courts, what rights parties have to online information, what electronic self-help remedies they may exercise, whether an offer may be communicated online, or even whether clicking on an icon on a Web page can indicate legal assent. An offer posted on the Internet is open to everyone, everywhere, and it is hard to tell a party's location, especially when the transaction will be performed entirely electronically. One of the main difficulties encountered by online merchants operating in the current legal environment is the large number of national laws that are potentially applicable to any given transaction. Unfortunately, it is almost impossible to tailor one's online practices to conform to all of these laws.

### Formation and Validity

May parties create an enforceable agreement through electronic forms of communication? The answer, arguably under any legal regime, is yes. The complication, however, is whether the contract is valid. The Restatement of Contracts lays out the fundamentals of what the law requires for the consumer's acceptance. "The formation of a contract requires a bargain in which there is a manifestation of mutual assent to the exchange (Third Restatement of the Foreign Relations Law of the U.S. 401)." "Manifestation of mutual assent … requires that each party either makes a promise or begin or render a performance." "The manifestation of assent may be made wholly or partly by written or spoken words or by other acts or by failure to act." "The conduct of a party is not effective as a manifestation … assent unless he intends to engage in the conduct and knows or has reason to know that the other party may infer from his conduct that he assents…" "If a party's conduct manifests assent but he did not in fact assent, the resulting contract may be avoidable because of mistake or other invalidating cause." "An offer may … require a specified acceptance to be made by an affirmative answer in words, or by performing … a specified act (Third Restatement of the Foreign Relations Law of the U.S. 401)."

U.C.C. Section 2-204 is open-ended in its approach to formation by simply providing that "a contract for sale of goods may be made in any particular manner sufficient to show agreement (Uniform Commercial Code)." It includes "contract by both parties which recognizes the existence of such contract." The section on offer and acceptance is also open-ended as regards to e-com-merce. It provides that "unless otherwise unambiguously indicated by the language or circumstances … an offer to make a contract shall be construed as inviting acceptance in any manner and by any medium reasonable in the

circumstances (Uniform Commercial Code)." Could it be said that a customer's clicking on a button is an offer, an acceptance, or an acceptance upon the seller's confirmation? While it could be argued that Article 2 provides the best fit for consumer electronic commerce, courts could adapt these very flexible standards to the changing landscape of electronic commerce. Even so, under existing law, there is no reason why courts should not enforce a contract formed electronically if the exchange was otherwise legally sufficient to manifest intention by the parties to bind themselves and to show a meeting of the minds.

*Mutual Assent*

Mutual assent requires an offer by one party and an acceptance of that offer by another party (Third Restatement of the Foreign Relations Law of the U.S. 401). Generally, an agreement that fails to satisfy a "meeting of the minds" on the terms and content of the agreement means there is no contract. Contract law has, however, made this requirement flexible through a set of rules and interpretations to determine if there is an offer and an acceptance (Stuckey, 2003). Although the offer requires no formal scrutiny, additionally the offeree must provide notice to the offeror of acceptance to rise to the level of acceptance (Third Restatement of the Foreign Relations Law of the U.S. 401). Although this manifestation of assent may be made by written document, spoken word, or other conduct, a valid contract only exists when the manifestation establishes that a party intended to accept the terms of the offer by way of exchanging promises or performance. The problem is that electronic contracts present thorny and distinct characteristics.

Basically, the Internet (Turilli & Kershenbaum, 1998) offers four main processes through which parties may enter an agreement: first, e-mail, second, listserv and chat services, third, World Wide Web (WWW) interfaces, and finally, electronic data interchange (EDI). First, e-mail is the most basic process used to form agreements. The e-mail enables someone to send a message electronically to another individual or group of individuals (Reno v. American Civil Liberties Union, 1997). Like ordinary letters, e-mail is written and distributed by a person to an individual or a group of persons. An e-mail may contain an "attachment" or other electronic files and messages, they can be "digitally signed" for authentication purposes. Most businesses use this medium in many ways. The form of an e-mail may include information concerning negotiations, offer and acceptance, or a draft of the contract itself. Typically, individuals may use listservs or chat-rooms to create transactions (Reno v. American Civil Liberties Union, 1997). Listservs or electronic bulletin boards provide a forum for individuals to discuss particular topics and chat-rooms allow individuals to chat with one another. This ability to communicate creates business opportunities by allowing individuals to engage in negotiations, make an offer or acceptance, send a form of contract, or send material that constitutes performance of an agreement. Chat-rooms offer individuals opportunity to chat and negotiate business at a fast pace. Like the phone or in person negotiation messages sent through the chat-room is instantaneous but has the disadvantage that no message is memorialized for any appreciable length of time.

The World Wide Web on its part is a graphical user interface (GUI) for intercommunication between a Web page and the visitor of the Web page (Stuckey, 2003). When an individual uses an Internet browser to type in a Web page address, the browser displays the Web page allowing the visitor to "navigate" the site through links and buttons to access additional text and material. Web pages combine multimedia and the ability to intercommunicate characteristics which enable a seller to

provide product and service information, and to communicate with buyers. Individuals can enter into contracts by filling their personal information into specified fields and click on a "return" or "accept" button to complete the transaction. Such online transactions include the purchase of physical goods like groceries, computers, automobiles and real estate.

Finally, transactions may occur electronically using electronic data interchange (EDI), that is, "the computer-to-computer transmission of data in a standardized format (Fisher, 1997)." Characteristically, computers act like "electronic agents" for agreement formation without human intervention (Street, 1997). Essentially, when an individual completes an electronic form requesting quotations for goods or services he may want to purchase, the request is routed electronically to a computer network which forwards the request to bidders who then return quotations for the suggested transaction. Evidently, this process lacks both negotiation agreement and sometimes does not involve human beings in the process.

Some of the basic issues of electronic contracts include the Statute of Frauds and determining. Commentators have wondered, especially in the context of e-mail contracts, how to determine manifestation of intent when the intent is not expressed. In a typical "click-through" contract transaction (Radin & Appelman, 1999), the consumer begins at the seller's home page and clicks his way through pages containing various items for sale by the help of links. To select what he wants he clicks on the item and places it in a shopping cart. He may continue shopping or proceed to a checkout counter. As he continues shopping there may be distracting incidents, notably, with unsolicited advertisements or personal inquiries. He may select items and forget them or simply discard some items if he changes his mind. At the checkout counter he provides his personal

information, (including credit card, name and address) and where he wants the goods shipped. At the end he is requested to finalize the transaction by clicking on "submit" button for transmission. The consumer may get confirmation of the order from the seller at some later time by e-mail (Effross, 1997).

Three conclusions can be drawn from the processes by which electronic transactions are reached: first, the entire communication is without signature and paperless; second, the parties know their identities only from the information they provide one another; and third, irrespective of the electronic process, the mechanics are similar; messages are disassembled in analog packets transfer (Kidd & Daughtrey, 2000). The burning questions are: do these processes produce legally enforceable contracts? Do these processes fit within the purview of traditional concepts of contract law? How are the courts adapting existing rules to respond to these issues?

Clickwrap Agreements: Adapting Manifestation of Assent

CompuServe, Inc. v. Patterson was one of the first cases on clickwrap contract to get to the court. In an online agreement between Patterson and CompuServe which provided that when a user paid a shareware licensing fee, CompuServe was entitled to a percentage of the fee, and passed the remainder to the shareware's creator. CompuServe presented the "Shareware Registration Agreement" online to Patterson, asking him to type in "Agree" at various points of the document. Later, CompuServe used the software that allegedly bore the trademark used by Patterson in his shareware program. Patterson complained and CompuServe promptly sought a declaratory judgment from an Ohio court that it was not infringing any of Patterson's trademarks. Patterson, a resident of Texas, immediately moved to dismiss based on lack of personal jurisdiction. The appellate

court, discussing "purposeful availment," found that Patterson had "entered into a written contract with CompuServe (CompuServe v. Patterson, 1996)." The court reasoned that by typing in "Agree" at points through the agreement, Patterson manifested assent to the "Shareware Registration Agreement." With this conclusion, the Sixth Circuit sent a strong message to the rest of the world that a contract entered online is binding and enforceable.

In another Internet based case, Hotmail v. Van$ Money Pie, Hotmail Corporation (Hotmail) which provided a free e-mail account to subscribers who agreed to the terms of an online agreement. One of the service agreements prohibited a subscriber from using Hotmail's e-mail account to send unsolicited e-mail, known as "spamming," or from sending obscene or pornographic messages and content (Hotmail v. Van$ Money Pie Inc., 1998). When Hotmail learned that the defendant was using Hotmail accounts to send spam messages through Hotmail subscribers who had received some of these messages, Hotmail filed a suit asserting breach of the terms of the Service Agreement seeking a preliminary injunction. Arguing that the defendants had agreed to abide by the terms of the Service Agreement, Hotmail asserted that using Hotmail accounts to support spamming operations and pornography-related messages constituted breach. The court granted a preliminary injunction holding that "… evidence supports a finding that the plaintiff will likely prevail on its breach of contract claim… (Hotmail v. Van$ Money Pie Inc., 1998)" Although the court did not consider the merits of the breach of contract claim, the electronic commerce community interpreted that as another victory for clickwrap contracts.

These cases do not, however, tell the entire truth because clickwrap contracts may lack mutual assent because often they constitute contract of adhesion and fail for lack of consideration (Vergari & Shue,

1991). Some of the contracts on websites usually contain numerous detailed provisions. Given their length and the nature of online transaction many consumers may not read or understand them, such that a "meeting of minds" never occurs. The hallmark of these "agreements" is that they are non-negotiable and non-acceptance of any provision; they simply require the consumer to click the "accept" button. By focusing only on the seller's interests and demanding non-negotiable terms, the contract virtually leaves nothing for the parties to agree on voluntarily. Another challenge is that a significant number of electronic transactions do not involve any human interaction. Offer, acceptance, and mutual assent occur between electronic agents. How do computers arrive at a "meeting of the minds" to produce an enforceable contract is one thing courts and legislators will have to deal with.

## What Are Terms and Conditions of Contracting Parties?

When there is offer and acceptance or other conduct that forms a contract, the next concern of the law is the terms in the contract binding the parties. Neither the Restatement nor the U.C.C. addresses this issue. Most Internet sites contain terms and conditions binding the parties. However, most online transactions are not indefinite agreements in which one or more terms are left open (Uniform Commercial Code, 1999). The terms appear right there on the website and often they are difficult to find or the websites even make it hard to find that consumers should not be considered as having agreed to them. Accordingly, if the court were to decide that the terms were "hidden" in this manner, it could regard the terms as open terms under Article 2. In other words, if a contract has been formed, the court supplies the terms by applying Article 2's gap fillers (Uniform Commercial Code, 1999).

In the absence of any applicable rule of law, guidance can be found in UCITA which borrows the concept of "manifestation of assent" from the restatement's provisions relating to contract formation and applies it assenting to the terms and conditions (Uniform Computer Information Transactions Act, 1999). It provides that a person manifests assent if he or she has knowledge of the term or "after having an opportunity to review the record or term … intentionally engages in conduct … with reason to know what the other party … may infer from the conduct … that the person assents to the record." "A person has opportunity to review a … term if it is made available in a manner that ought to call it to the attention of a reasonable person and permit review." Thus, UCITA requires the website to adequately provide opportunity to review the record; the customer may decide not to take advantage of the opportunity "unless the licensor intentionally manipulates the circumstances to induce the licensee to review the record." The comment clarifies that "a record is not available for review if access to it is time-consuming or cumbersome as to effectively preclude review. It must be presented in a way as to reasonably permit review. In an electronic system, a record accessible through an electronic link ordinarily qualifies (Uniform Computer Information Transactions Act, 1999)." Despite all these, the comment suggests that there is a rebuttable presumption that a link to the terms is a method that reasonably provides the opportunity to review them.

Formalities and Interpretation

*Overview*

In a transaction that closed in July 2000 (Jones & Winn, 2001), a couple purchased their new home with every transaction done online. They applied for their mortgage online from a dot-com lender that originates, underwrites, processes and approves with its online lending tools. The online lender and the title company both prepared the closing documents using electronic technology that creates and manages records and other mortgage-related documents. The couple and the other parties executed all the documents of the title company using their electronic signature. The title company transmitted the electronic deed and mortgage to the County Recorder which verified and recorded them and also collected its fees by electronic funds transfer. The title company issued its title policy in electronic form, and the online lender sold the loan and transmitted the electronic buyer, a home mortgage aggregator. The related services rights were transferred to the servicing company electronically which incorporated them into its own loan processing system.

This transaction which took place in less than three hours happened thanks to technology combined with new laws and coordination. The transaction was made possible by the approval of the Uniform Electronic Transmissions Act (UETA) in July 1999. However, the most significant development has been the adoption of the Electronic Signatures in Global and National Commerce Act (E-Sign), on October 1, 2000, enacted by Congress to put the weight of the federal law behind the principle that electronic contracts should have the same legal recognition as equivalent paper documents signed in ink with a traditional signature. To reach this goal, Section 101(a) of E-Sign provides that a signature or contract may not be denied legal effect "solely because it is in electronic form."

In the 1970s, businesses gradually began to replace traditional paper-based ways of communication using "electronic data interchange," a method for the electronic communication of business data between computers in standardized formats (American Bar Association, Electronic

Messaging Service Task Force, 1990). This means of doing business did not meet existing rules from common law and the U.C.C. Code regarding contract formation, contract validity, and contract terms were inadequate for assuring the legal validity and enforceability of contracts formed through the use of electronic media. Accordingly, parties doing business electronically began to execute "trading partner agreements" or "interchange agreements" as a way to contractually resolve legal uncertainties. There has, however, been a continuous recognition that the answer to the uncertainties of electronic commerce lay not in such agreements, but in the clarification of the rules applicable to electronic commerce. Particular issues requiring clarification included the application of "Statute of Frauds" requirements to electronic environments; the satisfaction of traditional formal requirements such as a "writing" and "signature;" the attribution of electronic messages to the sender and the methods of contract formation.

## Statute of Frauds

Besides mutual assent electronic transactions pose potential problems of Statute of Frauds. One of the basic rule of contract law demands that certain types of agreements must be memorialized in writing to be enforceable. This requirement has been used over the years to avoid fraud and discourage perjury. Contract law continues to require it to "promote certainty and deliberation … while limiting memory problems when the contract terms are questioned in court (Stuckey, 2003)" The U.C.C § 2-204 has liberalized the rule to require that any contract for sale of goods with a price of $500 or more will not be enforceable without a written contract of sale between the parties and signed by the party against whom enforcement is sought.

## What is "Writing?"

The definition of "writing" has evolved with time, but contract law has managed to preserve its semi-permanent fixed medium. Obviously, "writing" includes "paper-and-ink writings on stationery, napkins, or cardboard, but also includes spray-painted contract terms on a fifty-foot billboard or statements carved into a tree (Kidd & Daughtrey, 2000)." The Statute of Frauds has remained satisfied so long as the words were scratched onto a physical medium serving to preserve or "memorialize the agreement. What about a written contract in sand on the beach, can it serve a specific evidentiary purpose or the Statute of Frauds requires writing qua writing? The U.C.C. defines "writing" as any "intentional reduction to tangible form."

Since the purpose of a "writing" is to preserve the agreement in a medium independent of the parties' memories and the impermanence of oral promises (Kidd & Daughtrey, 2000), does a recording that preserves the intention of the parties, irrespective of the medium, not satisfy the of the Statute of Frauds? Could it be argued that electronic contracts are identical to "pen and paper" writing? Is it fair to say that the terms of an agreement on a Web page, in an e-mail, or within a word processing file are not "etched" onto a permanent medium but are only a continuous stream of electrons visible momentarily on a computer screen that lack "fixed" status (Department of Transportation v. Norris, 1997)?

In its new adaptation of the Statute of Frauds rule, the UCITA replaces "writing" with "record." Although UCITA retains the "tangible medium" element it recognizes a "record" as any information "that is stored in an electronic or other medium and is retrievable in perceivable form. The fact that the record can be converted into perceivable form; even if the record is temporary it resolves the scope of "tangible medium" of the Restatement. There-

fore, if a record indicates that a contract was formed and the subject matter can reasonably be established, the record requirement is satisfied. The UCITA rule finely crafts the U.C.C and common law contract concerns, because the intent of the rule focuses on the formalities for transactions of $500 and more and does not impose the requirement on contracts less than $500. With this amorphous development of "writing," UCITA has responded to the evolving ways of doing business. Henceforth, parties are no longer required to reduce their agreement to a concise written document, they could record it to be read or even heard (Uniform Computer Information Transactions Act, 1999).

What is "Signature?"

Signature is one of the requirements the Statute of Frauds uses in determining authentication of a contract against the breaching party. Customarily, the law has required parties to physically sign their full or legal name to satisfy the signature requirement; however, deviations like a mark or a symbol have been legally sufficient (Uniform Commercial Code).

Accordingly, initials, the letter "X," corporate letterhead and thumbprint satisfy the signature requirement if they stand anywhere on the contract but most importantly were executed "with the present intention to authenticate a writing." The importance of signature in contract law can never be underscored; it not only serves to authenticate a contract, it also guarantees the parties intent to enter the agreement the writing purports to establish. Thus, signature confirms to the world that the contracting parties are legally bound. The fact that signature is used to indicate authorization of a transaction provides a degree of efficiency.

UCITA has completely dropped the term "signature" for the broader concept of "authentication." Thus, the definition of "authenticate" expressly includes the notion of a record or adopting a symbol, but it also includes sounds, encryption, or any other process that indicates the intent of the party to identify itself, adopt or accept the terms, or verify the content of the record. Although the definition is technologically neutral, the drafters have made sure that a process of authentication is commercially reasonable and above all that it provides evidence of intent to authenticate and also prove that the method was used. The change from "signing" a document to 'authenticating' a record may not be exact, however, authentication may be conceptualized as either a signature on a document or a signature by process applied to the document, either of which serves to indicate intent, acceptance and verification. Although critics feel that it is easier to conceptualize "signature on a document" than "signature by process applied to a document," what the latter does is make the definition neutral to include both. The concept of "signature as process" is best explained by digital signature technology (Uniform Computer Information Transactions Act).

Digital Signatures and Authentication

Businesses seeking to conduct commerce electronically find digital signature technology an important tool because it serves to verify and authenticate messages (Street, 1997). The process of creating a digital signature requires encryption or encoding. After writing a message, the sender performs a mathematical computation on the document called "hash function." The "hash function" is intended to generate a string of code called a "message digest" (this is a kind of finger print). Due to the fact the "message digest" is based on a specific content of this original document, any changes to the document would yield a different message digest. The sender then encrypts the message digest with his private key, attaches the "signature" to the end of the document and sends the signed

document to the recipient. The recipient, who has access to the sender's public key, may now verify the sender's identity and the integrity of the document. This is done by decrypting the "signature" with the sender's public key, which will reveal the original message digest. The recipient then performs the "hash function" on the received copy. This will generate a copy of the digest. The recipient can now compare the two copies of the digest. Essentially, digital signature is not a "signature" at all, but a process that uses encryption and algorithms to encode a document.

Digital signatures have significantly heightened the authentication of sender identity, data integrity and non-repudiation. First, digital signatures provide a process to determine the sender of a communication and the identity of the sender. Second, the recipient can determine if the information has been altered from the time it was sent. Third, because the recipient has successfully decrypted the message the digital signature is capable of demonstrating that a message has not been altered, making it impossible for the sender to repudiate the message. Commercial industries are showing increasing interest in digital signatures because of the security that it guarantees. Many states are reported to have adopted digital signature laws and some are probably waiting for the introduction of UCITA which legitimizes signatures for electronic commercial contracts (Hill, 1998).

National and International Action

*Government Role in E-Commerce*

No doubt the United States can lay claim to the widespread initial development of the Internet. But it has shown little or no interest in regulating the medium. Instead, it hopes for a self-regulated market which has not materialized. Except for a patchwork of federal and state laws such as the Children's Online Privacy Protec-

tion Act of 1998 and the Federal Trade Act, there is no Internet regulation at the national level in the United States (Campbell & Woodley, 2003). That notwithstanding, how should the government's role be defined without getting too involved to stifle e-commerce? Tariffs, taxes, commercial law and jurisdiction are inherently the domain of the government. If governments do anything at all, they might stifle the e-commerce. If they do nothing at all, they might also stifle it. How can governments move fast enough to keep up with the advances in electronic commerce? The Hague conference on Private International Law raises the prospects for international agreement on the reciprocal treatment of foreign judgments, but it is taking too long (Clermont, 1999).

Conclusion

E-commerce has gained tremendous popularity and acceptance in global business because of the relative ease, speed and flexibility in which a transaction can be completed online. It is to be noted that since the Internet is largely global in character, legal issues resulting from it also have global ramifications (Ahmad-Mir & Banday, 2010). Common law principles relating to contracts, as evolved by the court, are currently generally applied to e-commerce given often the absence of relevant municipal or international law. As there are still many grey areas, the pressure to obtain solutions to the myriad of problems faced by countries to formulate a legal framework within the context of the Internet will increase. It is therefore worth seeking for solutions to these burning problems in order to facilitate the explosive growth of global E-commerce (Hankin, 2001).

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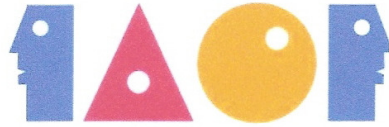
# ENTREPRENEURIAL ORIENTATION AND ORGANIZATIONAL LEARNING ON SMES' INNOVATION

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## Abstract

Entrepreneurial orientation (EO) is seen as a significant driver of firms' innovation capability. Despite an abundance of research suggesting that innovation capability contributes to SMEs' performance, little is known regarding the extent to which salient dimensions of EO may positively influence SMEs' innovation capability. Prior research examined various factors that influence the EO–innovation relationship. Nonetheless, few studies have expressly examined the extent to which organizational learning influences the EO-innovation relationship in the SMEs context. Based on the literature review, this study attempts to fill these research gaps by postulating that entrepreneurial innovativeness, entrepreneurial proactiveness and entrepreneurial risk-taking are positively related SMEs' innovation. Organizational learning, in turn, positively moderates EO–innovation relationship.

Keywords: Entrepreneurial orientation, organizational learning, innovation, SMEs

## Introduction

Due to the vital role which SMEs play in economic and technological development, SMEs' innovation has been covered extensively in the research literature (Mueller et al., 2013). Although SMEs generally have significant resource constraints, they are frequently successful at innovation. By being smaller in size, with structures which can react quicker and an entrepreneurial philosophy promoted by the founders and managers can all facilitate innovation activity in SMEs (Prajogo & McDermott 2013). EO is the strategy making process of an firm thus differing from entrepreneurship as the latter indicates emerging firms in the market (Tang & Hull, 2012). In short, EO destroys existing process to make way for innovative strategies. To survive today's business environment, enterprises need to sustain their capabilities (Kreiser et al., 2010). Unlike large enterprises, SMEs do not have resource and financial strength, and so their success depends on their ability to innovate strategies to fight competition (Mbizi et al., 2013). There is dearth of research on strategic management of SMEs regarding resource planning while enough research has been done on the three aspects of EO that SMEs should adopt (Keh et al., 2007). Despite an abundance of research suggesting

that innovation capability contributes to SMEs' performance, little is known regarding the extent to which salient dimensions of EO may positively influence SMEs' innovation capability.

Entrepreneurship is best studied through a thorough understanding of its key elements such as originality, proactiveness and daring attitudes. Organizational learning has further impact on the entrepreneurial orientation of firms especially SMEs innovation. Strategic management of SMEs, especially that which can lead to improved and mobilized resources, is a factor that has been hardly recognized or studied. Significant research has been conducted on the aspects of entrepreneurial orientation that SMEs must embrace. This includes innovativeness, risk-taking and proactiveness behaviors. These key elements integrate to represent an entrepreneurial directional approach which shows a firm's inclination to connect with entrepreneurial behaviour for attaining its calculated goals.

Prior research suggests that organizational learning influences firms' innovation performance (Alegre & Chiva, 2013). Innovation can be seen as an organizational learning process which directs firms toward innovation effectiveness and efficiency. Organizational learning is a dynamic process which enables firms to adapt quickly to the changing environment. This process includes the application of new knowledge and skills in innovative approaches. However, few studies have expressly examined the extent to which organizational learning influences the EO-innovation relationship in the SMEs context. This study attempts to fill these research gaps by postulating that entrepreneurial innovativeness, entrepreneurial proactiveness and entrepreneurial risk-taking are positively related SMEs' innovation. Organizational learning, in turn, posi-

tively moderates EO–innovation relationship. This study begins with a systematic review of the existing literature in each of these aspects and then deduces conclusion after thorough discussion of conclusions from the study.

## Literature Review and Development of Propositions

### Entrepreneurial Innovativeness and SMEs' Innovation

With respect to entrepreneurial innovation, innovativeness is defined as the ability to do something new when all known techniques fail. Mbizi et al. (2013) suggest that innovativeness for individuals and employees is the ability to harness creative abilities, how they do it, and how they out it to use in facing challenges while deciding to improve their processes, procedures, and products. This is a conclusive definition that has the reports from other similar studies combined in it. As outlined in the definition, innovativeness is a crucial process that comes to play when the decision making time of upgrading existing practices is on.

For many authors though, upgrading and innovativeness are different aspects of business development. For example, Kaplinsky and Morris (2003) consider innovation as the process through which a firm ensures that the product and processes in use are subjected to continuous improvement. According to them upgrading can also be equated as innovation only when it is present in a relevant context. Giuliani et al. (2003) alternatively describe upgrading as a function of innovativeness that is used to increase value to the firm or brand, often achieved by entering new markets, sectors and niches and generating new product/service functions. The new market

niches that the brand enters are essentially of a higher unit-value.

A practical agenda for understanding innovation types assumed by firms is a clever way to understand innovativeness in SMEs (Mbizi et al., 2013). The present a practical study which understands that decision to go for innovation is often based on the calculated extent of variation and the factor that brings about the variation in products, services and processes. While this is clear on the practical front, the explanation lacks the theoretical and logical consistency that seekers of a better understanding of innovativeness in SMEs' require. Four different directions that are available to firms to follow while upgrading their processes (Kaplinsky & Morris, 2003), and these include process, product, chain or functional upgrading. Humphrey and Schmitz (2003) point that these categories are important contributions to the international debate over on innovativeness and have gained recognition in the international sphere rapidly. Firms can therefore follow a hierarchy in up-gradations.

Many researchers have believed that technological innovation is equivalent to upgradation within a firm. In this context, Habaradas (2008) suggests that technological innovativeness is one that consists of many steps. The main steps include technological, scientific and commercial steps. Organizational and financial aspects are also counted as steps and are crucial in leading the firm to adopting innovative processes and generating enhanced products. Notably, the most important activities involved in this criterion is procurement of equipment and machinery, procurement of knowledge and all other arrangements for production delivery namely research and development, training of staff, setting up of tooling, sales and marketing.

Innovation can be described as creative application of traits held suitable in action to business development (Lyons et al., 2007). To generate a definition of innovation, it would therefore be safe to say that innovativeness is the process of generating original concepts by using methodologies that are generally used to place creative ideas in action. Roberts (1999) proves a direct correlation between innovation and profitability and it has been demonstrated that the early and fast introduction of innovation in the enterprise brings in highest possible market returns since the firm becomes the first one to introduce a product or good into the market (Hitt et al., 2001). Innovation is therefore important for SMEs to earn monopoly profit, although it is for a short term duration and is valid only till a competitor arrives in the scene. Competitive advantage is a direct outcome of innovation between competitor brands and hence, innovativeness is close to being the lifeline of a firm's strategy and therefore, an integral part of entrepreneurial orientation (Hamel, 2000). Firms can hit the jackpot if their entrepreneurial orientation is driven by a thrust to innovate at each and every step of the work. It has positive effect on not only the market performance but also on the brand's long term reputation helping firms to retain customers after the initial product breakthrough. Out of this discussion the following proposition emerges:

Proposition 1: Entrepreneurial Innovativeness is positively related to SMEs' Innovation.

*Entrepreneurial Risk-taking and SMEs' Innovation*

Entrepreneurial risk taking has many aspects to it and the charting of studies in this field helps us analyse a huge chunk of the factors that increase or decrease the level of risk in a decision and the role played by

risk taking in entrepreneurial orientation. Risk taking is ideally a combination of bold steps that a brand takes to improve its business returns. These steps include venturing into unknown markets, investments in ventures that have uncertain outcomes and borrowing large quantities from the market (Baker & Sinkula, 2009). In an alternative definition it is said that risk-taking is the readiness to commit huge amounts of resources (monetary, human) to projects which may have high probability of failure (Eggers et al., 2013).

Generally firms in the market which are built on entrepreneurial orientation are often classified or characterized by their risk taking potentials or strategies. These would include going under large debts or making large commitments of resources towards projects that secure high market returns by making the most of opportunities in the marketplace. In short, risk taking is a measure of the firm's ability to venture into the unknown and break away from the conventional path. Hughes & Morgan (2007) suggest that entrepreneurial orientations undertake risks in order to secure good performance. McGrath (2001) elaborates through his study that following conventional paths leads to high mean performance while risk taking has variable outcomes for businesses and have potential for long term profitability. Dess et al. (2011) and Tang et al. (2014) note that entrepreneurial risk taking has a positive influence on organization and business growth.

Risk taking and innovation are relatable aspects of entrepreneurial orientation as they have a positive impact on the growth of a business by virtue of improved brand awareness in the market and introduction of competition in the processes. Crucial factors in innovation that receive a boost through risk taking are product innovation and ser-

vices innovation which according to Hoonsopon and Ruenrom (2012) have a positive impact on the competitive advantage of the firm. Such firms provide superior benefits to their customers (Zhou et al., 2005) and enhance their cost advantage over competitors by offering same services and products at low costs (Hoonsopon & Ruenrom, 2012). The following proposition then emerges: Proposition 2: Entrepreneurial Risk-taking is positively related to SMEs' Innovation.

Entrepreneurial Proactiveness and
SMEs' Innovation

The level of entrepreneurial proactiveness in a firm often decides the extent to which it will survive the changes in the market. Proactiveness is often defined as the tendency of the firm to anticipate and understand and act upon potential needs that will originate in the marketplace, thus leaving behind present competition and establishing a favourable first mover benefit amongst competitors (Eggers et al., 2013). Fundamentally, proactiveness is a multi-dimensional tool that can be issued in relation to innovativeness or without it. A forward looking approach and a positive mindset help the firm use existing or old techniques to overcome an on-coming change in the market place. However, a firm has maximum chances of enjoying first mover benefits when it combines proactiveness with innovativeness and come up with a new solution that is brand new to the market place and therefore, accepted as a breakthrough. Entrepreneurial orientation rests on the capability of a firm to use its existing resources to introduce new products or services in the marketplace or redefine its investments and develop processes and products that are completely new to the marketplace. Proactiveness has the capacity to not just project the firm into the forward market

but also shape the environment in the market and give new edge to existing competition.

Constructive proactiveness therefore is a healthy supplement to competition since it propels the both. Capitalizing in emerging markets is the main requisite of the spirit of proactiveness (Tang & Hull, 2012). Proactiveness is expected to be significant in securing superior firm performance (Baker & Sinkula, 2009). It is easier for them to target premium markets and take pleasure in the first entrant advantages like skimming the market much ahead of their competitors (Tang & Hull, 2012; Lumpkin & Dess, 2001).

Conventionally, innovations are classified as radical or incremental, depending upon the degree of novelty in their applications (Nieto et al., 2013). Studies on innovation management and the amount of proactiveness show that firms which succeed in balancing their existing expertise to create improved incremental innovations by using proactiveness are more prone to experiencing market success, while they are required to simultaneously develop new technologies to bring about major breakthroughs (Chang et al., 2011). Needless to say that in order to fulfil this requisite, a firm must be able to balance internal dilemmas between innovation pathways against challenges related to demands of contradictory nature on the firm by the external market environment that creates external pressure on the firm (Jansen et al., 2006). A firm therefore is able to learn the art of striking the balance between radical and incremental innovative actions to accomplish superior sustainable performances. A firm that is unable to strike this balance will end up becoming mediocre and uncompetitive in the market (Chang et al., 2011).

Innovativeness is more akin to proactiveness since they are derived on a tandem to existing innovation protocols and are designed to meet the emerging customers or market needs (Nieto et al., 2013). The approach utilizes original designs, new markets creation, and new channels of distribution which are developed through due diligence and proactiveness. Alternatively, incremental innovations are to be derived by exploiting current capabilities alongside seeking continuous up-gradations that generate consistent and positive returns (Nieto et al., 2013). The firms expand on skills and the knowledge which exists currently. They also enhance the recognised designs and expand on the existing products and associated services, which increase the efficiency of existing distribution channels (Chang & Hughes, 2012). Hence, it is only natural that incremental innovations build on existing knowledge and organization learning frameworks and bring into focus existing skills, structures and processes (Jansen et al., 2006).

It is important to note here that product and service innovations are normally categorised by closeness to novel or existing technologies, functions and product features; customers, market segments and the market routes (Chang & Hughes, 2012). Enhancing product and service innovations therefore must be focused upon original and emerging customer needs in new, creative or rising markets through the use of novel technologies, features and functions which are significantly separate from existing processes and products. Likewise, incremental innovations of both products and services meet current market needs and those of customers with enhancements in modern technologies. This approach also meets up to customer needs through the feature sets and functions. It is important to note here that these sets and functions incrementally differentiate

them from the competitors' products (Chang & Hughes, 2012).

As noted earlier, innovations completely rely on using an inventive and proactive approach that is considered through prototyping, tests, research and discovery. Firms that are known to introduce innovations also need to substantially bring in a change in the way of operating by entry into unknown markets or by introducing new services and products using new technologies and have a critical impact in improving the total performance of the firm (Nieto et al., 2013). This type of proactive innovation is undoubtedly competence destroying for the firm using it. Innovation with all the proactiveness, in this regard, represents a high-risk strategy.

Proposition 3: Entrepreneurial Proactiveness is positively related to SMEs' Innovation.

Organizational Learning and
SMEs' Innovation

Prior research suggested that organizational learning is a number of organizational activities such as knowledge acquisition and information sharing that consciously influence on firms' innovation performance (Sakiet al., 2013). Firms' innovation can be a huge plus with the organization if there is a steady amount of organizational learning in the firm that is inspired by entrepreneurial orientation. It is important to acknowledge that organizational learning is a function of innovation and goes a long way in allowing the firm to make strategic moves in the market. Organizational learning and entrepreneurial orientation have a thin relationship mainly since organizational learning often eats away at the roots of firms' innovation and entrepreneurial ventures are more a copy of existing protocols or based on

stereotypical literature and theory (Avlonitis & Salavou, 2007). There is also reason to believe that has positive impact on innovation (Renko et al., 2009). It has been evidential that there is a general propensity of restricting lifecycles in both product and business structure in modern business setting (Hamel, 2000).

It is important to note that future profit streams in entrepreneurial firms from existing operations are uncertain and businesses need to use organizational learning to maintain a search for new opportunities. Empirical studies undertaken in this regard are supported in the view that organizational learning has a positive impact on entrepreneurial firms and performance (Zahra, 2012; Eggers et al., 2013), while organizational learning has a positive impact on the quality of performance and anecdotal evidence supporting the value of entrepreneurial orientation abounds (Tang & Hull, 2012). The intensification of pioneering entrepreneurship is a significant purpose for any new enterprise that increases its receptiveness to a global and varying market setting. Today's firms cannot survive fast change and novelty which they are compelled to experience if they fail to uphold entrepreneur's skill (Eggers et al., 2013). SMEs invariably lack the competence, market control and resources of other big firms. To a great extent, their success depends on their innovative behavior and the ability to formulate competitive strategies, implement them and respond to the market challenges posed by the changes (Mbizi et al., 2013).

Organizational learning from SMEs' point of view is pretty direct and impactful since there is less focus on innovation and more focus on expansion and enhancement of services in these businesses. From SMEs' perspective, internationalization is an entrepreneurial activity and entering new geo-

graphic markets on a large scale is to be regarded as equivalent to adopting new practices, up-gradations and implementing organizational learning (Johnson Jr. et al., 2013).

Prior research suggests that SMEs differ from larger enterprises because of difference in their leadership styles, internal operations, organisational structures, existing assets, and environment reaction (Mbizi et al., 2013). SMEs often understand and try to emphasize upon the innovation phase in order to achieve greater growth rates with exciting variances in a given period of time. The results are however, found to be with a high failure rate as the innovative phase is highly uncertain, risk taking and chaotic (Mueller et al., 2013). Organizational learning helps secure the risk factor and keeps movements under control, although the product or services launch phase is that of extreme importance in this regard. Organizational learning has an important role to play in the success of innovations. In support of this contention, Oke et al. (2007) suggest that SMEs are more engaged in creating product and service innovations basing upon important lessons in organizational learning and previous innovation drives (Saki et al., 2013). As is well known, innovations are aimed at the creation and commercialisation of improved products and services, in a way so as to meet demands of current customers and markets (Mueller et al., 2013). Such innovations have successful outcomes which are known to customers and firm builders and therefore have a low risk capability. Organizational learning is known to travel on a trajectory. Organizational strategists build upon previous experience, core competencies, organizational learning, linkages in the market and field knowledge (Kollman & Stöckmann, 2014). There is no doubt that in SMEs operating today, economies of scale and those of scope increase the firm's profit margins greatly, and directly affect operational efficiency and profitability. Existing portfolios and products allow the easy synergy of strategy with profitability. SMEs are known to hold the gift of experience over new entrepreneurs and as they apply their prior experience and bring in product line extensions from present product lines, they must keep in mind that they might greatly influence organizational learning curve. In addition, innovations are presumed to enhance the life cycle of the SME's offerings as too many resources are not required and profit gains are observed within a very short duration of time (Mueller et al., 2013). Out of this discussion the following proposition emerges:

Proposition 4: Organizational learning positively moderates the relationship between Entrepreneurial Innovativeness and SMEs' Innovation.

Proposition 5: Organizational learning positively moderates the relationship between Entrepreneurial Proactiveness and SMEs' Innovation.

Proposition 6: Organizational learning positively moderates the relationship between Entrepreneurial Risk-taking and SMEs' Innovation.

The following figure illustrates the expected relationships that form the basis of the propositions and reviews the extant literature on the construct in relation to the conceptual framework.

Discussion

Entrepreneurial orientation acts as the fundamental corporate poise of the firm which till now limit SMEs have been actually been able to adopt well. The entrepreneurial ventures that are created based on entrepreneurial orientation since it contributes very strongly to the SMEs' innovation.

This approach requires risk-taking as in the case of innovation, a highly proactive strategy to doing business in new and foreign markets and a very dynamic managerial strategy in place. From existing studies it can be argued that a great chunk of entrepreneurship is defined by the entrepreneurial orientation in the firm. It is clear that entrepreneurial orientation is a construct that essentially differs from entrepreneurship in theory but not always in practice. Entrepreneurship may generally refer to new market entries or new ventures. Entrepreneurial orientation is related to the entrepreneurial process but is focused on concerns and issues related to entrepreneurial course of action and decide the extent to which the firm will succeed. Since innovation plays an important role in entrepreneurial orientation and organizational learning in SMEs' innovations, numerous original products and services have come into the market. Entrepreneurial orientation that is common to all ventures selling these new products and services show unique marketing approaches and adjustments in business organisation. The extent to which entrepreneurs and SMEs utilize innovation determines the extent to which they will succeed or fail. The SMEs that embrace innovation raise their productivity and survival odds.

Figure1. Proposed framework for Entrepreneurial Orientation and SMEs' Innovation
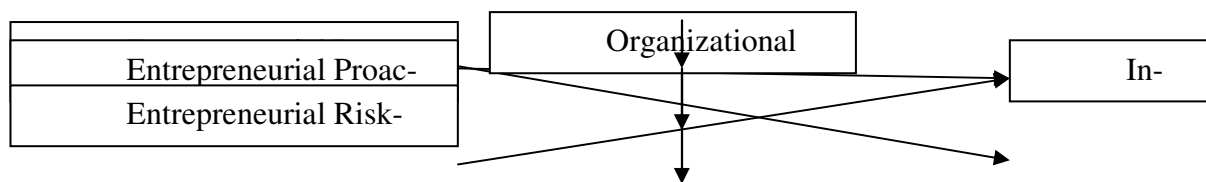


Looking at all the evidence, SMEs should be open to indulge in innovation and sustain their competitive advantage in the market to ensure their survival due to their limited resources and organizational frameworks. The innovation should be as per the market demands and changing preferences of consumers. Likewise, recruitment of appropriately skilled manpower would be an issue as the SMEs embrace innovation. This in turn might increase overhead expenditure since employees need to be paid at higher scale as per their skills. Maintain proper networks and contacts are also important along with innovation, so one should invest in innovation s per their requirements. Research and development is a vital component of business. This will also propel an organization forward and help it achieve the goals. As one may say survival of the fittest applies even in case of entrepreneurial orientation and SME innovation. This is very much applicable in a competitive market. Product differentiation and market penetration are two key elements in businesses. For this, constant research and innovation are the only way-out. SMEs take in a new perspective to business development and the process of innovative entrepreneurship only develops into a new dimension in these firms (Zahra, 2012). It has been noticed that there has been a reduction in the economies of scale in SMEs. To add to the chagrin, the role of SMEs in innovation and economic development has grown. This has resulted from an increase in higher discretionary incomes, individual tastes, and demands for variety. Firms which choose to provide old

and un-upgraded products tend to fall behind in competition. This can be attributed to the fact that they did not allow the existence of innovation within the core entrepreneurial strategy.

## Conclusion

Entrepreneurial orientation is a process that results in destruction of old business practices and stereotypes and leads to the establishment of new, innovative, risk-taking patterns of business development that secures a firm's economic behavior. The entrepreneurial strategy conducted by entre-preneurship is a combination of internal and external factors that are influencing the business at a certain point of time. External factors that affect companies and decide their individual entrepreneurship strategies include competition, technological turbulence and demand uncertainty. Due to these changing external factors, firms must constantly react to build competitive advantages and sustain their business for the future without paying much heed to old patterns of organizational learning, and rely solely on new patterns experienced in the business development of the SMEs' entrepreneurship.

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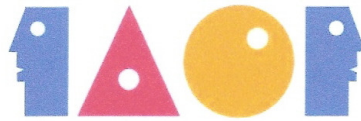
# AN EMPIRICAL EXAMNATION OF THE LINK BETWEEN CORPORATE PHILANTHROPY AND FINANCIAL PERFORMANCE UNDER THE CHINA CONTEXT

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Abstract

Many research studies have focused on the link between Corporate Social Responsibility (CSR) and Corporate Financial Performance (CFP) but few on the link between Corporate Philanthropy (CP) and CFP. The majority of the previous researches were based on the western companies. This paper examines the CP and CFP link under the China context.

Key Words: Corporate Social Responsibility (CSR), Corporate Financial Performance (CFP), Corporate Philanthropy (CP), Disclosure

## Introduction

### Corporate Philanthropy Importance In Contemporary Business

Corporate Philanthropy is discretionary Carroll (1979); Finkelstein & Hambrick (1996); Haley (1991); Waddock and Graves (1997); Mitchell et al. (1997); Seifertet al. (2003); Jones (1994); Godfrey (2005), but influenced by public demand.

Many consumers want to buy from an ethical or social responsible company. For example, Walker Information and the Council on Foundations made a survey in the year of 2000 and found that 94.9% consumers rated importantly a firm's philanthropy and expressed the willingness to do business if a company is philanthropic or social responsible. Harrison (2003) claimed that, "By 1996, 67% of adults

were claiming to consider a company's ethical stance when buying a product and 55% would not deal with a company if they disliked its ethics ".

To respond to consumers' demand, CEO's attitude or CP disclosure plays an important role. Luo and Bhattacharya (2006) found that nearly 90% of the companies already have CSR in place. The Economist Intelligence Unit (2005: 5) global survey reported that from 2000 to 2005, the CEOs rated CSR as 'central' or 'important' for decision-making from 54% to 88%. O'Hare ( 1991) reported that 70% of CEOs considered charitable themselves.

American companies donated pretax profit averaged 1.3% in 1999 (Hunt, 2000), or 1-2% (Useem, 1988), Pasquero (1991) and Buchholtz et al (1999) 1% of taxable income.

Review of Literature

*Corporate Philanthropy (CP) definition*

Wartick & Wood (1998) defined Corporate Philanthropy as "a discretionary responsibility of a firm involving choosing how it will voluntarily allocate its slack resources to charitable or social service activities that are not business related and for which there are no clear social expectations as to how the firm should perform."

Corporate Social Responsibility (CSR) and CP

In terms of CSR scopes, European Commission defined CSR as "a concept whereby companies integrate social and environmental concerns in their business operations and in their interaction with their stakeholders on a voluntary basis" (European Commission, 2001: 8). In vertical view, Carroll's (1979) outlines four-

level framework for CSR which are economic, legal, ethical, and discretionary responsibilities. CP is a discretionary responsibility weighted as the lowest importance of CSR. Therefore, CP is viewed as a construct of CSR.

*CSR and CSP relationship*

In the previous literatures, researchers often used different concepts like CSR and CSP. Actually, CSR and CSP are exchangeable concepts. CSP can be defined as 'a business organization's configuration of principles of social responsibility, processes of social responsiveness, and policies, programs, and observable outcomes as they relate to the firm's societal relationships' (Ruf, Muralidhar, and Paul, 1998).

CSR is not measurable. Instead, corporate social performance, can be transformed into a measurable variable that can be compared with financial variables (Van Beurden & Gössling, 2008), Artiach, Nelson and Walker defined CSP to measure the extent to which a firm embraces corporate social responsibility in its operations, and ultimately the impact it has on society.

As CP is a construct of CSR and CSP, the measureable property of CP makes possible for an empirical study to examine with CFP which is always measureable.

*The Motives to CP Dedication*

Husted and Salazar (2006) distinguish 3 types of CP as altruistic, egoistic and strategic. But pure egoistic and strategic motives are quite close to each other. It means while doing good to others may be doing good for itself. Campbell et al. (2002) concludes the possibilities of motives of CP are the altruistic, the political, the managerial utility and the strategic.

They found the third possibility, the managerial utility, which benefits not others, not the company but the decision maker himself. Therefore, we conclude the motives of CP are altruism, strategy and managerial utility.

*Strategic CP types*

Thorne, Ferrell, and Ferrell (2003) described strategic philanthropy as "synergistic use of a firm's resources to achieve both organizational and social benefits". Similarly, Hemphill (2004) suggests the dual purposes of strategic philanthropy as charitable causes and benefits for the corporation.

*Differentiation Strategy*

A large number of articles consider CSR as differentiation strategy to attract ethically oriented consumers. Arora and Gangopadhyay (1995) propose a standard model of vertical product differentiation to capture consumer heterogeneity in willingness-to-pay for environmental attributes. CSP play an important role in the implementation of differentiation strategies (Bhattacharya and Sen, 2004).

*Stakeholder Management Strategy*

Philanthropy can be assumed to be concerned in part with stakeholder management and be associated with company strategy (Saiia et al 2003; Saiia 2001). Those companies most likely to benefit from the management of stakeholder claim that in this way it would be expected to make the most use of philanthropy for such purposes.

If companies integrate philanthropy into their strategic goals, they will build opportunities to create value for their businesses while addressing important social needs. Hess, Rogovsky and Dunfee (2002) argue that philanthropy is truly

strategic for companies when they are able to use their businesses' core resources to create social benefits and enhance their competitive advantages. Communication Strategy: Signaling and CP Disclosure

Stakeholder management involves first to convey to the stakeholders the message that the company is a 'nice' company or a good corporate citizen. The message conveying channels include television, radio, magazine, newspapers, news, website, report, company activities, etc. to the stakeholders like customers, employees, investors, government, banks, etc. CP going thru the signaling channels will create company image, brand recognition, visibility and reputation which will help boosting sales and the bottom line. The better CFP will attract investors and good employees.

Muller and Kraussl (2011) described such path as donations generate the 'reputational capital' (Godfrey, 2005 ; Nan and Heo 2007; Polonsky and Speed 2001) that will enhance firm value, by strengthening relationships with key stakeholders (Hillman and Keim, 2001; Jones, 1995) It will also help product evaluations, purchase intentions, and the firm's market value (Berens et al. 2005; Luo and Bhattacharya 2006; Pirsch et al. 2007). Dowling (1986) found that in making investment decisions, career decisions, and product choices, the stakeholders rely on company reputation. There is associated corporate image and social recognition in the community generated by philanthropy that can also result in positive feelings and improvements in the attitudes of consumers toward the firm (D'Astous and Bitz 1995; Brown and Dacin 1997; Sen and Bhattacharya 2001).

*Competition Strategy*

From the theory of Resource Based View, a firm's competition is based on the 'valuable, rare, inimitable, and non-substitutable' assets. So McWilliams, Siegel, and Wright (2006) propose the CSR is such a type of resource. Strategic philanthropy decisions relate the effects of philanthropy to the firm's competitive position (Smith, 1994). Buchholtz et al. (1999) state that "Philanthropy has become one of the strategic tools a manager has for improving profits, instilling customer loyalty, enhancing employee morale, and building community relations." Strategy Objectives: profit and value maximization

Company has two objectives, for short term the profit, for long term the market value or shareholder value maximization. Philanthropy is used as a part of the overall strategy and the strategic positioning of a company (Campbell and Slack, 2008). Corporate philanthropy may enhance sales, employee morale and productivity, and eventually the shareholder value. (Navarro, 1988; Greening and Turban, 2000). Clotfelter (1985) was one of the earliest researchers who proposed the document of profit maximization of CP. Smith (1994) propose that it is possible for corporate philanthropy to help the bottom line. McWilliams and Siegel Makadok et al. (2001) point out that for profit-maximizing firms, CSR can be utilized for purposes of creating strategic advantages. Jensen (2002) argues that CSR is a vehicle for corporations to achieve value maximization.

*The deciding factors of CP level*
*Slack Resource Theory*

There is an assumption that corporate philanthropy depends on the availability of organizational slack (Seifert, Morris and Bartkus, 2003; Buchholtz et al., 1999,; Waddock and Graves, 1997). McGuire et al. (1988) maintained that

corporate philanthropic contributions "may be especially sensitive to the existence of slack resources and that less profitable firms may be less willing to undertake socially responsible actions. The slack resource view of social responsibility, prominent in the works of McGuire et al. (1988), Ulmann (1985), and Roberts (1992), argues that firms engage in socially responsible behavior such as corporate giving when slack resources permit. Hess et al. (2002) has other direction of causality. He suggests that philanthropy generates profitability as firms engage in philanthropy will enhance customer relations and build a positive corporate image. Industry effect

Firms from different industries have to deal with different external context, such as distinct environmental, social and financial concerns, and different stakeholders' needs. (Chand, 2006). Firms in industries that depend more on consumer sales (Burt, 1983), public perceptions (Clotfelter, 1985), more public contact (Fry, Keim, and Meiners, 1982), or more labor intensive (Nelson, 1970; Fry, Keim, and Meiners, 1982; Navarro, 1988) tend to give more.

In addition, high or low growth, high or low innovation may affect CSR/CP. Russo and Fouts (1997) found significant differences in the high and low growth industries. Hull and Rothenberg (2008) also show that CSR most strongly affects the performance in low-innovation firms and in industries with little differentiation.

*Company size*

According to Huang (2010), Brammer and Millington (2008) and Brik et al (2011), another factor that could influence the relationship between CSP and financial performance is firm size. Large firms have more resources to invest, which allows them to benefit from economies of

scale, scope and learning, and thereby achieve better financial performance than smaller companies.

### Consumer sensitivity

Since individual consumers and industrial buyers are different in terms of their purchase decision-making process, advertising plays a much more important role in consumer goods marketing than in industrial purchasing (Corey, 1991). Useem (1988) argues that firms from industries with high levels of public contact, such as retailers, insurance companies, or banks, typically give more than firms from low-contact industries, such as mining or primary metals. Fisman et al. (2006) develop a model which predicts that in the industries where a firm's image is important to customers will spend more in CP.

### Market competition level

In imperfect market, in order to compete, firms often over-comply with existing laws by developing CSR activities (Reinhardt and Stavins, 2010). Campbell (2007) argue that in a monopoly structure, firms have no need in CSR because it does not improve sales or profits. Fernández-Kranz and Santaló (2010) empirically studying the correlation between competition and CSP conclude that firms in more competitive markets invest more in CSR.

### CFP Measurement

Two most used to measure CFP are accounting based and market based measures. Accounting based measure is to measure the short-term profitability, like Return On Asset (ROA), (Margolis et al, 2007; Inoue and Lee, 2011; Choi et al, 2010; Lee et al, 2009;Makni et al, 2009;Van der Laan et al, 2008; Simpson and Kohres, 2002; Berman, Wicks, Kotha,

and Jones, 1999; Tsoutsoura, 2004). Schreck (2011), Shiu and Yang (2012) examine the correlation between CSR and firm performance using the market-based performance measure, i.e., Tobin's Q which represents the investors' insight, brightness, or doubt (Demsetz and Villalonga, 2001).

The correlation between CP and CFP Margolis et al (2007) and Orlitzky et al (2003) both made a meta-analysis and concluded that the relationship between CP/CSP/CSR and CFP are variable and mixed. There are several associations concluded such as positive, negative, and no relationship.

### Positive association

Galaskiewicz (1997) found a strong positive correlation between CP and CFP. Deckop, Merriman, and Gupta (2006) conduct an empirical research and concluded that CSP is positively related to CFP. Choi et al (2010), Inoue and Lee (2011) and Ioannou and Serafeim (2012) argued that better CFP companies have more resource to invest in CSP.

Negative correlation

Becchetti et al., (2005), Lee (2006), Lee et al (2009) and Makni et al (2009) argue that investment in CSP often generates high cost, therefore, CSP and CFP are negatively correlated.
Insignificant, inconsistent or no relationship

While Griffin and Mahon (1997) find no correlation. Seifert, Morris and Bartkus (2003) conduct a match-pair study of generous and less generous companies within the same industry and find no significant relationship between corporate philanthropy and financial performance. Rowley and Berman (2000) suggested that CSP and CFP cannot have a consistent link. The causality between CFP and CP

Surroca et al (2010) proposed " Three views on the direction of causality between CRP and CFP have been tested empirically: 1) the view that CRP positively influences CFP, 2) the view that CFP positively influences CRP, and 3) the view defining a recursive relationship between both constructs."

➢ *CFP influences CP*

Based on instrumental theory, Donaldson and Preston, (1995), Jones (1995) suggest that CRP influences CFP. Margolis et al.'s research (2007) found that companies with solid CFP tend to have high CP in the future. The slack resource can promote charitable donation (Seifert, et al., 2003). McGuire et al. (1988), and Scholtens (2008) argue that a firm's prior CFP profitability influences CSR. Campbell (2007) on the other hand, argued that weak CFP may hinder a company from acting socially responsibly.

➢ *CP influences CFP*

CP improves brand recognition and customer purchase, thus help the bottom line. Such causal relationship has been observed by authors, such as Callan and Thomas (2009), Brik et al (2011), Chen and Wang (2011), Choi et al (2010 ) and Hull and Rothenberg (2008).
CP and CFP influence each other

Waddock and Graves (1997) found that CSP for CFP is both an independent and dependent variable. She called such causality 'virtuous circle.'. Both are predictor and result to each other. So did McGuire, Sundgren, and Schneeweis (1988) support such bi-directional causal relationship.

Research Design

*Hypotheses*

Based on the above theories, we propose the following hypotheses.

H1: The CP disclosed companies have higher CFP than those who did not.

H2: the stock listed companies with higher CP level have higher CFP.

H2A: the stock listed companies with higher CP level have higher CFP in the same financial period.

H2B: the stock listed companies with higher CP level have higher CFP in the lagged financial periods.

H3: The stock listed companies with higher CFP level have higher CP.

H3A: The stock listed companies with higher CFP level have higher CP in the current financial period.

H3B: The stock listed companies with higher CFP level have higher CP in the lagged financial period.

Data resources

The samples were selected from 304 China stock listed companies in Shen Zhen and Shanghai from the year of 2006 to 2012. The financial reports of each individual company were from Taiwan Economic Journal (TEJ, www. tej.com.tw). The CP data was sourced from the CSR reports released by each individual company in Ju Chao Information Network, www.cninfo.com.cn. The acquired CP data was processed by Winsorize 1%. The selected industries were Food and Drink, Manufacturing, Electronic, Information Technology, Machinery, and Mining. 1928 companies were acquired from the year 2006 to 2012. Medium and small sized companies were removed. In addition, the data incomplete companies were removed as well. Finally, the selected

were 279,288,260,264,285,287,265 companies in each year. If a selected company's CP is 0, it is invalid in our index INDON, therefore it must be deleted. Eventually, 1353 samples were obtained totally.

*Variables*

Dependent variables.

ROA, Return On Asset, is the ratio of net income divided by total asset. It reflects the return rate on asset deployed in the business.

Tobin's Q, is the ratio of market value divided by the total asset in the end of the financial period. It reflects the market performance.

Independent variables.

The measurement of corporate philanthropy reporting and corporate philanthropy level . The measurement of the corporate philanthropy reporting is set at CSR=1 if corporate philanthropy reporting reveals corporate social responsibility, otherwise is 0.

The level of the corporate philanthropy is the index of the corporate giving. In order to unify the index, we take the natural log the corporate giving number. It is supposed that the higher level of the corporate philanthropy, the higher impact of its impact on corporate financial performance, and vice versa.

Control variables.

As the corporate philanthropy level and the corporate philanthropy reporting were selected as Independent Variables, when selecting Control Variables, we select the factors which have impact on these Independent Variables. Based on the previous literature, we selected the ownership type,

the share of the government, the asset/liability rate, the company size, industry concentration level, industry attributes, and annual Control Variables.

Model.

Based on the previous hypotheses and the procedure of the variables selection, we build the following models:

$$CFP_{it} = \alpha_0 + \alpha_1 CSR_{it} + \alpha_2 LNDON_{it} + \alpha_3 SOE_{it} + \alpha_4 SO_{it}$$
$$+ \alpha_5 LEV_{it} + \alpha_6 LNSIZE_{it} + \alpha_7 INDCON_{it} + \alpha_8 YEAR$$
$$+ \alpha_9 IND + \varepsilon \qquad (1)$$

$$CFP_{it} = \beta_0 + \beta_1 CSR_{it} + \beta_2 LNDON_{it} + \beta_3 LNDON_{it-1}$$
$$+ \beta_4 LNDON_{it-2} + \beta_5 LNDON_{it-3} + \beta_6 SOE_{it}$$
$$+ \beta_7 SO_{it} + \beta_8 LEV_{it} + \beta_9 LNSIZE_{it} + \beta_{10} INDCON_{it}$$
$$+ \beta_{11} YEAR + \beta_{12} IND + \theta \qquad (2)$$

$$LNDON_{it} = \delta_0 + \delta_1 CFP_{it} + \delta_2 CFP_{it-1} + \delta_3 CFP_{it-2} + \delta_4 CFP_{it-3}$$
$$+ \delta_5 SOE_{it} + \delta_6 SO_{it} + \delta_7 LEV_{it} + \delta_8 LNSIZE_{it}$$
$$+ \delta_9 INDCON_{it} + \delta_{10} YEAR + \delta_{11} IND + \theta \qquad (3)$$

CFPit stands for the current period's financial performance while CFPit-1, CFPit-2, CFPit-3 for the lagged years, first second and third. We use the ROA and TQ to measure the CFP. CSR represents the behavior of the corporate philanthropy reporting. LNDONit, LNDONit-1, LNDONit-2, LNDONit-3 represent the current year's giving and the following years' corporate giving, year1, year 2 and year3. SOE, SO, LEV, LNSIZE, INDCON, YEAR, IND represent respectively ownership type, government shares, asset/liability ratio, company size, industry concentration level, year as Control Variables, and industry attributes. The Model 1 examines the H1 and H2A. The Model 2 examines H2B. Model 3 examines H3.

Results

*Description*

This paper describes the Independent Variable, Dependent Variable, and Control Variable and undertakes the statistic of the maximum value the min- imum value, the average value, the median, and the standard variance. (The result is shown in Table 1).

Table 1.  The description statistic analysis of the variables

| Variables | Min | Max | Mean | Median | Std.D |
|-----------|------|--------|------|--------|-------|
| ROA | -0.30 | 0.50 | 0.05 | 0.04 | 0.05 |
| TQ | 0.00 | 129.63 | 2.14 | 1.38 | 4.19 |
| CSR | 0.00 | 1.00 | 0.30 | 0.00 | 0.46 |
| LNDON | -5.52 | 11.05 | 3.28 | 3.40 | 2.28 |
| SOE | 0.00 | 1.00 | 0.70 | 1.00 | 0.46 |
| SO | 0.00 | 0.81 | 0.17 | 0.00 | 0.22 |
| LEV | 0.01 | 1.94 | 0.51 | 0.51 | 0.19 |
| LNSIZE | 2.52 | 2.97 | 2.70 | 2.69 | 0.07 |
| INDCON | 0.00 | 1.00 | 0.07 | 0.03 | 0.10 |

From the Table 1, it shows that the samples correspond to the normal distribution. All the index's standard variance are ranged from 0.01 to 4.19. The distribution is quite normal. As for ROA, the minimum value s -0.03, while the maximum is 0.50, it shows some companies offer corporate giving even their bottom line is negative. It is saying that companies are willing to fulfill the CSR disregard the financial performance. TQ's standard variance is bigger than the ROA.

It is supposed that the company value fluctuate drastically during this period. The CSR value is 0.3 which indicates that most of the companies did not do their corporate philanthropy reporting. Such report is not implemented as a long term company action in the market. LNDON's distribution shows that corporate giving has big difference among companies. It is supposed to be caused by the company size and previous year's earnings.

*Correlations*

We tested the correlation among the Independent Variable, the Control variable and the Dependent Variable. The test was undertaken within the ideal environment that companies reveal their corporate philanthropy reporting and their corporate giving level. The impact on the financial performance by corporate philanthropy reporting and level has the statistic correlation as Table 2.

In Table 2, the coefficient is Pearson's correlation coefficient. CSR and LNDON's correlation coefficient with ROA is positive, while with TQ is apparently negative. This indicates that, ceteris paribus, without the impact from other Control Variables, corporate philanthropy reporting and corporate giving number is positive correlated to financial performance, but will hurt the company 's market value. In order to test corporate philanthropy's impact on financial performance, we undertake a multi factor regression.

Table 2. The Statistic Analysis of Variables Correlationship

| Variables | ROA | TQ | CSR | LNDON | SOE | SO | LEV | LN SIZE | IND CON |
|---|---|---|---|---|---|---|---|---|---|
| ROA | 1 | | | | | | | | |
| TQ | 0.15** | 1 | | | | | | | |
| CSR | 0.14** | -0.04 | 1 | | | | | | |
| LNDON | 0.19** | -0.02 | 0.25** | 1 | | | | | |
| SOE | -0.06** | -0.07** | 0.05* | -0.04 | 1 | | | | |
| SO | 0.05* | -0.00 | -0.00 | -0.03 | 0.37** | 1 | | | |
| LEV | -0.20** | -0.14** | -0.09** | 0.09** | -0.00 | 0.03 | 1 | | |
| LNSIZE | 0.19** | -0.18** | 0.37** | 0.48** | 0.10** | -0.01 | 0.25** | 1 | |
| INDCON | 0.05* | 0.03 | 0.03 | 0.10** | 0.04 | 0.09** | -0.04 | 0.05* | 1 |

Note: The *、 **、 *** represent respectively 10%、 5%、 1% level of significance (2-tailed-test).

*Multiple Regression*

After finishing all the variables' descriptive statistic and correlation analysis, in order to test the previous hypothesis, we add the Control Variables and undertake the multiple regression to test the impact of the current year's corporate philanthropy's on current year's financial performance. Based on previous structure's econometric model, we use the ROA and TQ to act as the Independent Variable respectively and incorporate current year's corporate philanthropy reporting and level, plus other Control Variables into the regression. (The result is shown in Table 3).

First of all, we test the impact of the current year's corporate philanthropy reporting on the same year's financial performance. From Table 3, we notice that using the ROA as the Independent Variable, the current year's CSR reporting's correlation is positive and has a significant level. CSR alone in the Model has a correlation of 0.05, with corresponding T value 1.67.It passes the 10% significant level test. When CSR and LNDON enter the Model simultaneously, the CSR correlation is 0.05 and the T value is 2.57. They pass as well the 10% significant

level test. But when we use the TQ as Independent Variable. although the CSR has a positive correlation, but it still passes the significant test. It says that company's reporting on corporate philanthropy has a significant impact on financial performance. On the other hand, such reporting was not delivered to the capital market, therefore, it does not help the company market value.

Secondly, we test the impact of the current year's corporate philanthropy on the same year's financial performance. No matter we use the ROA or TQ as the Independent Variable, the current's corporate giving is positively correlated and passes the significant test: If the ROA is Independent Variable, LNDON enters the Model alone, the correlation is 0.07 ( T Value 2.17). It passes the 5% significant level test. If CSR and LNDON both enter the Model, the LNDON correlation is 0.06 (T Value 2.06); With TQ as Independent Variable, the LNDON enters the Model by itself, the correlation is 0.06 (T Value 1.99). It passes the 5% significant level test. And when both CSR and LNDON enter the model, the LNDON correlation is 0.06 (T Value 1.965). The correlation maintains consistent twice in the regression.

Table 3. Corporate Current Year's Philanthropy's Impact on
Financial Performance Regression Result

| Variables | (1) | | (2) | | (3) | |
|---|---|---|---|---|---|---|
| | ROA | TQ | ROA | TQ | ROA | TQ |
| CSR | 0.04* (1.67) | 0.02 (0.83) | | | 0.05* (1.69) | 0.01 (0.31) |
| LNDON | | | 0.07** (2.17) | 0.06** (1.99) | 0.06** (2.06) | 0.06** (1.97) |
| SOE | -0.12*** (-5.05) | -0.05** (-2.12) | -0.11*** (-4.15) | -0.08*** (-2.59) | -0.11*** (-4.21) | -0.08*** (-2.60) |
| SO | 0.1*** (3.88) | 0.02 (0.90) | 0.09*** (2.83) | 0.04 (1.23) | 0.09*** (2.92) | 0.04 (1.25) |
| LEV | -0.25*** (-11.04) | -0.08*** (-3.32) | -0.32*** (-11.94) | -0.08*** (-2.78) | -0.31*** (-11.08) | -0.08*** (-2.60) |
| LNSIZE | 0.24*** (9.49) | -0.15*** (-5.61) | 0.28*** (8.37) | -0.16*** (-4.53) | 0.26*** (7.14) | -0.16*** (-4.32) |
| INDCON | 0.03 (0.93) | 0.04 (1.10) | 0.06* (1.77) | -0.01 (-0.21) | 0.06* (1.81) | -0.010 (-0.20) |
| Constant | -0.41*** (-8.06) | 25.92*** (6.38) | -0.45*** (-7.16) | 29.13*** (5.20) | -0.41*** (-6.08) | 29.79*** (4.96) |
| Adjusted R2 | 0.17 | 0.10 | 0.20 | 0.09 | 0.21 | 0.09 |
| F | 23.45*** | 13.38*** | 21.36*** | 9.15*** | 20.36*** | 8.64*** |

Note: in the parenthesis I the T value. *、 **、 *** represent respectively 10%、 5%、 1% level of significance (2-tailed-test). The year and the industry were controlled.

Taking the whole samples' regression result, ROA as Independent Variable is superior in goodness of fit to TQ. However, TQ as Independent Variable is stable in goodness of fit. TQ as the only Independent Variable, the CSR correlation is not significant meanwhile the whole Model is significant. It shows that a company with the current year's corporate philanthropy reporting and corporate giving has significant correlation with the same year's financial performance. This passes the Hypothesis H2A, i.e., the higher the stock listed company's corporate giving in the current year, the better the financial performance in the same year.

Thirdly, we test the impact of the current year's corporate philanthropy reporting and corporate on the lagged years' financial performance, i.e., the first, second and third year after the current year with multiple regression. (The result is shown in Table 4).

Shown in the Table 4, the ROA or TQ as Dependent Variable, corporate philanthropy reporting has positive correlation on financial performance, but not significant. As for the lagged years, the first, second and third years, using different index as Independent Variable, only the lagged second year has significant negative correlation of -0.09 (T Value -1.70).It passes the 10% significant level test.

In the lagged Model, the current year's LNDON has positive correlation on the same year's financial performance, in addition, the correlation is bigger than the lagged years. These results show that the current year's corporate philanthropy reporting and corporate giving are positively correlated to the same year's financial performance, but did not correlate the lagged 3 years' financial performance. Therefore the Hypotheses H2B does not pass. (The result is shown in Table 5).

In Table 5, this paper undertakes a 4 groups, 8 times multi regression test. In the first group, we examined the correlation of the current year's CFP and CP. The result showed that the ROA and TQ were 0.05 and 0.05 respectively（T value were 2.17 and 1.99）. The positive significant level showed that the CP level was influenced by the current year's CFP and market value. The higher the current year's CFP and market value, the higher the company can donate in CP. H3A therefore is proved. In the groups 2 to 4, we can see the clear results that the current year's Q and the lagged years' CP were insignificantly negative correlated. It said that the market value does not provide sufficiently the company future CP level. The current year's ROA coefficients were 0.10、0.09 and 0.10 respectivelyT value were 4.17, 3.44 and 3.46）. All were above 1% level. All were positively correlated with the lagged years' CP. It showed that company's current year's CP level was caused by previous year's profit. More profit can lead to more corporate giving in the coming years. H3B is proved. Therefore the H3 is proved.

*Robust Test*

To test the Robust of the design, this paper uses the corporate giving rate (DONRATE to replace the previous Model's LNDON to measure the corporate philanthropy's variables. The corporate income, LNOR, is used to replace ROA and TQ to show the corporate financial performance. The Model of the Robust Test is shown at below with its test results in Model 4 and Table 6.

$$LNOR_{it} = \eta_0 + \eta_1 CSR_{it} + \eta_2 DONRATE_{it} + \eta_3 DONRATE_{it-1}$$
$$+ \eta_4 DONRATE_{it-2} + \eta_5 DONRATE_{it-3} + \eta_6 SOE_{it}$$
$$+ \eta_7 SO_{it} + \eta_8 LEV_{it} + \eta_9 LNDCON_{it} + \eta_{10} YEAR$$
$$+ \eta_{11} IND + \mu \qquad (4)$$

In Table 6, Using DONRATE and LNOR to replace the current and lagged years' corporate giving level and financial performance in Model 4 for Model, the CSR shows positive and stable correlation. They both pass the 1% significant level test. DONRATEt is shown with DONRATEit-1,DONRATEit-2 and DONRATEit-3 respectively and has positive correlation in the current and lagged years in the Model, with the correlation respectively 0.05（T Value 2.35）、0.04（T Value 1.95）、0.04（T Value 1.69）and 0.07（T Value 2.65）. These results show that the corporate giving level has not only positive correlation in the current year, but also the lagged years. with the financial performance. However, these correlations have a descending trend. Therefore the Robust Test passes the H2B Hypotheses in the regression. As a result of the conclusion of the hypotheses, the H1 passed, while the 2 passed under certain conditions.

Summary and Conclusion

Owing to the financial reports of the stock market listed company in China do not have a long history. Many researches cannot be done. In the future, more data can be collected for more researches.

The correlation of sales and CP is a good subject for future research. Ethical consumerism is becoming more important. Consumers tend to more and more make the purchase decisions based on

Table 4. The Impact of The Current Year's Corporate Philanthropy on The Lagged Years, Multiple Regression

| Variables | (1) | | (2) | | (3) | |
|-----------|-----|-----|-----|-----|-----|-----|
| | ROA | TQ | ROA | TQ | ROA | TQ |
| CSR | 0.04 (1.13) | 0.02 (0.62) | 0.03 (0.81) | 0.03 (0.83) | 0.03 (0.70) | 0.05 (1.31) |
| LNDONit | 0.06 (1.5) | 0.12*** (3.07) | 0.09** (1.98) | 0.11*** (2.73) | 0.12** (2.34) | 0.08* (1.79) |
| LNDONit-1 | 0.05 (1.30) | 0.03 (0.72) | 0.05 (1.07) | 0.01 (0.16) | 0.03 (0.52) | 0.06 (1.25) |
| LNDONt-2 | | | -0.06 (-1.39) | -0.05 (-1.19) | -0.09* (-1.70) | -0.04 (-0.83) |
| LNDONit-3 | | | | | 0.06 (1.02) | 0.01 (0.20) |
| SOE | -0.14*** (-4.36) | -0.05 (-1.63) | -0.16*** (-4.58) | -0.17*** (-5.03) | -0.2*** (-4.82) | -0.18*** (-5.02) |
| SO | 0.08** (2.26) | 0.07** (1.96) | 0.058 (1.57) | 0.04 (1.15) | 0.08* (1.90) | 0.05 (1.45) |
| LEV | -0.34*** (-10.29) | -0.14*** (-4.20) | -0.35*** (-9.04) | -0.16*** (-4.29) | -0.34*** (-7.24) | -0.27*** (-6.78) |
| LNSIZE | 0.262*** (5.94) | -0.25*** (-5.63) | 0.28*** (5.42) | -0.27*** (-5.48) | 0.24*** (3.65) | -0.335*** (-5.86) |
| INDCON | 0 (-0.02) | 0 (-0.02) | 0.04 (0.82) | 0.08** (1.87) | -0.02 (-0.42) | 0.07 (1.48) |
| Constant | -0.41*** (-5.02) | 26.88*** (6.53) | -0.44*** (-4.62) | 18.11*** (6.68) | -0.34*** (-2.94) | 17.93*** (7.35) |
| Adjusted R2 | 0.21 | 0.21 | 0.23 | 0.32 | 0.22 | 0.43 |
| F | 15.94*** | 15.90*** | 13.17*** | 20.37*** | 9.19*** | 23.38*** |

Note: the value in the parentheses is T Value. *、 **、 *** represent respectively 10%、5%、1% significance level, two-tailed-tests. The year and the industry were controlled.

their feeling of the company. Ethical consumerism initiative and movement will grow and impact on company marketing. To analyze the CP and CFP correlation with a single industry, especially the high consumer sensitivity, is another subject that deserves exploring. We suppose that the companies with different level of consumer sensitivity will act differently in CP level. State owned companies play very

important role in China economy. Their CP behaviors also deserve exploring. This paper examines the single construct of CSR, the CP, and under the China context. The results show that CP and CFP have mutually positive link. In terms of causality, they are mutually predictor and result of each other, e.g., CFP leads to CP and vice versa. This result proves that the virtuous circle of CP and CFP not only.

Table 5. Multiple Regression on The Correlation Between CFP and CP by Years

| Variables | (1) | | (2) | | (3) | | (4) | |
|---|---|---|---|---|---|---|---|---|
| | LNDON | LNDON | LNDON | LNDON | LNDON | LNDON | LNDON | LNDON |
| ROAt | 0.05** (2.17) | | 0.05* (1.76) | | 0.04 (1.46) | | 0.06* (1.67) | |
| ROAt-1 | | | 0.10*** (4.17) | | 0.10*** (3.86) | | 0.110** (3.71) | |
| ROAt-2 | | | | | 0.09*** (3.44) | | 0.11*** (3.56) | |
| ROAt-3 | | | | | | | 0.10*** (3.46) | |
| TQt | | 0.05** (1.99) | | 0.04* (1.74) | | 0.03 (1.21) | | 0.03 (1.02) |
| TQt-1 | | | | -0.02 (-1.02) | | -0.03 (-1.13) | | -0.03 (-1.05) |
| TQt-2 | | | | | | -0.01 (-0.53) | | -0.00 (-0.14) |
| TQt-3 | | | | | | | | -0.03 (-0.87) |
| SOE | -0.09*** (-3.66) | -0.09*** (-3.78) | -0.09*** (-3.30) | -0.09*** (-3.49) | -0.08*** (-2.91) | -0.09*** (-3.18) | -0.07** (-2.41) | -0.09*** (-2.81) |
| SO | -0.02 (-0.74) | -0.02 (-0.64) | -0.01 (-0.24) | -0.00 (-0.14) | -0.01 (-0.39) | 0.00 (-0.14) | 0.02 (0.74) | 0.03 (0.76) |
| LEV | -0.07*** (-2.74) | -0.08*** (-3.43) | -0.08*** (-3.06) | -0.10*** (-3.78) | -0.08*** (-2.60) | -0.10*** (-3.51) | -0.06* (-1.68) | -0.09*** (-2.61) |
| LNSIZE | 0.55*** (20.00) | 0.57*** (21.62) | 0.551** (19.00) | 0.59*** (21.05) | 0.53*** (16.68) | 0.58*** (19.00) | 0.50*** (13.79) | 0.57*** (16.41) |
| INDCON | -0.00 (-0.09) | 0.00 (0.02) | 0.02 (0.59) | 0.02 (0.60) | 0.03 (0.75) | 0.03 (0.71) | 0.01 (0.34) | 0.02 (0.35) |
| Constant | -43.22*** -18.97 | -45.03*** -20.22 | -43.15*** -18.15 | -45.62*** -19.71 | -40.56*** -16.03 | -43.75*** -17.77 | -38.89 -13.41 | -44.09 -15.45 |
| Adj. R2 | 0.33 | 0.33 | 0.35 | 0.34 | 0.35 | 0.33 | 0.35 | 0.31 |
| F | 40.97*** | 40.90*** | 38.70*** | 37.13*** | 32.49*** | 29.98*** | 25.61 | 21.73 |

Note: the value in the parentheses is T Value. *、**、*** represent respectively
10%、5%、1% significance level, two-tailed-tests. The year and the industry were con-
trolled.

exists in western countries, but also in China. On the other hand, the mutual influence exists not only in the current period but also in the lagged years. This research also finds that the disclosure of CP helps the CFP.

Table 6.  The Results of The Robust Test

| Variables | (1) LNOR | (2) LNOR | (3) LNOR | (4) LNOR |
|---|---|---|---|---|
| CSR | 0.38*** (19.68) | 0.38*** (18.56) | 0.38*** (17.01) | 0.38*** (15.26) |
| DONRATEt | 0.05** (2.35) | 0.03 (1.35) | 0.02 (0.71) | 0.03 (1.31) |
| DONRATEit-1 | | 0.04** (1.95) | 0.03 (1.17) | 0.01 (0.55) |
| DONRATEit-2 | | | 0.04* (1.69) | 0.01 (0.51) |
| DONRATEit-3 | | | | 0.07*** (2.65) |
| SOE | 0.06*** (2.83) | 0.06*** (2.59) | 0.05** (2.08) | 0.05** (1.96) |
| SO | 0.03 (1.41) | 0.04 (1.48) | 0.04 (1.63) | 0.07* (2.47) |
| LEV | 0.30*** (15.20) | 0.31*** (15.01) | 0.35*** (15.05) | 0.35*** (13.78) |
| INDCON | 0.08*** (2.61) | 0.09*** (3.07) | 0.09** (2.56) | 0.07* (1.85) |
| Constant | 2.61 328.75 | 2.61*** 308.35 | 2.59*** 277.18 | 2.59*** 251.13 |
| Adjusted R2 | 0.31 | 0.32 | 0.33 | 0.33 |
| F | 51.91 | 45.68*** | 40.03*** | 32.17*** |

Note: the value in the parentheses is T Value. *、**、*** represent respectively 10%、5%、1% significance level, two-tailed-tests.

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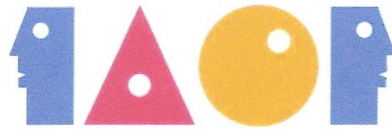
# IDENTIFYING NICHE MARKETS FOR TAIWAN'S INBOUND TOURISM

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Abstract

Tourism in Taiwan has undergone significant changes since 2008. The most notable change was the origin and number of inbound tourists. This article attempts analyze how tourists of various countries have contributed to Taiwan's economy. By constructing economic value portfolio matrices and using the Input-Out table to estimate the effects of inbound tourism on Taiwan. The results show that shopping still comprises the main activity for Chinese tourists in Taiwan; they contribute very limited yields in other aspects. Japanese tourists create significant yields despite their short stay, and present potential that has yet to be developed. Singaporean tourists also present much potential, but attracting them requires a focus other than shopping. As for Korean, Hong Kong and Macao tourists, increasing their willingness to spend should be the primary focus going forward.

Key words: Inbound Tourism, Economic Value Portfolio Matrix, Input-Output table, Favorable Market, Priority Market

## Introduction

Many empirical studies have identified international tourism as a major source of foreign exchange earnings, one that contributes significantly to employment, foreign direct investment (FDI), and gross domestic products (GDP) (Archer, 1995 ; Aktar, Sadekin, & Saha, 2014; West, 1993). Promoting inbound tourism therefore not only contributes to the growth of one industry sector, but has the potential to bring other tourism-related industries to life (Holzner, 2011; Tang and Jang, 2009) and even lead a nation's economic development. This is why a growing number of countries have escalated their attention towards inbound tourism to the extent that makes it a strategic industry.

In the last 10 years, focuses on tourism have shifted from growth of inbound tourists in shear numbers to the yields they bring to the destination countries (Dwyer and Forsyth, 2008). Countries including U.S., UK, Germany, France, Spain, Austria, Australia, and New Zealand have all

shifted their tourism focus towards achieving high tourism yield, meaning that they no longer emphasized on tourist count alone, but paid more attention on increasing yields from tourism. (Aktar, Sadekin, & Saha, 2014; Deskins, & Seevers, 2011; Moriarty & Simmons, 2007).

In 1998, Canadian Tourism Commission (CTC) commissioned Price - Waterhouse - Cooper (PWC) in a study on Canada's inbound tourism. The study discovered that, after eliminating U.S. tourists, French tourists became the largest source of foreign exchange earnings (Lee, Morrison, & O'Leary, 2006). This finding prompted the Canadian government to devise tourism packages and marketing strategies much to French tourists' liking, in an attempt to secure this strong income stream. Meanwhile, the Australian government also proposed new tourism policies in 2004 that shifted the country's focus towards high-yielding opportunities. Australian Government evaluations on tourists' economic contributions by their home countries, and according to its study in 2013, New Zealand, Japanese and U.S. tourists provided the highest returns considering the amount of marketing investments spent at the respective home countries. Li and Huang (2010) had also identified business travelers as high-value contributors in 2007, and thus devoted much effort into developing MICE (meetings, incentives, conferences, and exhibitions) to attract more business travelers and generate foreign exchange earnings. Based on the examples shown above, "yield management" has become a new focus adopted by countries around the world to identify their target segments, and hence enable strategies and policies to be devised for inbound tourism.

Tourism in Taiwan has undergone significant changes between 2008 and 2014. First, there was the structural change with regards to the origin and number of inbound tourists. Chinese tourists in Taiwan have increased year after year since cross-strait tourism was deregulated in July 4, 2008. By the first quarter of 2010, China had surpassed Japan to become the largest source of tourists in Taiwan. In the meantime, the number of inbound tourists had increased from 8.5million (visits per year) in 2008 to 11 million (visits per year) in 2013. Second, given the nation's diminishing competitiveness in the manufacturing sector, the Taiwanese government made an unprecedented decision to include tourism as part of its national development agenda. This decision was consistent with UK, Thai and Turkish governments, which also identified tourism as one of their key drivers to economic growth since 2009 (Dwyer & Thomas, 2012). However, Taiwan's Project Vanguard for Excellence in Tourism still used inbound tourist count as its growth target (Taiwan Tourism Bureau, 2014).

It is apparent that the Taiwanese government has not kept up with ongoing trends, and is still using outdated measures, i.e. inbound tourist count, to guide its tourism policies. More worrisome was that the Taiwanese government has divided tourists into four groups: Japan/ Korea, Hong Kong / Macao / Singapore / Malaysia, Europe/ America, and Emerging Nations (including China, Indonesia, Muslim countries, and India) (Taiwan Tourism Bureau, 2009). These four divisions covered almost the entire world, which were too general considering that Taiwan has only ten million inbound tourists per year. To succeed in marketing the nation's tourism, it is necessary for Taiwan to identify where its niches are. This article attempts to use the yield management tool to analyze how tourists of various nationalities have contributed to Taiwan's economy, and thereby helping the government agency identify niche opportunities and capitalize on different target markets through customized policies.

Literature Review

Tisdell (1993) had proposed that governments should take the following issues into consideration when evaluating and devising tourism policies: sum and distribution of foreign exchange earnings, employment opportunities, effects on culture, society and environment, and interactions with the world. However, it was Dwyer and Forsyth who later implemented these ideas into policymaking. In 1995, Dwyer and Forsyth conducted a study for Australian Department of Tourism titled "The Yield from Inbound Tourism," which mentioned that not all ideas proposed by Tisdell (1993) were feasible because of the difficulties involved in gathering data, and the fact that not all expenses paid by tourists at their home countries end up benefiting the destination country. Surveying at the tourist's end can not reliably measure the exact amounts that have flown into the travel destination. Furthermore, tourists of different nationalities and the ways they choose to travel may have different impacts on the local culture, society, environment, income distribution, and employment. Overall, what policymakers need to be aware of is that tourists not only contribute to the economy, but also affect the culture, the society and environment in the places they travel. As far as feasibility is concerned, the amounts spent by tourists after reaching the destination is the most readily available and feasible indicator (Dwyer and Forsyth, 2008).

In a subsequent study conducted by Dwyer and Forsyth (2008), they continued exploring the definition of tourist's yield. From the industry perspective, yield should be measured by corporate sales or profitability; from the government perspective, yield should be measured by GDP, employment, or overall gains of the society. From the social perspective, yield should also take into account how tourists affect the local environment, and some vi-

able indicators include: energy usage, water usage, $CO_2$ emission, carbon trace, etc. In that article, the authors did more than just discussing concepts but proposed quantitative indicators that could be used in practice. Using the quantitative indicators they had developed, Dwyer and Forsyth (2008) studied inbound tourists in Australia from five different perspectives including tourism expenditure per day, Gross Operating Surplus (GOS) per day, Gross Domestic Product (GDP) per day, local spending per day, and employment opportunities per AUD million of tourism expenditure. These indicators were calculated using average data between 2001 and 2004, in an attempt to determine the yields contributed by inbound tourists of different nationalities. In terms of tourism expenditure per day, Singapore, Hong Kong, Malaysia, Japan and U.S. were sources of the five top-yielding tourists. In terms of GOS per day, Singapore, New Zealand, Japan, Hong Kong, and U.S. were sources of the five top- yielding tourists. In terms of GDP per day, Singapore, Hong Kong, Malaysia, Japan and U.S. were sources of the five top-yielding tourists. In terms of local spending per day, Singapore, Japan, U.S., New Zealand, and Hong Kong were sources of the five top-yielding tourists. In terms of employment opportunities, New Zealand, Thailand, other parts of Asia, Canada, and India were sources of the five top-yielding tourists. The authors believed that ranking of high-yield tourists may differ depending on the definition of yield, and it is possible for the private sector to devise market plans based on daily tourism expenditure analyzed in the study. The public sector, on the other hand, may use GDP, GOS or employment as yield indicator.

Lee, Morrison and O'Leary (2006) proposed to divide tourists into four main groups using the Stay-Spend Index (SSI), which then forms an economic value portfolio matrix. The matrix comprises of four

sections: Favorable market - highest amount of spending per day per person with the longest stays; Priority market - high amount of spending per day per person but over shorter stays; Back-ups - low amount of spending per day per person but over longer stays; and Low value market - low amount of spending per day per person over shorter stays. The author targeted the study on French tourists in Canada (due to the fact that France provides the largest number of inbound tourists into Canada), and applied factor analysis to distinguish French tourists into four categories. Category 1 comprised of family travelers; Category 2 comprised of those who paid greater attention to safety and cleanliness; Category 3 comprised of those who enjoyed cultural activities and luxurious experience; and Category 4 comprised of those who enjoyed outdoor activities and expected to make new friends during their travel. These four categories of tourists were allocated into the aforementioned matrix based on the amount spent each day and the duration of their stay. The study discovered that family travelers were the most valuable, with 41% of whom falling in the Favorable market, 11% in the Priority market, and 33% in Back-ups. The tourism authority is likely to derive greater yields if the quality of tourism can be improved in line with the preferences of family travelers. Tourists who enjoy cultural activities and luxurious experience also contributed significant values, but since they formed only a small percentage of the population, it is not recommendable to treat them as a target market. The Low value market consisted mostly of those who paid greater attention to safety and cleanliness (Category 2), and those who enjoyed outdoor activities and expected to make new friends during their travel (Category 4). Though less valuable, it is still recommendable to treat Category 4 tourists as a target market given their large population and longer stays, and provide

them with incentives to spend more locally.

Becken and Simmons (2008) conducted a study on inbound tourists in New Zealand between 1999 and 2003 from three different perspectives: Financial yield, Public sector yield, and Sustainable yield. The study divided inbound tourists into five categories: Coach tourists, Foreign Independent Tourists (FIT), Backpackers, Camping tourists, and Home visitors. Financial yield measured tourists' daily spending; the ranking of amounts spent, in descending order, were Coach tourists, FIT, Camping tourists, Backpackers, and Home visitors. Public sector yield measured tourists' use of public facilities and natural resources, and worked as a reverse indicator because the more the public facilities were used, the higher costs incurred on the government and the further the ranking is towards the end. From the government's perspective, the highest yielding tourists were Home visitors, Coach tourists, FIT, Backpackers, and Camping tourists. This result was explained by the fact that FIT, Backpackers and Camping tourists were the most frequent users of public transportation, and had greater preference towards visiting museums, parks and national parks. Sustainable yield measured the level of $CO_2$ emitted as tourists traveled around New Zealand.

The lesser the emission, the higher the yield, and the ranking of top-yielding tourists in this regard was Camping tourists, FIT, Backpackers, Home visitors, and Coach tourists. The first three types of tourists produced less pollution because they mostly used public transportation; home visitors produced more $CO_2$ emission because of their longer stay. The author considered tourism a vital industry for generating foreign exchange earnings, which is why it is necessary to take financial yields into consideration. From the

government's perspective, however, the allocation of foreign exchange earnings and how tourism affects employment are two issues that also need to be taken into consideration. When investing in tourism facilities, it is necessary for the central government to coordinate with the local government to avoid duplicate and redundant investments. The environmental burden of traveling no longer pertains to any single country, but has become a global issue. Tourists' impacts on the local environment are not limited to $CO_2$ emission; there could be different findings as more indicators are added to the mix.

Northcote and Macbeth (2006) attempted to create an integrated tourism yield (ITY) framework that incorporate six yield measures (Tourist Yield, Financial Yield, Economic Yield, Social Yield, Environmental Yield, and Cultural Yield) in three different scenarios (current level, required level, and potential level). By assigning different weights to the yield measures, the framework would be able to produce a quantifiable indicator that facilitates sustainable growth. This framework assigned its weights on a scale of 1~5, and the article used 2003 statistics taken from Rottnest Island in Perth, Australia, to explain the framework. The current level is characterized by a combination of weights that represent Rottnest Island's current tourism focus; the required level is a combination of weights that represent the minimum; and the potential level is a combination of weights that represent what Rottnest Island is expected to achieve. Depending on the differences of each travel destination, this framework can be adjusted to suit the evaluated location. The author further introduced sub-frameworks under each yield measure. Under Tourist Yield, indicators including annual influx, seasonality, average length of stay, mode of stay, average density and diversity were introduced. Under Financial Yield, indicators pertaining to the Rottnest Island authority,

including revenue, staff, administration expenses, depreciation, and facilities were introduced. Under Economic Yield, indicators pertaining to Rottnest Island industries, including revenue, employment, infrastructure, inflation, and state revenue-taxes were introduced. Under Environmental Yield, indicators including flora, fauna, terrain, water, energy, and air were introduced. Under Social Yield, indicators including host/ guest satisfaction, equity, education, community engagement, inter-group cohesion, and in-group unity were introduced. Under Cultural Yield, indicators including heritage value, iconic value, lifestyle value, multicultural value, artistic value, and ritual value were introduced. By making calculations in a variety of scenarios, it enabled Rottnest Island authority to establish bottom lines with regards to tourism, and the ability to develop responsive measures against adverse impacts as well as guidelines for adjusting its current policies to reach the potential level. ITY provides a systematic framework through which tourism stakeholders may discuss and be involved in policymaking, and thereby ensures the quality of decisions made.

Dwyer and Thomas (2012) conducted a study on Cambodia's top ten sources of inbound tourists in 2008. Ranked in descending order, the top ten origin countries were: Korea, Vietnam, Japan, U.S., China, Thailand, UK, France, Australia, Taiwan, Malaysia and Germany. The author then measured tourism yields based on duration of stay, employment opportunities, and increase in GDP. In terms of spending per person per trip, the top ranking tourists were from: China, UK, Australia, Thailand, U.S., Germany, France, Malaysia, Vietnam, Taiwan, Japan, and Korea. In terms of spending per person per day, the top ranking tourists were from: Japan, China, Korea, U.S., Australia, Malaysia, Taiwan, Vietnam, Thailand, UK, Germany, and France. In terms of employment

opportunities (per thousand visitors), tourists with the highest contribution were from: China, UK, Australia, Malaysia, U.S., France, Germany, Taiwan, Vietnam, Japan, and Korea. Due to the fact that Cambodia does not maintain an official tourism satellite account, the amount of revenues and employment opportunities were entirely based on the authors' estimates. In addition, part of the tourism expenditures paid by inbound tourists may be retained at their home countries, while the amount that actually flew into Cambodia was not known with certainty. To account for this discrepancy, the authors had also applied their own adjustments to data acquired from tourism businesses. According to the authors' estimates, the percentage of inbound tourists' spending that could be retained as profit by local businesses were: tour guide (100%), entry fees to attractions (70%), dining (68.1%), shopping (66%), accommodation (61.8%), local transportation (60%), massage (50%), and casino (13.6%). From the GDP perspective, the top contributing nations were: China, UK, Australia, U.S., Thailand, Germany, France, Malaysia, Vietnam, Taiwan, Japan, and Korea. The authors held the opinion that using GDP to measure tourism yields may not be able to reflect unequal distribution of income and does not truly reflect how inbound tourists contribute to the local economy. Lastly, the authors asserted that although tourism has the potential to increase a nation's foreign exchange earnings, the income may not be distributed equally and would thus widen the disparity of wealth.

Based on past literatures presented above, the researchers apparently had the consensus that yields generated by inbound tourists were a more appropriate measure for tourism policymaking than inbound tourist count. However, yields can have a broad variety of definitions such as: local spending, spending per trip, spending per day, incremental GDP, incremental

GOV, employment opportunities, equality of income distribution, environmental impacts, cultural impact etc. While everyone agreed that inbound tourists do impact the local environment, culture, and society to a certain extent, they also acknowledged the difficulties involved in quantifying such impacts. Economic yield was something that could be more easily measured, given that a common measurement (currency) exists. It also has the ability to reflect the effectiveness of the existing policy on a timely basis. From the perspective of incrementalism, policy performance indicators are not something that can be developed all in one attempt. Being the first exploratory study on the yields of inbound tourism in Taiwan, this article attempts to identify Taiwan's most valuable inbound tourists using economic measures that are readily accessible.

## Research Methodology and Source of Data

This study is based on the arguments proposed by Lee, Morrison and O'Leary (2006) and Dwyer and Forsyth (2008). The analytical framework involved the use of two economic value portfolio matrices.

Figure 1. was based on the framework developed by Lee, Morrison and O'Leary (2006), using Expenditure per Person per Day and Average Length of Stay as indicators. Four market segments have been identified based on tourists' expenditures per person per day and their length of stay, which were: Favorable Market, Priority Market, Back-ups Market, and Low Value Market.

The Favorable Market is characterized by long duration of stay with high spending per person per day, and represents tourists that provide the highest yields. The Priority Market is characterized by high expenditure per person per

day but short duration of stay. These tourists have the tendency to spend more, and because of their short stay, they consume relatively less tourism resources, which

make them quite efficient in producing yields.

Figure 1.  Economic value portfolio matrix based on the stay-spend index

|  | Average Length of Stay Short | Average Length of Stay Long |
|---|---|---|
| Total Expenditure (Per person per day) High | Priority market | Favorable market |
| Total Expenditure (Per person per day) Low | Low value market | Back-ups market |

The Back-ups Market is characterized by long duration of stay but low expenditure per person per day. Although the tourists still produce yields, they consume more local resources over their long stay, making them less efficient in producing yields compared to the Priority Market. Lastly, Low Value Market is characterized by both short duration of stay and low expenditure per person per day.

Figure 2. was based on the framework developed by Dwyer and Forsyth (2008), using GDP per Visitor Night and GDP per Visitor as indicators. The purpose of using GDP as indicator was to compare how tourists contribute to the economy from a society's and a country's perspective. Comparisons made on tourists' expenditures are more relevant to individual companies and the industry, and are less likely

to represent contributions to the economy as a whole.

Next, the four market segments proposed by Lee, Morrison and O'Leary (2006) were matched onto Figure 2. One important thing to note here is that in Matrix 1, the Back-ups Market fell on the fourth quadrant but in Matrix 2, the Back-ups Market fell on the second quadrant. The reason for this was that in Matrix 2, the second quadrant represented low GDP per person per day but high GDP per trip because of the longer stay, which was consistent with the definition of Back-ups Market in Matrix 1. Also in Matrix 2, the Priority Market fall on the fourth quadrant, representing high GDP per person per day but low GDP per trip because of the shorter stay, which was consistent with the definition of Priority Market in Figure 1.

Figure 2. Economic value portfolio matrix based on GDP per visitor
and per visitor night index

|  | GDP per visitor night Low | GDP per visitor night High |
|---|---|---|
| GDP per visitor High | Back-ups market | Favorable market |
| GDP per visitor Low | Low value market | Priority market |

This study has targeted inbound travelers in Taiwan whose purpose of visit was leisure. Data was sourced mainly from "2009~2014 Annual Survey Report on Visitors Expenditure and Trends in Taiwan" (Taiwan Tourism Bureau, 2014) prepared by the Tourism Bureau, MOTC, in 2014. Here, the length of stay and expenditure per person per day were averages calculated over the duration of study, as proposed by Dwyer and Forsyth (2008). This study has based its analyses on average spending data between 2008~2013.

To estimate the effect on GDP from tourists of various origins, this article has adopted the use of the Input-Output Table that Chung-Hua Institution for Economic Research (2005) had developed for the government's National Development Plan (2002- 2007) - Doubling Tourist Arrivals Plan. An open model approach was adopted to proceed with the analysis, so as to avoid overestimating tourists' impacts on GDP. Meanwhile, considering the current state of Taiwan's economy, the model neither takes into account capacity constraints nor adjusts for supply/ demand equilibrium, but instead adopts a partial equilibrium analysis. This is an important tool for measuring how tourists of different countries affect Taiwan's overall economy.

The amount of tourists' spending in Taiwan was mainly based on 2009~ 2014 Annual Survey Report on Visitors Expenditure and Trends in Taiwan, adjusted according to "Taiwan Tourism Satellite Account" with air fare and relevant tourism service charges added to the total. The amount of "shopping spending" was divided and allocated to the respective industries according to the average proportions of items that tourists claimed to have purchased in the survey, so that economic contributions can more closely resemble the reality.

Research Findings and Discussions

Table 1 has compiled the origin and average number of inbound tourists in Taiwan from 2008 to 2013, and their average length of stay. Tourists in Taiwan were mostly from (in descending order) China, Japan, Hong Kong & Macau, Korea, Malaysia and Singapore. The above-mentioned countries account for 91.5% of all tourists in Taiwan. Table 3 shows average expenditure per person per day for tourists of all origins from 2008 to 2013. Table 4 shows GDP estimated from tourists' expenditure per person per day and expenditure per trip using the I-O Table.

Table 1.* Average Number and Average Stay of Inbound Tourists in Taiwan

| Country | Total | China | Japan | HK & Macau | Korea | Malaysia | Singapore | Other |
|---|---|---|---|---|---|---|---|---|
| Tourist count ** (thousand visits) | 3518 | 1239 | 833 | 617 | 137 | 202 | 188 | 299 |
| % | 100% | 35.2% | 23.7% | 17.5% | 3.9% | 5.8% | 5.4% | 8.5% |
| Average nights stayed (Nights) | 6.1 | 6.7 | 5.4 | 3.4 | 5.5 | 6.4 | 6.7 | 10.4 |

Source(s): Taiwan Tourism Bureau, 2014
*: Average from 2008 to 2013
** The tourist count represents travelers in Taiwan whose purpose of visit was leisure

Table 2.*  Inbound Tourists' Expenditure per Person per Day in Taiwan
Unit: USD/ persons/ nights

| Market | | Spending within hotels | Dining outside hotels | Transportation within Taiwan | Entertainment | Sundry expenses | Shopping spending | Average |
|---|---|---|---|---|---|---|---|---|
| Average | Amount | 73.01 | 28.69 | 24.99 | 10.74 | 2.71 | 69.36 | 219.61 |
| | % | 32% | 15% | 11% | 4% | 1% | 36% | 100% |
| China | Amount | 41.69 | 29.27 | 33.67 | 6.71 | 2.04 | 138.08 | 251.47 |
| | % | 17% | 12% | 13% | 3% | 1% | 55% | 100% |
| Japan | Amount | 111.93 | 46.06 | 44.47 | 16.54 | 1.73 | 68.41 | 289.15 |
| | % | 39% | 16% | 15% | 6% | 1% | 24% | 100% |
| HK & Macau | Amount | 57.52 | 26.82 | 14.78 | 10.61 | 2.52 | 57.83 | 170.08 |
| | % | 34% | 16% | 9% | 6% | 1% | 34% | 100% |
| Korea | Amount | 79.16 | 16.05 | 17.05 | 14.92 | 6.09 | 39.83 | 173.11 |
| | % | 46% | 9% | 10% | 9% | 4% | 23% | 100% |
| Malaysia | Amount | 60.23 | 19.97 | 11.77 | 8.49 | 2.59 | 57.99 | 161.03 |
| | % | 37% | 12% | 7% | 5% | 2% | 36% | 100% |
| Singapore | Amount | 87.51 | 33.94 | 28.21 | 7.19 | 1.27 | 54.01 | 212.14 |
| | % | 41% | 16% | 13% | 3% | 1% | 25% | 100% |

Source(s): Taiwan Tourism Bureau, 2014
*: Average from 2008 to 2013

Matrices presented in Figures 3, 4, 5, and 6 were prepared based on data contained in Tables 1, 2 and 3. Figures 3 and 4 represented the amount of tourists' expenditure, with and without shopping spending. Figures 5 and 6. represented tourists' GDP contributions, with and without shopping spending. The reason why shopping spending was treated as a separate element in this study was that Chinese tourists, the primary source of tourists in Taiwan, spent 54.91% of their expenditures on shopping. This percentage had far exceeded those of other countries. According to a study by Wang (2012), Chinese tourists exhibited a distinctive characteristic that was not seen in tourists from other countries: while Chinese tourists topped in terms of total expenditure per person per day, their expenditures fell below average after shopping spending was removed. Due to the significant amounts that Chi

nese tourists spent on shopping, the figures showed very different patterns when shopping spending was isolated. This analysis was able to obtain more information by treating tourists' shopping spending as a separate variable.

Based on Figures 3. to 6., the patterns of tourists from all countries were summarized into Table 4. Each market was then discussed separately.

China

China was undoubtedly a Favorable Market in terms of both tourists' expenditure and GDP contribution. Since the deregulation of Chinese tourists into Taiwan on July 4, 2008, China has been growing in significance and eventually surpassed Japan in 2010 to become Taiwan's largest source of tourists and tourism revenue.

Table 3.  Tourists' GDP by Country   Unit: USD

|  | China | Japan | HK & Macau | Malay-sia | Singapore | Ko-rea | Ave. |
|---|---|---|---|---|---|---|---|
| GDP per visitor night | 469 | 542 | 315 | 296 | 373 | 303 | 364 |
| GDP per visitor | 3,285 | 2,176 | 1260 | 1,778 | 2,611 | 1,816 | 2,220 |
| GDP per visitor night (exclusive of shopping) | 180 | 327 | 199 | 171 | 241 | 210 | 212 |
| GDP per visitor (exclusive of shopping) | 1,261 | 1,308 | 796 | 1,024 | 1,687 | 1,262 | 1,294 |

Source(s): Calculated by author

Table 4.  Market Segment Allocation

|  | Expenditure | Expenditure (excludes shopping) | GDP | GDP(excludes shopping) |
|---|---|---|---|---|
| the People's Republic of China | Favorable market | Back-ups market | Favorable market | Low value market |
| Japan | Priority market | Priority market | Priority market | Favorable market |
| Singapore | Back-ups market | Favorable market | Favorable market | Favorable market |
| Hong Kong/ Macao | Low value market | Low value market | Low value market | Low value market |
| Korea | Low value market | Low value market | Low value market | Low value market |
| Malaysia | Back-ups market | Back-ups market | Low value market | Low value market |

However, China became a Back-ups Market in terms of expenditure and a Low Value Market in terms of GDP contribution if shopping spending is removed from the calculation. This shows that Chinese tourists contribute little to Taiwan's economy besides their shopping activities, which raises the following points of concern. Firstly, this single dominant activity by a dominant source of tourists poses un-certainty to Taiwan's inbound tourism revenue. If local businesses were unsuc-cessful arousing tourists' desires to shop, Taiwan could see a drastic change in eco-nomic contributions from Chinese tourists. Secondly, even if local businesses were successful in arousing tourists' desires to shop, more attention needs to be paid on what tourists were buying. China imposes high customs duties on imported goods; this creates largest differences between the

prices of goods that Chinese people can buy in their home country and those they can buy overseas. This difference is especially significant in luxury goods, and is what encourages Chinese tourists to shop overseas. Furthermore, due to the popularity of counterfeit goods in China, Chinese tourists are more concerned about purchasing counterfeit goods by mistake in their home country, and thus have more incentives to shop overseas. However, this behavior contributes little to Taiwan's economy because luxury goods comprise only a small portion of products made in Taiwan.

Chinese tourists generally have less desirable tourism experience during their stay in Taiwan. This is because many Taiwanese travel agencies have enticed Chinese tourists by offering zero commission tour packages, and relied on the commissions they make from tourists' shopping as the main source of profit. (Nathan, Fuquan, & Yin, 2013) This low-cost approach needs to be changed in order to raise Chinese tourists' satisfaction during their stay in Taiwan, and increase their spending on all aspects.

Compared to Japanese tourists, another great contributor of tourism revenue, the Chinese spent US$251 per person per visit while the Japanese spent US$289 per person per visit. Comparing the details of their expenditure, Japanese tourists spent US$68 lesser per person per visit lesser on shopping, amounting to less than 1/ 2 of what Chinese tourists spent on. When shopping spending is removed, Chinese tourists are found to have spent much lesser than Japanese tourists (US$113 vs US$221 per person per visit), which means that Chinese tour groups lack the kind of local experience such as: Quality accommodation, dining and entertainment on which Japanese tourists focus. Japanese tourists spent significantly higher amounts on entertainment, which means that they

engaged in more entertainment activities such as spas, photography, and local performances.

However, many studies have shown that Chinese tourists do not necessarily prefer to compromise their accommodation and dining experience just so that they can have more budgets to spend on shopping. Li, Lai, Harrill, Kline, & Wang, (2011) discovered that most Chinese tourists are price/ value-conscious. Some respondents indicated that 50 to 100 U.S. Dollars (USD) a night was acceptable, and said they like to stay at three star or better hotels. Their budget for food was approximately USD 10 to 30 per day. Other studies have also supported this finding, such as Yu and Weiler (2001).

According to the experience of Japanese tourists, Taiwan apparently has the capacity to offer premium tour packages, while many Chinese tourists are both willing and able to pay for quality tourism experience. If Taiwan continues its low-cost approach, it would inevitably undermine visitors' satisfaction and lessen their willingness to revisit.

Japan

Japan falls into the Priority Market segment whether in terms of expenditure or GDP contribution. Even when shopping spending is removed, Japan still falls in the Priority Market in terms of expenditure and Favorable Market in terms of GDP contribution. One thing worth mentioning is that Japanese tourists become the highest spending travelers in Taiwan after shopping spending is excluded. Japanese tourists were generally willing to allocate much of their traveling budgets on local experience; they had more of an inclination to use hotel facilities and engage in distinct local experiences such as food, massage, photography, arts, cultural activities, and the people's everyday life (Tai-

wan Tourism Bureau, 2014). Japanese tourists were in the Priority Market segment, instead of the Favorable Market segment, because of their shorter stay. However, they represent one of the highest yielding groups given their size and the amounts they spend in Taiwan.

Data presented by Japan National Tourist Organization (2014) has shown that, due to the stagnant economy, Japanese tourists are making fewer long-distance travels and more short-distance travels; and the number of tourists traveling to Taiwan has grown more rapidly than numbers traveling to other parts of Asia. Furthermore, the Japanese people are fond of the Taiwanese people as they topped the world in donations in the aftermath of the 311 Earthquake. Given the fact that short-distance travels tend to be characterized by shorter duration of stay, what Taiwan should focus on is to encourage revisits and explore long stay packages for Japanese tourists.

Becken and Simmons (2008) discovered through their studies that home visitors were the highest yielding tourists of all. What they referred to as home visitors were consistent with the definition of long-stay tour in Japanese outbound tourism, meaning tourists who travel to foreign destinations for long periods of time in order to experience living abroad. (Ono, 2008) Japanese tourists had the shortest stay among all tourists. Service providers should therefore develop itineraries with longer durations, in order to maximize contributions from Japanese tourists to Taiwan's economy.

Offering long-stay tours for Japanese retirees is perhaps another way to shift Japanese tourists toward the Favorable Market segment. According to a local study, Japanese tourists were mostly concerned with "access to Japanese food" when choosing long- stay tours; other

points of concern in descending order were "access to medical resources," "ease of transportation," "culture at the place of stay," "accommodation type," and "access to living necessities" (Chen and Tsai, 2008).

Singapore

Singaporean tourists were considered a Back-ups Market in terms of total expenditures, but a Favorable Market in terms of expenditure without shopping spending and GDP contribution. This places Singaporean tourists among the highest yielding group besides China and Japan. One thing worth noting is that Singapore became the most Favorable Market when shopping spending is removed. This finding was hardly a surprise, given the fact that Singapore imposed no import duties and was already a shopping paradise on its own. Shopping was never Singaporeans' primary purpose when visiting Taiwan. Instead, Singaporean tourists contributed to other aspects of Taiwan's economy.

In fact, the Taiwanese government had never treated Singaporean tourists as a separate market, considering that they accounted for only 6% of total inbound visits. They are currently grouped among Hong Kong, Macao, Malaysian and other Southeast Asian tourists, and are marketed under the same strategy. This is obviously a strategic mistake, one that needs to be rectified by treating Singaporean tourists as a separate niche, and reallocating available budgets to address their needs as the first priority.

According to a survey by Euromonitor International (2014), Singaporean tourists tend to travel to regional destinations in search of nature, coastal environment and beach holidays which are limited in Singapore. However, the government's current marketing plans focus more on

promoting the Taiwanese lifestyles and fine food, which deviate from what Singaporean tourists' preference towards nature. Taiwan has many natural attractions to offer in this regard, but it currently adopts an improper marketing strategy that may create a discrepant destination image for Singaporean tourists and undermine their travel intention.

Compared to Japanese tourists, Singaporeans spend less per person per day but stay for longer periods. With the right marketing strategy, Singaporean tourists should have the potential to achieve the same level of contribution as do Japanese tourists. Singapore has become a new opportunity for the Taiwanese tourism industry, and thus should be given priority to be developed as a separate niche.

Malaysia

Malaysian tourists were considered a Back-ups Market in terms of total expenditures, and a Low Value Market in terms of GDP contribution. The Taiwanese government had never treated Malaysian tourists as a separate market, considering that they accounted for only 6% of total inbound visits. They are currently grouped among Hong Kong, Macao, Singaporean and other Southeast Asian tourists, and are marketed under the same strat- egy. However, Malaysian tourists have very different composition when compared to tourists from other countries.

Malaysia is a Muslim nation, and Muslim tourists have religious and cultural needs such as halal food, Muslim restaurants, or prayer rooms. Lack of awareness towards the Muslim culture in non-Muslim countries had caused Muslims to seek Islamic-related cultural features in overseas destinations. (Kim, Im, & King, 2014) Battour, Ismail, & Battor (2011) offered many practical suggestions for developing tourism for Muslims, such as: (1) Provid-

ing directions to nearby Mosques/ praying facilities, and offer prayer timetables. (2) Refrain from offering alcoholic beverages and adult channels in hotel rooms. (3) Require female service personnel to comply strictly with the Islamic dress code. Nevertheless, the most important issue of all lies in the design of tour packages, where differences across Muslim tourists of different countries must be taken into consideration.

The Taiwanese government has indeed been targeting Muslim tourists as a potential market, and is making changes to its tourism facilities to better cater for the needs of Muslim tourists in Taiwan. However, Taiwanese people are still unfamiliar with the Muslim culture, and there is still much to be done before being able to attract Muslim tourists.

Hong Kong, Macao and Korea

Hong Kong, Macao and Korean tourists are currently classified in the Low Value Market segment. Hong Kong and Macao represented Taiwan's third largest source of tourists, while Korea represented the fourth largest source. Despite their significance, this study has found Hong Kong, Macao and Korean tourists to be characterized by short duration of stay and low expenditure per person per day. Overall, they contributed little to Taiwan's economy.

According to a study on Korea's outbound tourism by Seo, Park, & Yu, (2009), Korean tourists are characterized by high price elasticity and the fact that price constitutes their most critical determinant when choosing travel destinations. Also, statistics by Tourism Australia (2013) had also confirmed this finding, as Korean tourists spent an average of US$105 per day when visiting Australia.

The study by Guillet, Lee, Law, & Leung, (2011) discovered that Hong Kong tourists stayed an average duration of seven days and spent HK$12, 414 (equivalent to US$1,655 per trip). After deducting air fare and service fees charged by local travel agencies, Hong Kong tourists were estimated to spend less than US$200 per person per day when traveling overseas. This was similar to Korean tourists. Based on the aforementioned studies regarding spending behaviors of Korean and Hong Kong tourists, it may prove difficult to guide them towards the Favorable Market or the Priority Market segment.

Conclusions and Recommendations

This study combines the economic value portfolio matrix proposed by Lee, Morrison and O'Leary (2006) with Input-Output Analysis to develop a new framework that analyzes foreign tourists' activities in Taiwan and implications of existing tourism policies, using factors such as expenditure per person per day, length of stay and GDP contribution. Below are the main findings and suggestions from this study:

Shopping still comprises the main activity for Chinese tourists in Taiwan; they contribute very limited yields in other aspects. Japanese tourists create significant yields despite their short stay, and present potential that has yet to be developed. Singaporean tourists also present much potential, but attracting them requires a focus other than shopping.

Korean, Hong Kong and Macao tourists are classified in the Low Value Market segment. Malaysian tourists are classified as Back-ups Market as far as expenditure is concerned, and Low Value Market in terms of GDP contribution. Apparently the things that Malaysian tourists spend on produce little economic yields to Taiwan, which is what explains why they spend

more than Hong Kong, Macao and Korean tourists but end up with the same level of GDP contribution.

Securing Chinese tourists

Chinese tourists spend more than the average amount of Taiwan's total inbound tourists, but when shopping spending is removed, the amounts they spent on accommodation, dining and entertainment fell below average. This shows that Chinese tourists are being offered low-quality accommodation and dining; given the amount of tour package they paid for, this level of experience is somewhat underwhelming. The government should plan its policies ahead in ways that aim to provide Chinese tourists with better travel experience.

When comparing Japanese to Chinese tourists, the study discovered that Japanese tourists spend more per person. When shopping spending is removed, the study revealed that Japanese tourists spend far more than Chinese tourists on accommodation, dining and entertainment (most of which were optional outside the package tour), and hence are able to enjoy more quality experience. This finding also demonstrates that Taiwan has the capacity to offer premium quality tour packages. By offering better quality accommodation and dining, it is possible to increase the amount spent by Chinese tourists and their satisfaction without deliberately increasing their numbers, and in turn create yields through accommodation and dining services.

In addition to the common tour packages currently available, other featured experiences, such as SPA, photo shoot, local entertainment, arts & cultural performance, cosmetics medicine, and healthcare can also be introduced to Chinese tourists. By offering local activities, it is possible to satisfy tourists with unique

quality experiences that they are willing to spend extra money for, and in turn build tourists' willingness to revisit and achieve higher economic contribution. Shopping activities can be easily replaced through trade arrangements, but experience is something that is difficult to replicate, something that can only be gained by revisiting and spending within Taiwan. This experience is the most sustainable package that Taiwan can sell to Chinese tourists.

### Potential of Japanese tourists

Japan used to be the largest source of tourists in Taiwan. Although Japan has fallen to second place, it still accounts for one-fourth of inbound tourists. Japanese tourists spend higher amounts per person, but their duration of stay is shorter than average, which is something that can be improved upon. Japanese tourists mostly stay within one location during their visit to Taiwan. Only few people participate in whole-island tours, which is what limits their stays and their potential yields.

### Diversity of Southeast Asia

Singapore and Malaysia are the two main sources of Southeast Asian tourists with very different needs. Singaporean tourists place high demands on the quality of accommodation and spend less on shopping; meanwhile, Malaysian tourists focus more on shopping and their Muslim nature requires very different strategies compared to other tourists.

Hong Kong, Macao and Korean tourists

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Although Hong Kong, Macao and Korean tourists account for more than 20% of inbound visitors in Taiwan, this study has classified all of them in the Low Value Market segment as a result of tourist spending habits. Although the Taiwanese government has long committed in promoting tourism to these three locations, its efforts have yet to yield effective results. Increasing tourists' willingness to spend should be the primary focus going forward.

Promotion of "local products"

This study has identified gaps between the amounts spent by tourists and the GDP they generate. This gap is especially significant in Chinese tourists' purchase of luxury goods. In order to generate real yields for Taiwan's economy, what the government should do is to promote products that are "locally made." Furthermore, "region exclusive" merchandise, things that can only be purchased in Taiwan, can be introduced to add to the uniqueness of the tourists' experience.

### Other sources of tourists

Taiwan's inbound tourists mostly comprise of tourists from nearby countries. The Asian countries covered in this study account for more than 90% of inbound tourists. Tourists from other regions are very limited at this point and should be explored. In fact, Taiwan must have the ability to attract tourists from other continents if it were to develop tourism and generate higher economic yields.

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Figure 3. Economic value portfolio matrix based on the stay-spend in Taiwan
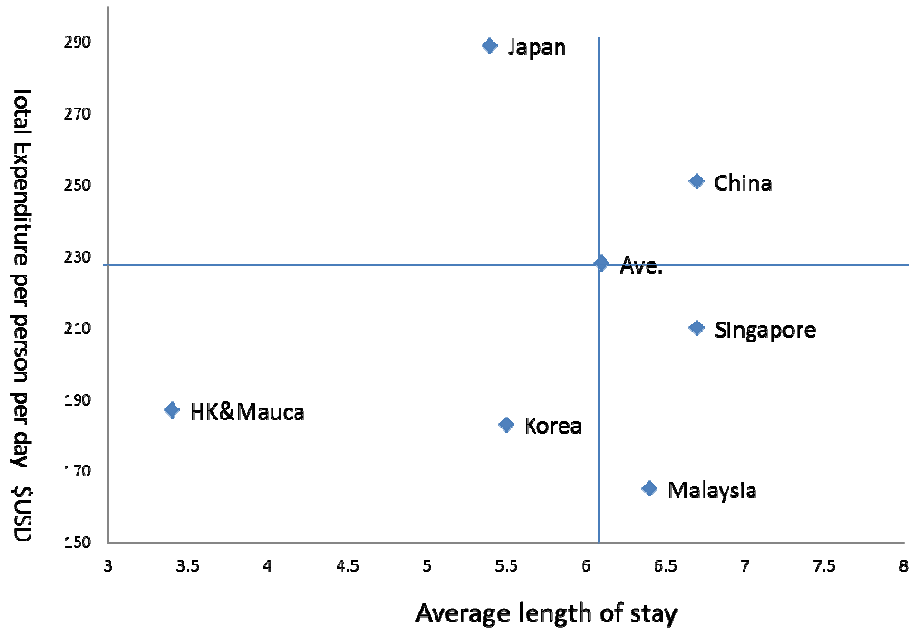by major countries



Figure 4. Economic value portfolio matrix based on the stay-spend in Taiwan by
major countries (exclusive of shopping)
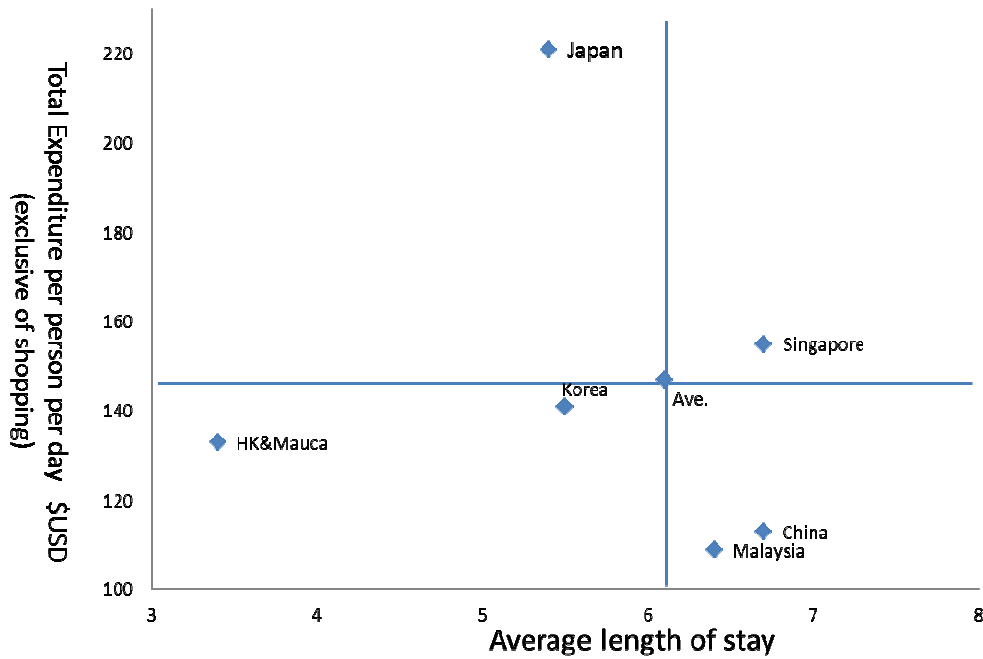
Figure 5.  Economic value portfolio matrix based on GDP per visitor and per visitor night in Taiwan by major countries
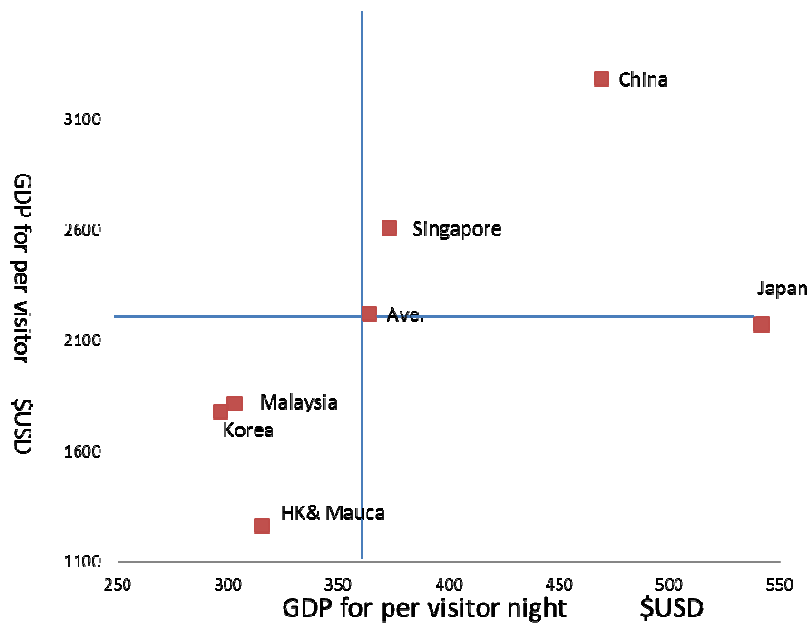


Figure 6.  Economic value portfolio matrix based on GDP per visitor and per visitor night in Taiwan by major countries (exclusive of shopping)
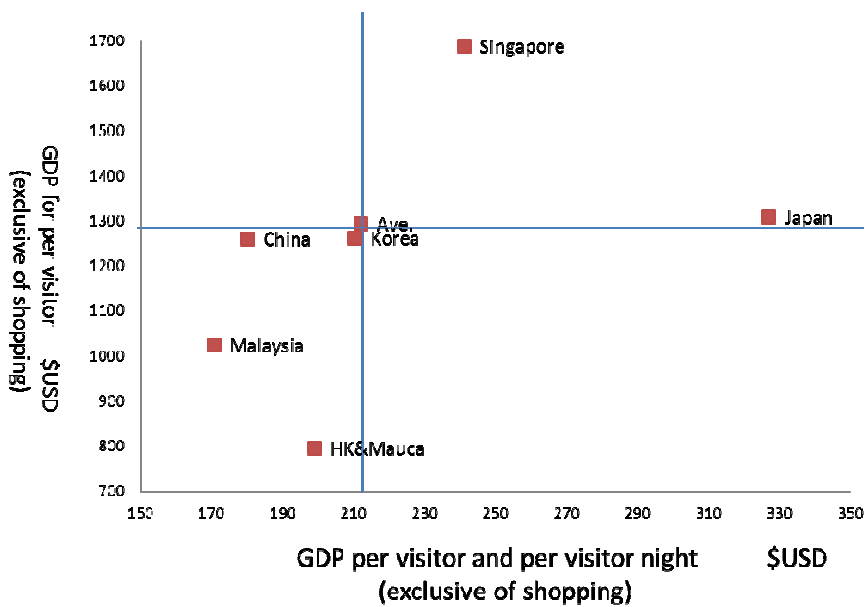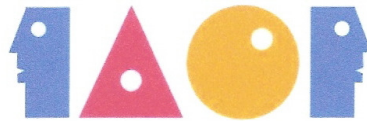
# A GREY RELATION ANALYSIS OF THE PERFORMANCE OF LISTED HOSPITALITY COMPANIES IN TAIWAN

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Abstract

This study is the first paper to apply financial indexes to evaluate the performance of hospitality industry in Taiwan. The grey relation analysis (GRA) is used to resolve the small sample constraint. In fact grey relation analysis is an appropriate methodical instrument to examine critical factors in an incomplete information environment. We use financial statements from 2008 to 2012 of five listed companies of hospitality industry in Taiwan. It has been discovered that hospitality companies, despite having all been classified under the tourism sector, would vary significantly in terms of financial performance because of the business strategies and target customers they choose, and produce extreme financial ratios. Overall, return on assets had the highest impact on earnings per share (EPS) among all four variables, followed by debt ratio, total asset turnover, and profit margin.

Key Words: Grey Relation Analysis, Hospitality Industry, Return on Assets, Debt Ratio

## Introduction

The hospitality industry has prospered in recent years. According to a survey conducted by the Department of Statistics, Ministry of Economic Affairs of Taiwan in 2013, revenues generated by the hospitality industry have grown rapidly since 2009, amounting to nearly NT$385.5 billion by 2012. Despite the rising fortunes of the hospitality industry, however, there has not been a corresponding increase in academic studies into the business performance of the industry.

Most studies relating to the performances of local tourism businesses have been focused on multinational hotel brands (e.g.: Chen and Huang, 2001; Chen and

Wang, 2003; Lu, 2006; Chang and Hwang, 2006; Wang, 2006; Yang, 2008; Wang, 2008; Chang, 2009; Jiang, 2009). This was perhaps due to the reality that established hotel brands were more meticulous in reporting and maintaining records. For other tourism businesses, however (e.g. the hospitality industry), there was less transparent and less complete financial information available, which posed many difficulties in data gathering. Therefore, the aim of this paper is to fill up the gap and try to have a better understanding of hospitality industry in Taiwan.

One effective mean of obtaining complete financial information on the hospitality industry is perhaps through the disclosures made by listed companies in Taiwan. Currently there are a total of 13 locally listed tourism businesses; only five of them are involved in hospitality. All five local hospitality businesses have been listed for a relatively short time, and all five companies had financial statements published and made accessible for the analysis starting in 2008. Most statistical tools were unsuitable for handling such a small sample (sample size less than 30), except the Grey System Theory proposed by Deng (1982), which was specifically developed to analyze uncertain and incomplete data.

The Grey System Theory has so far been used in a broad range of applications and has been used to produce reliable forecasts. Chang and Hwang (2006) conducted a performance evaluation on multinational hotel brands operating in Taiwan, and compared the use of Grey Relational Analysis (GRA) with data envelopment analysis (DEA) to conclude that the two methods were equally effective in performance evaluations. This shows that GRA does not necessarily produce inferior forecasts than DEA, and that it is a suitable performance evaluation tool for the tourism industry.

Hu et al. (2008) applied the Grey System Theory to forecast unemployment rates, which they achieved a 99.58% accuracy for Taiwan and 99.72% accuracy for Taipei City. Their study concluded that the Grey System Theory required "only four records" to produce reliable forecasts. Their findings support the applicability of Grey System Theory in this study, where only four years of data was available.

Section Two of this article contains a literature review. Section Three provides an brief explanation of the GRA theory and describes the source of samples used in this study. Section Four contains an empirical analysis followed by a discussion of the results.

Literature Review

This section looks back at the methods that researchers have used to evaluate business performance in tourism industry. Jang and Yu (2002) explored financial performance of 13 hotels and 19 casinos in the United States between 1994 and 1998, and compared them by their differences in business focus. The study used internal rate of return as the dependent variable and revenues, total assets, asset turnover and debt ratios as independent variables. The study discovered that differences in business focus did not affect a hotel's financial performance, and casinos were significantly more efficient in generating revenues with their given assets.

Hsieh (2004) analyzed financial statements of 11 listed tourism companies in Taiwan and chose return on assets, return on shareholders' equity, profit margin, earnings per share, and overall profitability of the tourism industry as key profitability indicators for financial management purpose. The empirical results showed that profitability of locally listed tourism companies were significantly related to, and were mostly explained by, their funding

capabilities. The more cash flow a company is able to generate from operating activities, the lesser the operating expenses incurred, and the higher the profitability.

Kim and Ayoun (2005) analyzed financial ratios of 212 tourism-related businesses chosen from Standard & Poor's Compustat database. The chosen sample comprised of 41 hotels and motels, 121 restaurants, 12 entertainment businesses, and 38 airliners. They discovered that airliners possessed greater liquidity (in terms of current ratio and liquid ratio) than restaurants, which explained the fact that airliners purposefully maintained higher current assets to avoid bankruptcy or financial distress. In addition, hotels performed relatively better than entertainment businesses in terms of asset management (cash conversion period, inventory turnover, and total asset turnover). With regards to profitability (in terms of profit margin, return on assets and return on equity), hotels and airliners performed better than entertainment businesses, while restaurants achieved significantly higher return on assets than entertainment businesses did.

Guillet and Mattila (2010) gathered financial information of 211 U.S. companies comprising of 46 hotels, 126 restaurants and 39 casinos from Standard & Poor's Compustat database, Center for Research in Security Prices (CRSP) and RiskMetrics. The main financial ratios used in the study were: return on assets, return on equity, profit margin, Tobin's Q, market capitalization and capital expenditure. The study first classified its samples into hotels, restaurants and casinos, and then distinguished two groups within each category based on strength of shareholders' equity. Analysis of variance (ANOVA) was applied to determine whether strength of shareholders' equity contributed any significant differences to a company's financial performance. The study discovered that companies with weaker shareholders'

equity operated on a relatively larger scale with higher return on equity and lower capital expenditure. Meanwhile, restaurants with higher shareholders' equity tend to exhibit lower leverage ratios compared to hotels and casinos.

Youn and Gu (2010) conducted financial analyses and compared the performance of U.S. food and beverage companies of similar total asset sizes, both bankrupt and surviving, from 1996 to 2008. The range of financial parameters used included: current ratio, liquid ratio, liabilities to assets ratio, EBITDA (earnings before interest, tax, depreciation and amortization) to current liabilities, debt ratio, EBITDA to total liabilities, interest coverage ratio, profit margin, return on assets, inventory turnover, and total asset turnover. Both regression and artificial neural networks were used for empirical testing, which the author found better predictability using the regression model.

Yang et al.(2011) analyzed financial performance of 22 listed food producers based on their financial statements. Operating costs, operating expenses, non-operating expenses, fixed assets and net revenues were the five indicators chosen to proceed with the evaluation. By applying the entropy method, non-operating expenses had been identified as the indicator that was most critical to the financial performance of listed food producers.

Research Methodology

Regression analysis, correlation analysis, and factor analysis were the most common methods used in the past. However, these methods were prone to the following disadvantages: (1) large sample requirement; (2) assumption of classic normal probability distribution; and (3) limited to only a handful of variables. Given the limited number of local hospitality companies and their relatively short

durations, these conventional tools would be easily susceptible to limitations if applied for the purpose of this study.

Grey relation analysis (GRA), however, analyzes trends and requires neither a large sample size nor a classic normal distribution to produce results that are consistent with common tools. This characteristic allows GRA to be used in a broad variety of applications, and it was GRA's least sample size requirements, its multi-perspective, quantitative and serial features that made it suitable for this study.

This article mainly applied Grey Generating, Grey Relation Analysis (GRA), Grey Modeling and Grey Prediction. Grey Generating, GRA and Grey Prediction were calculated using Office Excel; whereas Grey Modelity involved the use of Matlab tools developed by Wen et. al. (2007). Below is a short introduction of this approach.

## Grey Generating

It is difficult to compare factors that are not measured in the same units, particularly for those that have very different magnitudes or geometric curves. For this reason, data needs to be normalized into comparable series.

The normalization method chosen will affect GRA results, therefore it is important to know whether the method chosen is able to properly reflect the data trend. In this study, the "average method" was used to normalize variables, because it produced data with high grey relations.

## Grey Relation Analysis (GRA)

GRA is a method based on the Grey System Theory that measures relationships within a discrete data series. GRA measures relationships by identifying similarities or differences in trends. Two factors would be considered to have a strong relationship if their trends are consistent with each other; otherwise they would be considered to have a weak relationship. The ultimate purpose of GRA is to derive grey relational order, a ranking that can aid in decisions.

When conducting GRA, a Reference Series needs to be identified and compared to other data series (the compared series). The "closeness" of series compared will determine the grey relation and generate grey relational order. Data series would be considered as comparable if it satisfies the following three conditions: nondimension, scaling, and polarization.

## Grey Modeling

The concept of Grey Modeling is to convert data series into differential equations that allow the construction of grey dynamic model. The grey dynamic model could be considered as a differential equation that comprises of number of stages and number of variables. Models with different numbers and variables have different meanings and purposes.

## Grey Prediction

By using the grey model conduct a qualitative prediction. The purpose is to bridge the gap between grey process theory and practice. The results of the prediction could be useful for policy formation.

## Empirical Results

This study targets five hospitality companies listed in Taiwan, namely New Palace International Co., Ltd. (New Palace; 8940), Gourmet Master Co., Ltd. (F-Gour-met; 2723), An-Shin Food Services Co., Ltd. (An-Shin; 1259), Wowprime Corporation (Wowprime; 2727), and TTFB (2729).

Financial statement information of these companies was sourced from Taiwan Economic Journal (TEJ) and Market Observation Post System (MOPS). The sample period ranged from 2008 to 2012.

All financial ratios had been calculated from financial statements using formulas published by MOPS. Calculations were compared to the results announced by the respective companies over their websites to identify any discrepancies.

Description of Variables

In this article, six financial indexes have been identified as performance indicators; they were namely: debt ratio, current ratio, inventory turnover, total asset turnover, return on assets, and profit margin. It has been observed in Table 1 that: An-Shin (1259), F-Gourmet (2723) and New Palace (8940) had exhibited significant outliers in terms of current ratio in 2011 or 2010. A follow-up investigation had identified several causes that may explain outliers in the given years: (1) These years were when the companies launched their initial public offerings(IPOs), and coincidentally they all made additional cash issues in the same year, which resulted in a major increase in cash and cash equivalents, and thus increased current assets and current ratio by a significant extent. Meanwhile, similar occurrences were also seen in Wowprime (2727) in 2012, the year it was listed, and in TTFB (2729) during 2012 3rd quarter (a quarterly statement prepared after listing). For this reason, it requires additional attention when calculating financial ratios that involve current assets (e.g. current ratio and liquid ratio) particularly during the IPO years. (2) TTFB (2729) showed more than 30% increase in current ratio in 2010 as compared to the previous year; this was attributable to a 30% increase in current assets and a

33% increase in revenues, showing that changes in revenue were also capable of affecting current ratio.

The sampled companies have exhibited very different inventory turnovers. For example, Wowprime (2727) averaged an inventory turnover of four times while An-Shin (1259) averaged more than 70 times. Differences in inventory turnover were attributable to the different target customers, business strategies and characteristics that the five companies have adopted. For example, Wowprime operated 11 food brands that required it to carry a greater variety of inventory for the different customers it serves. An-Shin (1259), on the other hand, is a fast food business where excellence is measured by quick turnover of its products and shorter cash recovery.

As explained above, hospitality companies may exhibit very different financial performances from one another depending on the business strategies and target customers they choose. Due to the significant number of outliers observed in current ratio and inventory turnover, the chosen variables were revised down to: debt ratio, total asset turnover, return on assets, and profit margin.

This step involves the grey relational analysis. The original series were first normalized into figures ranging from 0 to 1 (the same applied to other three variables) before proceeding with GRA calculations. As shown in Table 2, the calculated values placed New Palace (8940) 1st and Wowprime (2727) 5th place in terms of debt ratio; An-Shin (1259) 1st and New Palace (8940) 5th in terms of total asset turnover; TTFB (2729) 1st and New Palace (8940) 5th in terms of return on total assets; and F-Gourmet (2723) 1st and An-Shin (1259) 5th in terms of profit margin.

Table 1.    Performance Indicators/Sample Data

| | Year | Profit margin (%) | Current ratio (%) | Inventory turnover (times) | Total asset turnover (times) | Return on assets (%) | Debt ratio (%) | EPS ($) |
|---|---|---|---|---|---|---|---|---|
| An-Shin | 2008 | 3.69 | 78.48 | 92.83 | 3.16 | 12.25 | 60.58 | 4.42 |
| | 2009 | 3.76 | 91.89 | 77.54 | 2.92 | 11.98 | 60.96 | 5.01 |
| | 2010 | 5.12 | 95.26 | 72.43 | 2.72 | 15.44 | 59.84 | 7.91 |
| | 2011 | 4.37 | 176.90 | 72.29 | 1.64 | 9.44 | 38.50 | 7.10 |
| | 2012 | 2.46 | 189.71 | 72.10 | 1.76 | 4.27 | 35.08 | 3.16 |
| F-Gourmet | 2008 | 9.31 | 75.57 | 25.20 | 2.63 | 27.41 | 61.67 | 7.97 |
| | 2009 | 12.07 | 162.89 | 20.19 | 1.96 | 33.44 | 37.27 | 27.32 |
| | 2010 | 10.03 | 349.19 | 18.34 | 1.32 | 17.58 | 21.52 | 18.78 |
| | 2011 | 9.93 | 246.27 | 17.81 | 1.43 | 15.90 | 25.92 | 19.98 |
| | 2012 | 7.46 | 190.84 | 15.87 | 1.57 | 12.14 | 27.28 | 6.93 |
| Wow-prime | 2008 | 6.96 | 124.43 | 4.22 | 2.24 | 15.56 | 51.16 | 5.52 |
| | 2009 | 6.28 | 128.76 | 4.43 | 1.90 | 13.60 | 52.75 | 5.60 |
| | 2010 | 11.02 | 125.83 | 3.89 | 1.83 | 23.65 | 53.82 | 13.35 |
| | 2011 | 10.04 | 123.30 | 3.52 | 1.87 | 21.33 | 55.02 | 12.71 |
| | 2012 | 10.84 | 170.03 | 3.82 | 1.43 | 19.33 | 38.37 | 15.69 |
| TTFB | 2008 | 7.12 | 130.88 | 48.28 | 2.51 | 21.11 | 45.13 | 15.65 |
| | 2009 | 7.85 | 180.82 | 49.43 | 2.16 | 19.54 | 42.61 | 8.61 |
| | 2010 | 10.43 | 217.45 | 53.22 | 2.36 | 27.32 | 38.25 | 13.70 |
| | 2011 | 10.86 | 190.18 | 34.29 | 2.17 | 28.52 | 37.15 | 9.42 |
| | 2012 | 9.69 | 572.44 | 33.63 | 0.99 | 12.19 | 12.03 | 9.53 |
| New Palace | 2008 | 9.27 | 122.85 | 10.91 | 0.73 | 7.58 | 21.95 | 1.40 |
| | 2009 | 1.09 | 74.62 | 9.64 | 0.64 | 0.81 | 20.27 | 0.12 |
| | 2010 | 7.33 | 112.37 | 7.89 | 0.73 | 5.65 | 22.48 | 0.97 |
| | 2011 | 11.91 | 144.54 | 7.13 | 0.88 | 11.06 | 22.25 | 2.05 |
| | 2012 | 9.53 | 143.56 | 6.40 | 0.79 | 6.22 | 22.33 | 1.43 |

Source: Compiled by author
Results of GRA

Table 2.   GRA Value and Ranking

| GRA series | An-Shin | Wowprime | TTFB | New Palace | F-Gourmet |
|---|---|---|---|---|---|
| Debt ratio | 0.3953 | 0.3913 | 0.5175 | 0.9888 | 0.6827 |
| Total assets turnover | 0.9240 | 0.6242 | 0.7591 | 0.3868 | 0.5861 |
| Return on assets | 0.4975 | 0.6353 | 0.8154 | 0.4243 | 0.7975 |
| Profit margin | 0.4488 | 0.7333 | 0.7557 | 0.7312 | 0.8954 |

Source: Calculated by author

Grey Modeling

In this stage, calculations were made in number of years with the addition of dependent variables earnings per share (EPS)($b1$), debt ratio($b2$), total asset turnover($b3$), return on assets($b4$), and profit margin($b5$) are the independent variables. It can be seen from Table 3 that signifi cance of the four variables on EPS was $b4>b5>b2>b3$ in 2008, $b3>b2>b5>b4$ in 2009, $b4>b2>b3>b5$ in 2010, $b2>b3>b4>b5$ in 2011, and $b4>b5>b3>b2$ in 2012. Return on assets ($b4$) was ranked first in years 2008, 2010 and 2012. Overall, return on assets had the highest impact on EPS among all four variables, followed by debt ratio, total asset turnover, and profit margin.

Table 3.   Significance of Independent Variables on the Dependent Variable

| Variable Year | 2008 | Order | 2009 | Order | 2010 | Order | 2011 | Order | 2012 | Order |
|---|---|---|---|---|---|---|---|---|---|---|
| Debt (b2) | 1.555 | 3 | 8.1827 | 2 | 3.1556 | 2 | 21.5832 | 1 | 0.2441 | 4 |
| Total asset turnover (b3) | 1.3678 | 4 | 12.0887 | 1 | 1.053 | 3 | 11.1326 | 2 | 0.3774 | 3 |
| Return on assets(b4) | 5.6588 | 1 | 3.4412 | 4 | 3.6065 | 1 | 8.4904 | 3 | 3.1054 | 1 |
| Profit margin(b5) | 2.6095 | 2 | 7.0937 | 3 | 0.7787 | 4 | 1.7407 | 4 | 1.4697 | 2 |

Source: Calculated by author

By comparing the observations presented in Table 2, return on assets was generally the highest in years when companies generated the highest amount of EPS, except for the minor differences shown by Wow prime (2727) and TTFB (2729). The annual earnings per share for other companies from 2008 to 2012 were also the highest; return on assets was also the highest during the study period. These findings show that return on assets is highly influential on EPS and are worthy of consideration.

Grey Prediction

Due to the lack of complete samples, predictions were made only for 2012. EPS predicted using the model developed through Grey Modeling has been presented in Table 4. Predictions were relatively more accurate for F-Gourmet (2723), Wowprime (2727) and New Palace (8940). Predictions for An-Shin (1259) and TTFB (2729) did not achieve the expected results.

Table 4.  EPS Predictions

|  | An-Shin | F-Gourmet | Wowprime | TTFB | New Palace |
|---|---|---|---|---|---|
| 2012 EPS - predicted | 7.09 | 18.22 | 9.9 | 2.64 | 1.27 |
| 2012 EPS - actual | 3.16 | 6.93 | 15.69 | 9.53 | 1.43 |

Source: Calculated by author

General Discussion

Take An-Shin (1259), for instance: being a strong player in the fast food business, its services are characterized by short turnaround times that resulted in very high inventory turnovers; meanwhile, it is also a company that produces high total assets turnover at low profit margins. Despite its relatively high total asset turnover, An-Shin (1259) had underperformed in terms of profit margin; this had much to do with intensive competition and the ways other companies had incurred additional costs to produce better quality products and price them at higher margins. Against competitors who also adopt the low-price, wide distribution strategy, raising profit margin should become the priority for An-Shin (1259).

F-Gourmet (2723) sells affordable coffee and pastries. Its primary focus is the Chinese market, while its secondary focus is in Taiwan. What distinguished F-Gourmet from other companies was its centralized food preparation facility, created to ensure consistent freshness and quality in the food it serves while in the meantime reducing outlet and personnel costs. This was why F-Gourmet delivered higher profit margins and returns on assets than the other four companies. Pastries generally have a short time until expiry, and need to be sold quickly to keep inventory levels low and avoid obsolescence. This makes asset turnover ratio a much more critical performance indicator to F-Gourmet (2723) than it is to the three restaurants in the chosen sample. However, since coffee and pastries are not daily necessities to the general population, F-Gourmet (2723) exhibited lower total assets turnover when compared to An-Shin (1259), which prepares regular meals for takeout.

Wowprime (2727) and its 11 food brands have been a favorite to local residents. Its products are offered in set meals, and the advantage of doing so is the ability to ascertain the amount each customer spends. Meanwhile, Wowprime (2727) offers great variety through the many brands and outlet it owns, and has achieved economies of scale to lower the cost of its purchases. Having multiple brands at work also enables more efficient uses of food materials. One other feature that sets Wowprime (2727) apart from other companies is its ability to make advance purchases of food materials while the price is low, and thereby reduce the cost of its purchases and avoid sudden changes in food prices. The special procurement process adopted by Wowprime (2727) puts significantly more inventory on its balance sheet than other companies. This is rather unusual because high inventory level is typically regarded as a burden to the company. Because of the different procurement strategy, Wowprime (2727) exhibited lower inventory turnover and higher liability ratio as compared to other hospitality companies. In terms of profit margin, Wowprime (2727) has been consistent because of tight cost control.

With a focus on eastern cuisines, TTFB (2729) has developed its competi-

tiveness by creating a standardized kitchen and stationing its branches inside departmental stores to achieve prestigious exposure at lower rent. To ensure consistency in food preparation, TTFB (2729) has created its own culinary academy and introduced a proprietary grading system that standardized its procedures. By implementing a methodical supply system, TTFB (2729) is able to achieve optimal control over material costs and quality, which is reflected in a relatively high inventory turnover. Operating through a vast network of chain stores gives TTFB (2729) the economy of scale to make purchases at relatively low prices; however, cost control will likely pose a challenge to the new branches that TTFB (2729) has planned to establish in China.

New Palace (8940), the first hospitality company to be listed for trading, specializes in catering for wedding banquets. It also offers full wedding packages to help save the trouble and time that consumers face in wedding preparations. New Palace (8940) currently owns banquet halls in Harbin and Shanghai. Since 2012, the company has begun running a new food brand named "Host Shabu," which specializes in premium hot pot. This has been the company's response to consumers' growing demands for innovative food preparation and meticulous services. Specializing in wedding banquets puts New Palace (8940) susceptible to seasonality and changes in economic cycles. The 2008 financial crisis, for example, had devastated 2009 revenues and was badly reflected in both profit margin and return on assets.

Nevertheless, revenues recovered significantly in 2010 as people grew confident in their spendings. Total asset turnover occurred fewer than once for New Palace (8940). This is because wedding banquets are held either in the afternoon or the evening session, and only one round of customer is served. Furthermore, accord-

ing to Chinese tradition, not every day is appropriate for wedding banquet. To overcome these limitations, New Palace (8940) requires extensive marketing to maximize customers' spendings on days when sales can be made.

When predicting EPS, Grey Prediction produced more accurate estimates for F-Gourmet (2723), Wowprime (2727) and New Palace (8940). Reasons that An-Shin (1259) resulted in less accurate predictions may be due to its recent branch establishments in China, which have yet to generate sufficient revenues and thus delivered 40% lesser profits in 2012 as compared to 2011. Lower after-tax profit also had a significant impact on profit margin and return on assets. Reasons that TTFB (2729) resulted in less accurate predictions may be due to the fact that it was listed in 2012, and the IPO had greatly increased the company's current assets and reduced current liabilities as compared to 2011, causing an unexpected reduction in liabilities to assets ratio and return on assets. Outliers have been observed when making Grey Predictions for single year.

Conclusions

The hospitality industry has been an emerging part of the tourism sector in Taiwan in recent years, and deserves research attention as it represents the largest group of listed companies among all subcategories under the tourism sector. However, studies in this field had been scarce due to the lack of reliable financial data. This study was the first in Taiwan to evaluate performance of the hospitality industry using financial indexes. To address the lack of established track records and sample size, the study has adopted the Grey System Theory and developed an example of how GRA could be applied given the circumstances, and has made exploratory discoveries that can be followed up by successors.

In this article, GRA was first applied to derive the ranking of the five chosen companies in various performance indicators over the period of study. Grey Modeling was then performed to determine how each performance indicator was influenced. Once a model has been developed, it was applied to predict performance values for 2013, and then compared with 2013 actual performance to evaluate the accuracy of Grey Predictions.

It has been discovered in this article that hospitality companies, despite having all been classified under the tourism sector, would vary significantly in terms of financial performance because of the business strategies and target customers they choose, and produce extreme financial ratios. It is recommendable to subsequent studies to choose a broader range of performance indicators at first, so that there would be sufficient samples to proceed with the study if outliers were to be eliminated.

The empirical results showed that grey relational theory is mathematically feasible tool. Despite the fact that there were only five year's worth of financial data from five companies and four performance indicators, the accuracy of the analysis is still credible. Being able to identify key factors under circumstances where there is lack of data helps exploratory studies and research efforts in new

fields. The GRA uncovered return on assets as the variable that had the greatest influence over EPS performance; other variable in descending level of influence were debt ratio, total assets turnover and profit margin.

There are two limitations to this study: The first limitation is that financial statements prior to the listing of hospitality companies were more difficult to obtain. As some of these companies were listed only recently, there could be inadequate number of years to establish trends and the company may still be adjusting its accounting practices. Secondly, there is currently few number of listed hospitality companies, making it difficult to perform analyses in more refined industry classifications. Furthermore, listed companies vary greatly in terms of business characteristics and financial figures, making comparisons somewhat difficult. It is recommendable for subsequent studies to incorporate financial analyses from other parts of the tourism sector (e.g. hotels or travel agencies). This study has been limited by the small number of listed companies and the short durations since their listing. It is recommendable for subsequent studies to be based on quarterly or semiannual reports for a larger sample size and verify the results of this study using alternative means.

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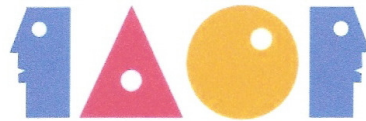
# AN EMPIRICAL STUDY OF PURCHASE INTENTION
# ON FAST FASHION GOODS IN TAIWAN

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Abstract

Fast fashion has already become a trend in recent years. With the rise of fast fashion clothing retailers, it has become an issue that many researches want to dig in. Academia has already presented some researches in the aspect such as supply chain and management. However, there were few in the aspect of consumer behavior. In the rapid spread of the wave swept around the world, facing the potential business opportunities and the markets, it is important to discover the consumers' purchase behavior of fast fashion. This study wanted to compare the consumers who had bought fast fashion goods from foreign stores to those who did not have the purchase experiences. The results showed as followings: Maladaptive beliefs influence perceived scarcity and perishability; Perceived scarcity and perishability influence in-store hoarding, Perceived scarcity and perishability influence hedonic value, In-store hoarding influences purchase intention of fast fashion goods, and Hedonic value influences purchase intention of fast fashion goods.

Key words: Fast Fashion, In-Store Hoarding, Purchase Intention, Marketing Strategy.

Introduction

The spread of the global financial crisis has a great impact on fashion industry. However the clothing stores of well-known fast fashion brands such as ZARA, H&M, and UNIQLO are swarming with visitors in the major cities in the world, which shows limited influence of the economic downturn on fast fashion goods and how fascinating fast fashion goods are. According to the list of Best 100 Global Brands for 2012 published by the branding consultancy Inter-

brand, the company performed best in fashion industry is Swedish retail clothing company H&M, ranking at number 23 with brand value of US$16,571 million; and the performance of Spanish retail clothing company ZARA can't be underestimated with brand ranking progressing from number 44 in 2011 to number 37 with brand value of US $9,488 million (Interbrand website, 2012). UNIQLO, the popular brand in Asia, enjoys Japan number one ranking in Best Retailer Brands for 2013 (Interbrand website, 2013), and the business has set to soar as its global expansion grows. Sull and Turcone (2008) argued that the profits of fast fashion industry were enormous and these companies enjoyed over 20% growth in sales and profit each year. Fast fashion leaders such as ZARA and H&M achieve higher net profits of 16% on the average than their traditional competitors.

In the club of high fashion of the past, excessive prices in fashion boutique forms as barriers to keep the public out of the high fashion. It is even harder for the public to relate to fashion as it's up to big-name designers to decide what is popular and what is out of fashion in the very few fashion seasons each year. But in recent decades, clothing retailers like ZARA, H&M and other brands have evolutionarily followed the strategy of fast fashion; where affordable goods for the common people and widely popular mass culture has stumbled the clothing market and introduced fashion boutique to the public (Sull & Turconi, 2008). The current academic researches on fast fashion focus more on logistics and distribution channels, quick and flexible delivery strategy, or strategic management of fast fashion (Sheridan et al., 2006), with less perspective from consumer behaviour aspect derived from fast fashion. Consumers in Taiwan hold relatively high consumption ability on fashion goods, but have less study on fast fashion related concept and behaviour. Therefore, this study will start with exploring the characteristics of fast fashion,

taking in-store hoarding and perceived scarcity and perishability as the basis, extending to consumer related behaviours and discussions, and hoping to further understand consumer purchase intention under the influence of fast fashion. Moreover, it aims to learn the influences in-store hoarding has on consumer purchase intention. This study aims to comprehend whether in-store hoarding has a positive influence on consumer purchase intention from an empirical aspect, by the understanding of consumer behaviour related studies on fast fashion; and furthermore to observe consumers' responses on fast fashion in Taiwan, and based on the research results provide sound and prospective recommendations for the marketing and management professionals of future fashion industry.

Literature Review

This study aims to explore a range of issues, including (1) the impact of maladaptive beliefs of a consumer on perceived scarcity and perishability; (2) the impact of perceived scarcity and perishability of a consumer on in-store hoarding and hedonic value; and (3) the impact of in-store hoarding and hedonic value on purchase intention. Thus the study will probe into literature reviews on fast fashion, consumers' maladaptive beliefs, perceived scarcity and perishability, in-store hoarding, hedonic value and purchase intention.

*Fast Fashion*

Fast fashion market is highly competitive and requires retailers' quick response to update their products to avoid disappearing from the fashion trend; which means retailers must raise the stock turnover rate to continuously bring in new collections, for example the clothing retailer ZARA can update 20 new season collections during a year (Christopher et al., 2004). Fast fashion also represents a strategy adopted by retailers for quick response to current and emerging trend (Fernie, 2004). Fast fashion responds

quickly to current fashion trends, frequently updates its items, and keeps very low stock in each style. Fast fashion can be defined as quickly updating products with a short renewal cycle and speedy delivery of goods, where it gets its name from the concept of fast food (Byun & Sternquist, 2008). Tokatli (2007) and Byun & Sternquist (2008) proposed four important features in fast fashion which were quick responses to consumers' demand, a short product life cycle, a rapid supply chain, and lower prices respectively. Fast fashion industry expands rapidly in the major cities of the world, hoping to reach consumers quickly and find out consumers' preferences (Tokatli, 2007); and one of the primary objectives is that fast fashion products are the indicators of fashion trends. The professionals in fast fashion industry must be highly sensitive to fashion trends, and recognize the ever-shifting taste of consumers. More than 300 designers and marketing specialists at ZARA's headquarter constantly draw inspiration from movies and fashion shows to update their collections (Sull and Turconi, 2008). Consumers can own more and trendy selection than traditional clothing retail stores at a relatively lower price, which must be supported by shorter lead times and high-level flexibility (Tokatli, 2007).

Fast fashion brands have such responsiveness to consumers' senses which increases the possibility of reaching a wide variety of consumer preference. Consumers may come to the store for new products every week (Dutta, 2002). Short product lifecycle differentiates fast fashion brands from general traditional retailers. Products of fast fashion brands are designed to capture the very short fashion trend and seasonal style. Therefore the product designed can be on shelf for merely a few months or even weeks (Christopher, et al., 2004). The products seen today could be very likely unavailable in few weeks, and thus it is an important characteristic of fast fashion consumption. It also requires highly responsive

supply chain to develop new products and work collaboratively to be in line with the characteristic of short cycle time in fast fashion industry. The high sensitivity on fashion trends, quick decisions making, inventory management, and distribution management constitute a fine supply chain system (Dutta, 2002). This fast supply chain becomes the most powerful supporting system for fast fashion industry.

Fast fashion offers fashion design styles similar to high fashion brands, but at much lower prices (Dutta, 2002). Which means consumers can spend less to enjoy the works of designers of high fashion brands. Such relatively lower prices can easily attract younger group to purchase, and for younger group not to hesitate to buy fashion products they like further encourages impulsive buying (Byun and Sternquist, 2008).

Maladaptive Beliefs

The short renewal cycle of fast fashion results in the uncertainty of a consumer as to whether a liked product is available next time; and consumers of different personality relate to it differently in degree. One of the purposes of this study is the analysis of maladaptive beliefs might affect consumers' perceived scarcity and perishability of product.

Compulsive hoarding refers to the acquisition of, and failure to discard objects of limited value, and even interfering with living spaces and causing impairment in functioning (Frost & Gross, 1993; Frost & Hartl, 1996). Frost and Hartl (1996) proposed compulsive hoarders exhibited complex mind and confined way of inclusiveness towards things that were different from nonhoarders. Grisham and Barlow (2005) explored the characteristics of compulsive hoarders' mind and suggested that maladaptive beliefs were one of the reasons forming compulsive hoarding, and could be divided

into four attributes which were emotional attachment to possessions, memory for possessions, responsibility for possessions and control over possessions: 1) Emotional attachment, 2) Memory, 3) Responsibility, and 4) Control (Furby, 1978; Frost and Hartl, 1996; Frost et al., 1998; Grisham & Barlow, 2005; Steketee et al., 2003).
Perceived scarcity and perishability
Due to the rapid stock turnover in fast fashion the products consumers see while visiting a store might not be available for their next visit. As a result, such uncertainty about product availability further encourages consumers' perceived scarcity and perishability.

Scarcity is the fundamental economic theory; according to microeconomic theory, the pricing mechanism in a free market works depending on the balance between demand and supply; and scarcity arises from limited availability from suppliers, the prices of relatively scare goods will be increased by the force of the operation from the free market until consumers' demand can be lowered to a reachable degree (Lynn, 1992a). Therefore when the quantity of a product decreases or even is out of stock, consumers are likely to expect the prices to rise in the future. As a result limited products tend to be perceived as expensive and of quality, and will eventually lead to a desire on the rare products (Lynn, 1991, 1992b). Jung and Kellaris (2004) proposed that the effect of scarcity had on the field of marketing was an important and powerful principle of social impact, where scarcity tended to increase consumers' desire for the products. Lynn (1991) noted that every product would be rated by consumers on its degree of unavailability; retailers could promote the cognitive value of a product by increasing the perceived scarcity consumers had on the products, services or emotions. Retailers should therefore create the impact of scarcity on the products' value. Snyder pointed that in western society merchandise is one of the important sources in self-

recognition due to the connection between products and self-identity; consumers will acquire and pursue something unique or different from others, and those who are emotion-oriented are most likely to desire unique products (1992) (Snyder, 1992).

Perishability refers to something that is short-lived or less desirable after a period of time (Gupta et al., 2003; Voss & Seiders, 2003). Services are often considered as a perishable commodity as its value occurs only during the time the service delivered or consumed (Geoffrey, 2000; Byun & Sternquist, 2008). Fashion industry has a trait of perishability similar to food and service, particularly in fast fashion industry where updated fashion items are continuously launched to attract consumers and outdated items look less appealing to consumers seeking change and innovation (Byun & Sternquist, 2008). In addition, the nature and seasonal characteristic of the commodity itself can enhance its perishability, and thus retailers can strategically accelerate product's perishability through frequent innovation, and short and quick product life cycle (Voss & Seiders, 2003; Byun & Sternquist, 2008).

According to the literature, hoarding is associated with cognitive impairments where maladaptive beliefs are part of it. Hoarders can easily relate to product's scarcity or message of unavailability released by retailers when shopping in a store, because their discard threshold is higher than non-hoarders and therefore it is easy for hoarders to have an emotional link to store products (Frost & Hartl, 1996; Steketee et al., 2003; Grisham & Barlow, 2005). Therefore, this study proposes research hypothesis.
H1: maladaptive beliefs are positively related to perceived scarcity and perishability.

In-store hoarding

Hoarding can be considered as behaviour of accumulating stock (McKinnon et al., 1985). In the 1970s, hoarding in reaction to shortages of supplies was a common behaviour to ensure supple for future use (Kotler & Levy, 1971). Based on hoarding was the behaviour resulting from a sense of scarcity, Kotler and Levy (1971) suggested the characteristics of hoarding as the following: high risk of being deprived of goods, excessive acquisition of objects than general standards in quantities, and abnormal inventory in comparison with others. Hoarding can be motivated by fears of inability to obtain a product they desire or the scarcity of a product itself. Byun & Sternquist (2008) defined in-store hoarding as behaviour where consumers kept a product in hands or basket for themselves to avoid the product being purchased by other customers, which was different from traditional and rational way of selecting goods. Consumers can easily perceive the perishability and scarcity of a product due to the business model of fast fashion and the possibility of not getting the product they want, as a result generating the so-called in-store hoarding behaviour. Consumers will take possession of a product and keep it for themselves while shopping to keep it being purchased by other customers due to the scarcity and perishability of fast fashion goods (Byun & Sternquist, 2008). Therefore, this study proposes research hypothesis

  H2: perceived scarcity and perishability is positively related to in-store hoarding behaviour.

### Hedonic value

Consumer value can be classified as utilitarian value and hedonic value. Utilitarian value and hedonic value are important variables in assessing consumers' consumption experiences; where utilitarian value is task orientated and rational to achieve results expected in the process of shopping, such as shopping for Christmas presents or

purely buying a bottle of water for thirst; whereas hedonic value focuses on the sensation perceived from enjoyment of the overall shopping process and the actual acquisition of a product is not even the main purpose, which means consumers shop for the shopping itself and shopping is not simply to purchase (Babin et al., 1994). Batra & Ahtola (1991) also argued consumers' perception of consumption pattern could be assessed in two ways, one was utilitarianism and the other was hedonism. Judging consumers' preferences for hedonic value or utilitarian value is crucial for marketers in developing the direction of their marketing strategies (Blackwell et al., 2001).

Hedonic shopping value can be defined as the sense of enjoyment and pleasure associated with shopping at a store perceived by a consumer from the entire shopping process (Griffin et al., 2000; Kaul, 2007). Holbrook and Hirschman (1982) studied the hedonic value and the experiential perspective of consumers, which was a pioneering study to examine hedonic value and consumer behaviour. It defined hedonic consumption from an experiential perspective, including fantasy, emotional aspects of consumption, and multisensory experiences. In addition, hedonic value can vary with individual consumption orientation, cultural orientation, economic development and the overall competition in shopping environment (Woodruffe-Burton et al., 2002). Hedonic value or hedonism is also based on personal aesthetics and experiential dimension (Kaul, 2007).

Some studies propose consumers collect information on clothing products for two reasons, which are to enhance product knowledge and to experience a sense of pleasure. Experimental study further proves motivation for hedonic aspect is higher than for informative aspect (Bloch et al., 1986). Scarpi (2006) suggested that both utilitarianism and hedonism had impact on consumers purchasing fashion goods, where hedonic

value had greater influence than utilitarian value. This suggests the great impact hedonic value has on consumers when purchasing fashion goods.

On the aspect of the shopping purpose, some consumers pay greater attention on utilitarian value, whereas other consumers value more on hedonic value. Which means a comprehensive and pleasure shopping experience is what a consumer really cares. Consumers will regard goods more valuable and precious when they sense the scarcity and perishability of a product (Lynn, 1992a), and as a result are more likely to have a fun shopping experience. This study proposes hypothesis

H3: perceived scarcity and perishability is positively related to hedonic value.

Purchase Intention

Ajzen & Fishbein (1980) proposed that purchase intention was strongly related to actual purchase behavior; which meant purchase intention could actually evaluate how likely a consumer was to buy a product. Consumers tend to buy certain brands because they perceive those brands provide fine quality and perform well (Lee et al., 2008). Morrison (1979) studied the relationship between the variable means of purchase intention and actual purchase behavior, and found that purchase intention and actual purchase behavior were closely related. Purchase intention can be the possibility that consumer might purchase a good; general speaking, purchase intention is widely utilized in effectively evaluating consumers' future consumption (Dodds et al., 1991). Consumers always face many situations that might make they give up buying at any time; once the buying decision has been made, all sorts of situations are likely to

arise and interfere consumers' purchase behavior (Blackwell et al., 2001). Based on the theories, the purchase intention in this study is to explore the possibility of consumers buying fast fashion goods in the future. Byun & Sternquist (2008) pointed out in their study that in-store hoarding was a behavior where consumers kept a product in hands for themselves to avoid the product being purchased by other customers. In addition, it would enhance consumers' sense of urgency to obtain the products under the situations where they were constrained with time or uncertain of product availability (Verhallen & Robben, 1994). Therefore, retail stores often use such sales tactics as limited quantity or time to attract consumers to buy (Lynn, 1991, 1992a, 1992b). However fast fashion did not use such obvious marketing practices to attract consumers, but rather vaguely released this kind of messages and expected consumers to take immediate action (Byun and Sternquist, 2008).

Therefore, this study proposes research hypothesis:

H4: in-store hoarding behaviour is positively related to purchase intention on fast fashion goods.

There is a positive correlation between hedonic value oriented consumption and impulse purchasing (Bayley & Nancarrow, 1998). Furth-more, hedonism oriented consumption is likely to increase consumers' motivation for shopping to satisfy such hedonic value as emotional experience in a store (Hausman, 2000). Therefore, this study proposes research hypothesis H5: hedonic value is positively related to purchase intention on fast fashion goods. Based on the literature reviews and research results, this study formulates the framework as in Figure 1 below:
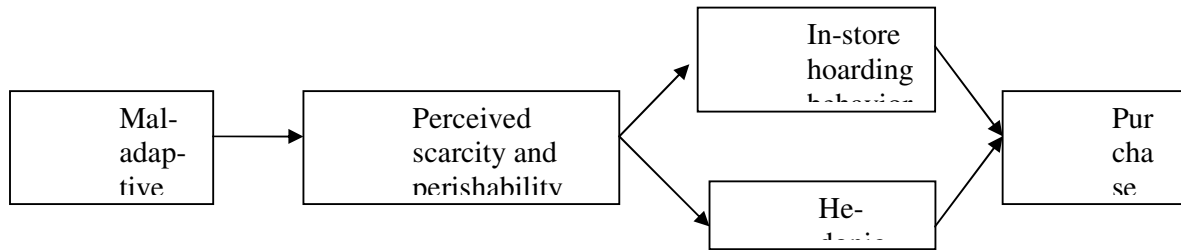
Figure 1. Study Framework

## Research Methodology

This study formulates a questionnaire referring to prior research findings and questions on variables and amending to conform to our need. Seven-point Likert scales were used to measure all constructs.

### Pre-test

The test objects of this study are consumers who have purchased products from fast fashion brands like ZARA, H&M, or UNIQLO's physical stores overseas. There are a total of 40 questionnaires delivered and collected, with valid questionnaires of 37 after deducting questionnaires of invalid answers. The reliability analysis on the pretest questionnaire shows the Cronbach's α value of maladaptive beliefs is 0.888, and after deleting question 6 the overall Cronbach's α value increases to 0.892; and the question is too wordy that respondents may not be able to understand it within the time frame, it is therefore deleted. There are a total of 10 questions in this section and it is a questionnaire of high reliability. The Cronbach's α value of perceived scarcity and perishability is 0.722, and after deleting question 9 the overall Cronbach's α value increases to 0.793; it is then amended that the respondents can understand it better. There are a total of 8 questions in this section, and it is of acceptable reliability. The Cronbach's α value of in-store hoarding is 0.819, thus all questions are left unchanged.

There are a total of 6 questions in this section and it is of high reliability. The Cronbach's α value of hedonic value is 0.939, and after deleting question 13 the overall Cronbach's α value reaches 0.949; there are a total of 12 questions in this section and it is of high reliability.
Formal questionnaire delivery and collection

The participants of this study are consumers who have purchased products from ZARA, H&M, or UNIQLO's physical stores overseas. The study utilizes the free web space and builds an internet questionnaire, and distributes the questionnaire via emails and web forums. We also distribute physical questionnaire in Taipei, the capital city of Taiwan, to avoid bias in overly concentration of participants' distribution via the Internet. Bhattachabyya & Johnson (1977) proposed a method of estimating the number of valid samples, where the population sample is unknown, and the number of valid sample has 95% in reliability and convergent validity with an error of 5%, the number of valid sample is approximately 384. Therefore the number of valid sample collected in this study should be over 385. On the result of questionnaire collection it recovers 480 completed questionnaires from the Internet with a valid number of 376; and it recovers 130 completed physical questionnaires with a valid number of 118. The total number of valid questionnaire is 494.

On the gender ratio, the majority of participants are female with the number of 322, 65.2% of the total participants; there are relatively less male participants with the number of 172, 34.8% of the total people. On the age distribution, the majority are 24-28 years old with the number of 237, 48% of the total participants; it is followed by the group of 19-23 years old with the number of 158, 32% of the total people; and finally the group of 29-35 years old with the number of 80, 16.2% of the total participants.

### Research Analysis and Results

The hypotheses were tested using regression with each of the variables serving as the dependent variable.

### Reliability and Convergent Validity Analysis

The sample of this study shows the Cronbach's α value of maladaptive beliefs is 0.88, which reaches the mid-high level; the Cronbach's α value of perceived scarcity and perishability is 0.77, which is acceptable; the Cronbach's α value of in-store hoarding is 0.78, which is acceptable; and the Cronbach's α value of hedonic value is 0.91, which reaches the high level. The figures show the reliability of this study is well as shown in Table 1. In the gender t-test, there is no significant difference.

Table 1. Sample gender T-test and reliability analysis

| Item / Variable | Mean Male | Mean Female | T - test | Cronbach's Alpha value | Number of questions |
|---|---|---|---|---|---|
| Maladaptive beliefs | 4.10 | 4.04 | 0.59 | 0.88 | 10 |
| Perceived scarcity and perishability | 4.87 | 4.82 | 0.68 | 0.77 | 8 |
| In-store hoarding | 4.47 | 4.60 | -1.37 | 0.78 | 6 |
| Hedonic value | 5.06 | 5.05 | 0.12 | 0.91 | 12 |

Validity analysis is to examine whether the questionnaire construed for a study can correctly measure the model for its capacity and accuracy. This study will evaluate it from the content validity and the construct validity aspect.

Content validity refers to the appropriateness of the topics of the scale in relation to the sampling of related content or behavioural dimension, in order to be representative. The initial development of the questionnaire in this study was drawn up based on the theory and related literature from well-known scholars; and then a pre-test was conducted to modify and retouch the wording and questions after inquiring the respondents' opinions. On the other hand, domestic experts and scholars were invited to provide comments on the questionnaire which was then modified accordingly. Therefore, the content validity of the questionnaire developed by this study is satisfactory.

Construct validity refers to the degree to which the topics can measure certain theoretical concepts or attributes. In general the convergent validity and discriminant validity are used to examine the standard of construct validity.

Composite reliability and average variance extracted are calculated first to interpret convergent validity. Each variable in this study has composite reliability greater than 0.7 and average variance extracted greater than 0.5, thus this study is considered to have substantial convergent validity. (See Table 2.)

Discriminant validity can be assessed by using correlation matrix between the latent variables, which is PH matrix after standardization. The diagonal element in PH matrix is replaced by square root of the average variance extracted, and then the value of the diagonal element is checked to see if it is greater than the value of its corresponding column and row. When the value of the diagonal element is greater than its corresponding column and row, it is referred to have discriminant validity. Table 3 shows all the values of the diagonal elements are greater than the values of their corresponding columns and rows, which indicates this study is qualified as of adequate discriminant validity.

Regression Analysis

Simple linear regression analysis:
1) The effect of maladaptive beliefs on perceived scarcity and perishability, Table 4 shows maladaptive beliefs has a significant impact on perceived scarcity and perishability (F value is 19.927, and P value is 0.000). The β estimated value of maladaptive beliefs is 0.146 indicating the higher maladaptive beliefs, the higher consumers' perceived scarcity and perishability is. As a result the simple linear regression model is inferred as: perceived scarcity and perishability = 4.249+0.146 * maladaptive beliefs. The R square of the model is 0.059 and the adjusted R square is 0.057, suggesting that the overall explanatory power of this model reaches 5.7%. This empirical research identifies maladaptive beliefs has a positive influence on perceived scarcity and perishability, therefore hypothesis H1 is acceptable.

2) The effect of perceived scarcity and perishability on in-store hoarding behavior, Table 5 shows significant influence perceived scarcity and perishability has on in-store hoarding behavior (F value is 78.759 and P value is 0.000). The β estimated value of perceived scarcity and perishability is 0.478, which reaches significant, suggesting the higher perceived scarcity and perishability the higher in-store hoarding behavior is. As a result the simple linear regression model can be deduced as: in-store hoarding behavior = 2.228+0.478 * perceived scarcity and perishability. The R

Table 2. Convergent Validity

| Item Variable | Composite reliability | Average variance extracted |
|---|---|---|
| Maladaptive beliefs | 0.92 | 0.53 |
| Perceived scarcity and perishability | 0.91 | 0.56 |
| In-store hoarding | 0.78 | 0.76 |
| Hedonic value | 0.94 | 0.57 |

Table 3. Discriminant validity

| Item / Variable | Maladaptive beliefs | Perceived scarcity and perishability | In-store hoarding | Hedonic value |
|---|---|---|---|---|
| Maladaptive beliefs | 0.73 | | | |
| Perceived scarcity and perishability | 0.18 | 0.75 | | |
| In-store hoarding | 0.52 | 0.46 | 0.87 | |
| Hedonic value | 0.50 | 0.40 | 0.61 | 0.76 |

Table 4. Simple linear regression analysis
between maladaptive beliefs and perceived scarcity and perishability

| Model | Non-standardised coefficient | | Standardised coefficient | t value | Significant |
|---|---|---|---|---|---|
| | β estimated value | Standard errors | β distribution | | |
| Constant variance | 4.249 | 0.137 | 0.197 | 30.993 | 0.000 |
| Maladaptive beliefs | 0.146 | 0.133 | | 4.464 | 0.000 |
| F value | 19.927 | | | | |
| R square | 0.059 | | | | |
| Adjusted R square | 0.057 | | | | |

square of the model is 0.138 and the adjusted R square is 0.136, supposing the overall explanatory power of this model reaches 13.6%. This empirical research suggests perceived scarcity and perishability has significant influence on in-store hoarding behavior, therefore hypothesis H2 is acceptable.

3) The effect of perceived scarcity and perishability on hedonic value, Table 6 shows significant influence perceived scarcity and perishability has on hedonic value (F value is 38.030 and P value is 0.000). The β estimated value of perceived scarcity and perishability is 0.318 which reaches significant, representing the higher perceived scarcity and perishability the higher consumer's hedonic value is. As a result the simple linear regression can be modeled as: hedonic value = 3.509+0.318 * perceived scarcity and per

ishability. The R square of the model is 0.072 and the adjusted R value is 0.070, suggesting the overall explanatory power of this model reaches 7.0%. The empirical research proves perceived scarcity and perishability has significant influence on hedonic value, therefore hypothesis H3 is acceptable.

Logistic regression analysis

Table 7 shows the overall omnibus test result of model coefficients, where the chi-square value of the two independent variables is 8.639 and p value of 0.013, less than 0.05, represents significant. Which indicates at least one of the two independent variables, in-store hoarding and hedonic value, in this study can effectively interpret and predict the result of the samples' yes/no in purchase intention.

Table 8 shows the logistic regression analysis of the two independent variables on purchase intention, and the significant test

Table 5. Simple linear regression analysis of the relationship
between perceived scarcity and perishability and in-store hoarding

| Model | Non-standardised coefficient | | Standardised coefficient | t value | Significant |
|---|---|---|---|---|---|
| | β estimated value | Standard errors | β distribution | | |
| Constant variance | 2.228 | 0.264 | 0.371 | 8.470 | 0.000 |
| Perceived scarcity and perishability | 0.478 | 0.054 | | 8.875 | 0.000 |
| F value | 78.759 | | | | |
| R square | 0.138 | | | | |
| Adjusted R square | 0.136 | | | | |

Table 6. Simple linear regression analysis of the relationship
between perceived scarcity and perishability and hedonic value

| Model | Non-standardised coefficient | | Standardised coefficient | t value | Significant |
|---|---|---|---|---|---|
| | β estimated value | Standard errors | β distribution | | |
| Constant variance | 3.509 | 0.253 | 0.268 | 13.857 | 0.000 |
| Perceived scarcity and perishability | 0.318 | 0.052 | | 6.167 | 0.000 |
| F value | 38.030 | | | | |
| R square | 0.072 | | | | |
| Adjusted R square | 0.070 | | | | |

Table 7. Omnibus test of model coefficients

| | | Chi-square | Degree of freedom | Significant |
|---|---|---|---|---|
| Step 1 | Step | 8.639 | 2 | 0.013 |
| Block | | 8.639 | 2 | 0.013 |
| Model | | 8.639 | 2 | 0.013 |

of the overall model $x^2$=8.639 which reaches the significant level of 0.05; and the values for Cox and Snell $R^2$ and Nagelkerke $R^2$ are 0.117 and 0.255, respectively, which means the two independent variables given has a low correlation with purchase intention where the two independent variables can explain the total variations of purchase intention of 11.7% and 25.5%. In Ta-

ble 8 the Hosmer-Lemeshow value is 4.926, and p is 0.766 which is greater than 0.05 and does not reach the significant level; which means the goodness of fit of the overall model is good and independent variables can effectively predict dependent variables. In addition, Table 8 shows that of the two given independent variables, only in-store hoarding's Wald value reaches the level of significant, which indicates in-store hoard-

ing is significant related to purchase intention; whereas hedonic value's Wald value does not reach the level and has no significant relationship with purchase intention. Therefore hypothesis H4 is acceptable, but hypothesis H5 is not acceptable. Furthermore, the β estimated value of in-store hoarding is 0.557 indicating in-store hoarding has a positive influence on purchase intention.

Table 9 is the cross-tabulation of predicting accuracy of classification. It shows that of 471 consumers who are willing to buy, one person has been classified in no-buy group (classification error); and that of 23 consumers who do not want to buy, 4 have been classified in buy group (classification error); and the overall accuracy of classification is 98.9%, according to the classification forecast of Logistic regression model. This indicates the regression model built based on in-store hoarding and hedonic value has a high prediction rate of purchase intention on fast fashion goods.

According to the Logistic regression equation, the regression equation built is: purchase intention = 0.078+ (0.557 * in-store hoarding behavior)-(0.148 * hedonic value). Of which in-store hoarding has significantly positive correlation with purchase intention on fast fashion goods, which indicates consumers who are higher in in-store

hoarding tendency their purchase intention on fast fashion goods will be higher.

Hypothesis Verification

Results from this study indicate that maladaptive beliefs have a positive relationship with perceived scarcity and perishability, thus hypothesis H1 is acceptable. It proposes that consumers who are strong in maladaptive beliefs are easier to perceive products' scarcity and perishability. Consumers who can easily project memories or even attach emotions to a product represents they are particularly vulnerable to sentiment and value the objects they've owned or are going to own. Therefore they are very likely to be moved by the message of scarcity and perishability released from a product.

Perceived scarcity and perishability has a positive relationship with in-store hoarding behaviour, thus H2 is acceptable. It proves that consumers will develop in-store hoarding behaviour when they feel scarcity and perishability of a product. When consumers feel the products at a store may be discount items for a limited time or may not be available for their next visit, the reasonable response is to take appropriate reaction; and in-store hoarding behaviour is the sensible reaction because it can further reduce the risk of a product being deprived and the product is still available.

Table 8. Goodness of fit of Logistic regression analysis and examination of the significance of individual parameters summary

| Variable tested | B estimated value | W.E. | Wald value | Df | Significant strength |
|---|---|---|---|---|---|
| In-store hoarding | 0.557 | 0.248 | 5.059** | 1 | Cox & Snell $R^2$=0.117 |
| Hedonic value | -0.148 | 0.249 | 0.351 | 1 | Nagelkerke $R^2$=0.255 |
| Constant term | 0.078 | 1.169 | 0.004 | 1 | |
| Goodness of fit | $x^2$=8.639*** | | | | |
| | Hosmer-Lemeshow =4.926 n.s. | | | | |

***P<0.01 **P<0.05 *P<0.1 n.s.P>0.1

Table 9. Cross-tabulation of predicting accuracy of classification

| Actual group | Predicting group | | |
|---|---|---|---|
| | Buy | No buy | Accuracy of model |
| Buy | 470 | 1 | 99.8% |
| No buy | 4 | 19 | 82.6% |
| Accuracy of model | | | 98.9% |

Perceived scarcity and perishability has a positive relationship with hedonic value, thus H3 is acceptable. It proposes that consumers consider scared products more valuable and precious comparing to general products when they perceive the scarcity and perishability of the products (Lynn, 1992a).

In-store hoarding behaviour has a positive relationship with purchase intention on fast fashion goods, thus H4 is acceptable. It proves consumers who hold in-store hoarding behavior have higher purchase intention on fast fashion goods; which means consumers who pick up and keep a product for themselves have higher subsequent purchase intention than those who don't.

Hedonic value has a negative relationship with purchase intention on fast fashion goods, thus H5 is unaccepted. This represents hedonic joy arises from the overall shopping process will not promote consumers' purchase intention on fast fashion goods. The result of this hypothesis does not support the literatures to which this study referred. However, hedonic value will increase consumer purchase motivation to satisfy their desire for pleasure, and eventually leads to compulsive purchasing (Piron, 1991; Hausman, 2000). On the other hand, Han et al. (1991) proposed that consumers will more easily be moved by the design and style of clothing in a fashion-oriented shopping process; in other words, factors such as fashion design or style may have a greater influence than hedonic value in fashion world.

Conclusion and Recommendations

*Research Recommendations*

Past academic researches on fast fashion focus more on logistics and distribution channel, emphasizing on rapid and flexible distribution policy or strategic management of fast fashion (Sheridan et al., 2006), with less attention on consumers' perspectives derived from fast fashion. However, consumers are the major aspect of purchase behavior; fast fashion brands aim to attract consumers' attention by utilising strategy based on consumers' perspectives and innovative model in fashion industry, which ultimately leads to accept and further purchase fast fashion goods. In a world of information overload and booming internet, consumers can easily gather a lot of fashion information. At the same time, under the influence of rising living standards and the impact of economic recession, general consumers would like to enjoy the ability to select from a great variety of the latest fashion designs at an affordable price.

Therefore, based on the conclusions of this study, this study offers the following recommendations to fast fashion industry: Continue to meet consumers' taste for newness

The times where fashion industry updated merchandise once per season has been seriously challenged due to current consumers can easily receive information and quickly collect and browse fashion information and the latest fashion styles from media, blogs or forums. As a result, consumers

are more assertive in clothing goods and fashion trends, and no longer swayed by others. In addition, consumers tend to be overly fond of new products in the market; and their preferences change as quickly as the fashion trends that are hard for fashion industry to follow. Best selling items last week could become unpopular today. Fashion retailers should be aware of this trend and the ever-changing consumers' preferences. Therefore, those companies who continue meeting consumers' tastes in new products while maintain a certain level of quality and standards are believed to be able to earn its place in the market.

These are the benefits and opportunities of fast fashion model, where fashion retailers would soon be eliminated by the quick replacing power of fast fashion if they do not know to be adaptable. Take ZARA as example, its price range in fashion industry sits at mid- to upper-mid level and its quality is at around mid-level; and their advantage is the choices of diversified styles. The price indeed is lower than the popular and high-end clothing fashions but not necessarily cheaper than the low cost brands. H&M prices slightly lower than ZARA but enjoys the same advantage of diversification; UNIQLO poses biggest threat to the low cost brands, focuses more on launching basic styles, and has the lowest price of the three.

Overall, the three fast fashion brands price their products differently but all hold enough power to threaten general fashion retailers, which is diverse selection, affordable prices and organization of flexibility. Facing such strong competitors, general fashion retailers might wish to follow fast fashion model. However not every fashion retailer is suitable for this strategy, they should consider their own operation model, product advantages, target customers and supporting logistics system to decide whether to follow fast fashion brands and accelerate their products circulation, or to

strengthen their product features and promote certain styles, or to attract price-oriented consumers with even lower prices. Encourage consumers to develop in-store hoarding behavior

This study proposes in-store hoarding behaviour has a positive relationship with purchase intention on fast fashion goods, where fast fashion goods can make consumers feel the urge to purchase the item they like as it might be unavailable next time. In-store hoarding becomes an act of prevention for consumers due to the scarcity and urgency created by fast fashion good; and when in-store hoarding behaviour arises it indicates that consumers are likely to purchase fast fashion goods, which means in-store hoarding behavior, can be described as the prelude of consumer purchase behaviour. Therefore, fashion stores can encourage consumers to develop in-store hoarding behaviour from some marketing tactics of fast fashion characteristics, such as speeding up the circulation of goods, limited time promotion, and limited quantity promotion. Consumers are very likely to purchase products when they are encouraged to develop in-store hoarding behaviour. Reinforce a sense of affinity with fast fashion goods

The prices of fast fashion goods are not as hard to reach as consumers expect in Taiwan; thus when fast fashion brands enter into Taiwan's market, retailers can promote that, given the same fashion style and price, fast fashion goods have a wider selection than other brands. Apart from this, fast fashion goods provide a collection of design from major fashion brands in the world so that consumers can purchase fast fashion goods without spending huge amount of money and at the same time enjoy the design and functionality of top fashion brands. Target specific consumer groups

Fast fashion retailers should target their marketing strategies towards specific con-

sumer groups. For example, female customers prefer to be charming and attractive, and possess different mentality as male consumers which could be purchase behaviour that derives simply from wanting to buy, a feeling of dislike to regret, swinging between non-routine and extreme reality, and comparing to commercial terms healing words being more effective. Thus, fast fashion brands can take the subtle inner traits of female consumers into account when they enter into the market in Taiwan and develop marketing strategies in the future. Or they can target younger consumers as the prime customers because fast fashion owns advantages that fit perfectly with what young consumers love. In addition to targeting consumers by sex and age, fast fashion pursues quick updating products, and therefore can focus on consumers who like fashion and novelty, have certain level of education, love shopping for pleasure, and are more edgy and trendy.

*Pay close attention to changes in other industries and fast fashion*

Fast fashion strategy has been widely applied in certain clothing brands; its quick stock turnover, less expensive price, and flexibility and quick response has become their competitive advantages. ZARA's advertising budget is lower comparing to other clothing retailers, which only accounts for 0.3% of the total revenues. ZARA therefore saves a lot of advertising budget to increase their profit margin. They pay more attention on the impact of storefronts and word-of-mouth than advertising. Fast fashion retailers have to constantly keep pace with consumer demands and find out what general public would like as fast fashion goods need to be updated in store. Apart from fashion retail industry, fast fashion can expand to other industry sectors by employing its ability of successfully attracting customers, and quick response and flexibility. For example, online fashion stores can take advantage of flexibility than general stores and quickly

launch fashionable new products in current season; fashion footwear retailing industry can promote more variety per season and attract customers with their fashion styles that can equal those high priced brands through word of mouse. Fast fashion strategy can be applied in various industries to constantly explore consumer demands, quickly launch more new items in one season to attract consumers, and meet customer tastes of all classes.

*Pay attention to variety - and fashion-oriented era*

There are several factors determining the fashion cycle in fashion marketing, which include natural season factor, that is weather, trend followed by groups, and commodities moving from hypermarket to high end market. But in contemporary society, fashion industry must constantly keep updated to discover all sorts of creative ideas from every corner in the world. In the past, French is the leader of fashion world, but now other important fashion sites like the United States and Japan have gradually taken their leads as well. At the same time, new lifestyle has gradually changed the style and design of fashion; and fashion leaders in the past will need to adopt.

Younger consumers prefer to have variety and choices; and item of fashionable trend has become a growing and powerful trend.

Marketing Recommendations

This study shows that inducing consumers' in-store hoarding behaviour has a positive influence on purchase intention; thus marketing professionals can develop their marketing strategies accordingly. The main points are how to stimulate consumers' feeling towards unavailability and scarcity, and further encourage consumers' in-store hoarding behaviour to purchase goods. In addition, this study will propose and dis-

cuss fast fashion industry from a marketing perspective. The following section will examine fast fashion goods from STP and marketing mix aspect respectively.

### STP

Market segmentation: Using demographic variables as segmentation variable; for instant, different age groups pursue fashion differently in degree, which will influence the sales of fast fashion goods. Segmenting the market by different age groups can develop a more effective promotion activity.

Targeting: Although fast fashion goods launch clothing for all ages and all occasions, it can target particularly at consumers under 30 years old who are trend oriented and fashionable due to its quick stock turnover feature.

Positioning: This is to identify and analyze the positioning of fast fashion goods, which is to understand the price of fast fashion goods is at mid-range in the whole fashion retailing market and the design is positioned at mid to high level; precise positioning can better develop effective marketing strategies.

### Marketing mix

From the perspective on product itself, the main characteristics of fast fashion goods are quick stock turnover and low in quantity but more variety that attract the attention of many consumers. At the same time, fast fashion industry has many designers who design products basing on consumers' preferences and market trends; each design is of limited quantity but fashionable style. As a result consumers can perceive a sense of scarcity and perishability, and develop in-store hoarding behavior and eventually purchase fast fashion goods. From the perspective on price, fast fashion goods are relatively cheaper than popular luxury

brands, and provide consumers with more choices in fashion styles at an affordable price. From the perspective on promotion, apart from quick updated items, fast fashion goods often attract consumers with limited in-store specials. This strategy of increasing consumers' perceived scarcity can deliver such message as the liked products may not be available. In fast fashion market, retailers take advantages of the characteristics of quick stock turnover to create the preciousness of the product. Fast fashion retailers are able to achieve this by the support of the supply chain and distribution channel. In terms of quantity, this can be achieved from both the supply and demand side; from the supply point of view, offering limited edition products makes consumers scramble for it; in terms of demand, retailers can place certain level of pressure on consumers by emphasizing stock shortage. In terms of season, retailers can work from the supply side, and add seasonal factor to products or limitation to certain time frame.

In terms of distribution channel, fast fashion industry mainly sells directly to their retail stores, hoping to closely control each branch; in addition, they carefully chose store location and invest in store layout, hoping to provide a trendy and fashionable environment for consumers to experience and enjoy.

Through the recommendations, this study aims to provide better marketing strategies in practice for fast fashion industry.

### Study Limitations and Future Research Directions

Due to the time, financial and resource constraints, there may be some issues in certain areas, and therefore in this section we raise the study limitations for future research directions and recommendations. In addition, the scope of this study focuses on the clothing sector of fashion industry, and

thus it is difficult to apply the same conclusions to other related fashion industry. It is suggested to expand researches to other fashion sectors in the future, such as footwear industry.

The recommendations for future research directions are, first of all, conducting more researches on different brands. The targeted research subjects of this study are brands such as ZARA, H&M, and UNIQLO; but there are many fashion brands such as Top Shop, Mango and GAP that have the characteristics of fast fashion,

and thus it is advised to further study different fast fashion brands in the future. Secondly, comparing post-purchase behavior; it is suggested to target consumers of different fast fashion brands and study the post-purchase behavior after they purchase fast fashion goods.

Lastly, comparing different consumer values; as this study suggests that hedonic value and purchase intention of fast fashion goods are not significantly related, it is recommended to explore consumer's utilitarian value in the future.

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# A STUDY OF THE APPLICATION OF COMPETITIVE DYNAMICS THEORY INTEGRATED WITH AHP - A CASE STUDY OF TAIWAN'S LISTED AUTOMAKERS

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Abstract

This study constructed the Competitive Dynamics AHP Model (CDAHPM), and integrated multiple resources to measure resource similarity, as to facilitate the inter-organizational competition analysis. This study integrated different resources and incorporating them into the CDAHPM resource similarity computation according to their priorities to facilitate the objective resource analysis. By applying the Analytic Hierarchy Process (AHP), the CDAHPM constructs different resources and criteria before measuring the priority sequence and weights of the resources and criteria. In the empirical study of Taiwan's listed automakers, three different resources were integrated to develop the resource similarity, which was analyzed by CDAHPM. Moreover, strategic suggestions for various companies were proposed. Regarding the construction of CDAHPM, for single or comprehensive resource analysis, there are differences in competitor perceptions, predicted actions or responses with traditional competitive dynamics. No past studies have integrated multiple resources to conduct the competitive dynamics analysis. This study proposed a new model for the computation of resource similarity in the competitive dynamics analysis.

Keywords: Competitive Dynamics, AHP, CDAHPM

Introduction

Strategic planning is very important for enterprises in a competitive environment, and it requires subtle and correct perception and analysis of the competitors. Many studies have proposed different aspects of corporate resources. As the data evaluation in different resource aspects can produce different strategic judgments, the establishment and analysis of an integrated resource similarity to determine the right strategy is a research priority.

Past studies have suggested that resources can be presented in different forms, such as human resources (Schuler and Jackson, 1987), strategic assets (Amit and Schoemaker, 1993), knowledge-based capabilities (Teece et al., 1994), and discussed the impact of different resources on the company from five dimensions including ability, knowledge assets, organizational assets, goodwill assets, tangible assets and a variety of resource items (Jeremy, 2005). These studies have enhanced the importance of the impact of the corporate resources on its strategy and marketability with the same meaning, and explained the variety of aspects of resources. The single resource aspect evaluation and analysis can produce different competitors, thereby affecting strategy formulation.

Based on literature review, this study finds that the distribution of various resources of the company can be known by current assets and fixed assets (Hall's, 1992; Jeremy, 2005). The current assets and fixed assets are company resources (John and David, 2012). In the generation of different resources and rules, the application of AHP method can systematize the complex problems of decision-making with multiple eval-uation rules by decomposing them at different levels and quantifying the results for integrated evaluation. Hence, the appropri-

ate options can be provided for the decision-makers. By applying the AHP, the CDAHPM constructs different resources and criteria before measuring the priority sequence and weight of the resources and criteria, in order to summarize different data of resource similarity for analysis and comparison.

Differ from the competitive dynamics analysis model of the market commonality and resource similarity, different resources may be not the same importance. This study calculates the resource similarity of different resource aspects, and applies the CDAHPM integrated with current assets, fixed assets, and sales locations. Finally, regarding the case study, this study uses Taiwan's four listed automakers as examples, and applies the CDAHPM to establish the different criteria of resource, and calculated the resource and criteria weights for the four automakers. The measurement and analysis of resource similarity are also conducted. Based on resource similarity, different weights affect the resource heterogeneity, strategic consideration, and priority sequence. Competitor images are established for evaluating and predicting the competitors' the market, resources and weights. According to the analysis results, in the resources of current assets, fixed assets, and sales locations differ from the basic competitive dynamics theory the single resource evaluation that will generate different major competitors, the CDAHPM can consider the strategic formulation by integrating different resources.

Cheng (1996) argued that the consideration of using resource similarity measured by competitive dynamics has potential problems, and thus other resources may be taken into consideration. This is the focus of the present study. The proposed CDAHPM integrates different resources in the description of the competitor images. When analyzing the

competitors, besides understanding the market and resource, it can bring an understanding to the weights of different resources.

The remainder of this paper is organized as follows. Section 2 summarizes the studies on competitive dynamics, Resource-based theory (RBT), AHP theory, and different resources. Section 3 describes the research methodology, constructs different resources and criteria architecture, and proposes the CDAHPM. Section 4 uses Taiwan's automobile industry as an example, and applies the CDAHPM on data analysis and the description of the locations of competitors of the cases, in order to illustrate the analysis of competitors. Section 5 offers conclusions and suggestions, and highlights the contributions of this study on solving the problem of similarity of multiple resources by using the CDAHPM.

Literature Review

Regarding the evaluation of the market commonality and resource similarity proposed by the competitive dynamics theory, past studies often adopt the multiple competition in the analysis of competitors (Karnani and Wernerfelt, 1985; Gimeno, 1994; Smith and Wilson, 1995) in order to emphasize the importance of market share in the evaluation of corporate strategies. Some studies apply the RBT (Barney, 1991; Peteraf, 1993; Conner, 1994) to distinguish the enterprises by strategy or resource. However, these studies mostly focus on market or internal operations of the enterprises for evaluation. Some scholars (Amit and Schoemaker, 1993; Poter, 1991) underlined the evaluation balancing the external market and the internal resources. The competitive dynamics theory (Chen, 1996, 2007) is to evaluate the objective competitors by the perceptions of the focus manufacturer. The theory is confirmed by the perception, competitor image analysis, attack and response in the case of airliners in the U.S. Similarly, in the study on similarity characteristics (Tversky, 1977), Tversky suggested that commonly accepted symmetry axiom underlying the metric distance function is not valid in capturing the concept of similarity, i.e., d (a,b)≠d (b,a). Statements of similarity are directional and depend on which element of the comparison is the "subject" and which the "referent". To illustrate this concept, Tversky further pointed out that "A is like B" is not the same as "B is like A". This echoes that the focus manufacturer explained by the competitive dynamics can evaluate its competitors according to market commonality and resource similarity.

RBT

The core concept of RBT is to follow "distinctive competence" proposed by the "heterogeneous resource" proposed by strategic management scholars (Selznick, 1997; Chandler, 1962, 1977; Ansoff, 1965; Barnard, 1970; Andrew, 1971). According to (Hoskisson, 1999), Barnard discussed in the book entitled The Functions of the Executive the company organization and operational mechanism by the management function and process based viewpoints to open the door to the research on strategic management.

The research on the strategic management of resource-based concepts includes the company aspect viewpoint of inside-out strategic analysis (Penrose, 1959; Wernerfelt, 1984; Rumelt, 1984; Barney, 1986b, 1991). The "industrial aspect" viewpoint of out-inside strategic consideration is discussed by (Porter, 1980, 1985, 1991). It is clear that many scholars have different views and ideas about the inside and outside environment concerning research topics on resources.

However, the ultimate purpose of the studies is to discuss how the enterprises maximize their profits. Therefore, in summary of the above RBT viewpoints from inside the company, the discussion on how the company maintains and improves competitive advantages differs from the viewpoint of industrial organizational economics; instead, it focuses on external environment.

Penrose (1959) mentioned in the book entitled The Theory of the Growth of the Firm that enterprises should have excellent resources and the distinctive competence to make effective use of these resources. Penrose is a pioneer of RBT (Montgomery, 1996). By extending the viewpoint of Penrose, (Wernerfelt, 1984) proposed the term of resource-based view (RBV) and the replacement of "product view" by "resource view" in his article concerning enterprise RBV. He argued that enterprise should make proper use of resources and strengthen resource efficiency in management, in order to build resource advantages that other competitors do not have for sustainable competitiveness. (Grant, 1991) was the first scholar to replace RBV with resource-based theory (RBT) and highlighted the significance of the theory in academic study. (Barney, 1986a) extended the viewpoint proposed by Wernerfelt, arguing that business performance does not come from the product market competition only but can be attributed to resources of different business backgrounds as the future values of different enterprises generated from different strategic resources are varied. Hence, when selecting strategy, enterprises should analyze the unique resources including technology and capability.

Regarding the definition and categorization of business resources, scholars have proposed different views. (Penrose, 1959) was the first scholar who regarded resource as the key factor affecting business behaviors. He considered the enterprise as the system of resource combinations and the enterprises pursue business growth through effective use of internal resources. (Coyne, 1986) used the two categories of abilities of "having" and "doing" to describe the organizational resources. The "having" ability means that the enterprise has competitive advantages and defensive position in terms of the results of previous actions.

Legally speaking, it includes the ownership rights of the legal entity such as the intellectual property rights. The "doing" ability means that the ability in function including knowledge, technology, employee experience and other business related personnel (e.g., supplier, distributor). (Hamel and Prahalad, 1994) pointed out from the core expertise perspective that the core expertise in the long term comes from the current product price and performance. However, in the long term, it comes from the ability to launch products of lower cost in a more rapid way than the competitors. The future of the enterprises is the competition of core expertise, and thus, the enterprises should focus on the development, acquisition and layout of its core expertise, and also accumulate and concentrate the expertise on strategic key points. (Grant, 1991) argued that "resource" is the basis of corporate profitability and is the major source of organizational "abilities".

RBT concerns about how to identify, clarify, cultivate and protect the core and unique resources of the organization. (Hill and Jones, 1992) pointed out that companies should promote the extraordinary ability to achieve better efficiency, quality, innovation and customer response for the application in the differentiation and cost-based strategy in order to complete value creation. The extraordinary ability mainly comes from organiza-

tional resources and the potential for using the resources. To summarize, resource is the basis to keep the competitiveness of the enterprises. These core resources allow the enterprise to have better value creation activities and profits.

As mentioned above, many studies have argued that resources should be distinguished into tangible and intangible resources (Jeremy, 2005; Hall, 1992, 1993). The tangible resources include financial assets (Grant, 1991), physical assets (Grant, 1991), and public financial reports (Wyatt, 2002; Jeremy, 2005). In the same resource dimension, current assets and fixed assets are presentations of the tangible resources of the company. The current assets are studied in the study of company resource (Rauscher and Wheeler, 2012; Dong, Liu, Klein, 2012). The fixed assets is used to illustrate and analyze the resources of the company (Deepankar and Ramaa, 2013; Sheila and Javier, 2012; Allen and Lamont, 2011; Hu and Fang, 2010; Karen, 2009).

Competitive Dynamics.

The competitive dynamics is to measure and analyze competitors utilizing the market commonality and resource similarity by observing the competitors in two dimensions, including the market and resource, in order to understand the competition motivation, and compares their abilities and performance. Then, pre-judgment of the competition behavior and response are made to return to the competition analytic architecture for cycles. The competitor image uses the comparator to compare the market commonality, and resource similarity of the companies, indicating the locations of competitors in the two-dimensional graphs. The locations in the graph also illustrate the corresponding relationships with the competitors to explore and pre-

dict the possibility of mutual competition strategy. Regarding the comparison of market and resource, market commonality is the stronger and more beneficial prediction in the prediction of competition behaviors and response (Cheng, 1996, 2007).

Market commonality.

$$M_{ab} = \sum_{i=1}^{2000} \left[ \left( P_{ai}/P_a \right) \times \left( P_{bi}/P_i \right) \right] \qquad (1)$$

Mab = Market commonality that airline b has with the focal airline a;
Pai = Number of passengers served by a in route i;
Pa = Number of passengers the served by a across all routes;
Pbi= Number of passengers served by b on route i;
Pi = Number of passengers served by all airlines in route i;
i = A rout, among the top 2,000 routes, served by both a and b.

Eq. (1) measures the market commonality, which indicates the degree of commonality in the product market of the focus manufacturer and its competitors. A high degree of market commonality suggests that the two companies are more likely to be competitors. When the possibility of competition behavior is low, the competition response is more like to take place (Chen, 1996, 2007).

Resource significance.

$$T_{ij} = \sum_{m=1}^{n} \left[ \left( A_{im}/A_i \right) \times \left( A_{jm}/A_m \right) \right] \qquad (2)$$

Tij = Resource significance between airline i and j;
Aim = the total number of m type aircraft operated by airline i;
Ai = the total number of aircraft operated by airline i;
Ajm = the total number of m type aircraft operated by airline j;

Am = the total number of m type aircraft operated by all airlines;
m = Types of aircraft operated by both airline i and airline j

Eq. (2) measures the resource similarity. The comparison of the available resources of the focus manufacturer and its competitors indicates the differences in resources and competition strategy. At a higher degree of resource similarity, the possibility of competition is low and the possibility of competition response is high (Chen, 1996, 2007). In brief, competitive dynamics measures the competitors in the market and resource, and illustrates the market commonality and resource similarity. The competition behaviors and responses may belong to the following situations (Chen, 1996):

Proposition 1a: The greater B's market commonality with A, the less likely A is to initiate an attack against B, or else being equal.

Proposition 1b: The greater A's market commonality with B, the more likely B is to respond to A's attack, or else being equal.

Proposition 2a: The greater B's resource similarity with A, the less likely A is to initiate an attack against B, or else being equal.

Proposition 2b: The greater A's resource similarity with B, the more likely B is to respond to A's attack, or else being equal.

AHP

The AHP, proposed by Saaty (1971), is a systematic analysis tool for applications in uncertainties and decision-making problems that involve multiple assessment criteria. The four major steps of AHP are as follows:

Step 1. Define the problem: regarding the problem under discussion, make further analysis and define the problem range.

Step 2. Establish a hierarchical architecture: hierarchical evaluation architecture is the main part to explore the interactions between various criteria. The hierarchical architecture can be developed from the topmost abstract indicators to clearer indicators through the detailed list.

Step 3. Compute the relative weight between criteria: establish the pairwise comparison matrix, compute the maximum eigenvalue, and obtain the maximum eigenvector to determine the relative weight of the various criteria through the standardized procedure.

Step 4. Consistency verification: to ensure the credibility of the computation results of Step 3 (i.e., the pairwise comparison matrix transitivity). The consistency index (C.I.) of the matrix is shown in Eq. (3).

$$C.I. = \lambda max - n \ / \ n - 1 \quad (3)$$

The computation of consistency ratio (C.R.) is as shown in Eq. (4). R.I value refers to Random index (R.I), which can be obtained from the table. If the C.R. value is smaller than 1, it means that the result is credible; otherwise, it means there is no consistency.

$$C.R = C.I \ / \ R.I \quad (4)$$

Method

The first step of this study is to conclude that the organizational resources can be presented in multiple dimensions as literature review suggests. With Taiwan's listed automakers as an example, three resources are selected: current assets (Rauscher and Wheeler, 2012; Dong, Liu, Klein, 2012), fixed assets (Dee-

pankar and Ramaa, 2013; Sheila and Javier, 2012; Allen and Lamont, 2011; Hu and Fang, 2010; Karen, 2009), and sales locations (Mondey et al., 1987; Taneja, 1989; Chen, 1996) to measure the CDAHPM as shown in Fig.1.
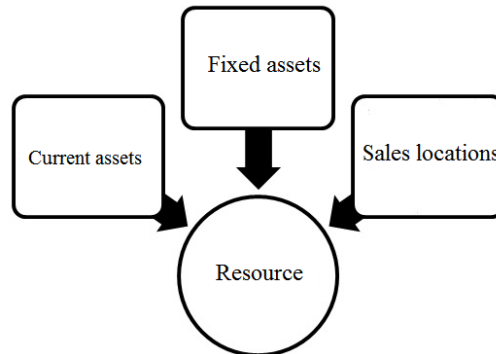


Figure1. Resource similarity in different resources

The second step is to analyze the criteria of the resources. With four Taiwan's listed automobile industry as an example, the three resources (i.e., current assets, fixed assets, sales locations) are categorized into 10 criteria. The AHP is applied in the computation of the weight of the resources as shown in Fig.2.

The third step is to use the CDAHPM to summarize different resource similarity. Eq. (5) combines different resources before the discussion of the competitors. The CDAHPM resource similarity computation equation is as shown below:

$$S_{ij} = \sum_{k=1}^{n} W_k \times S_{ij}^k \qquad (5)$$

sij= CDAHPM resource similarity between company i and j;

Wk = the weight of kth resource;

$S_{ij}^k$ = the similarity between k resource of i company with j company.

Differences from the traditional competitive dynamics theory; the CDAHPM integrates different resources to obtain the resource similarity integrating multiple resources as shown in Figure 3. CDAHPM.

The four automakers are in the business of automobile assembly and sales. The relevant data of the listed automakers in 2012 were used in this study. Based on previous literature, this study summarized the three resources and 10 criteria. Then, the
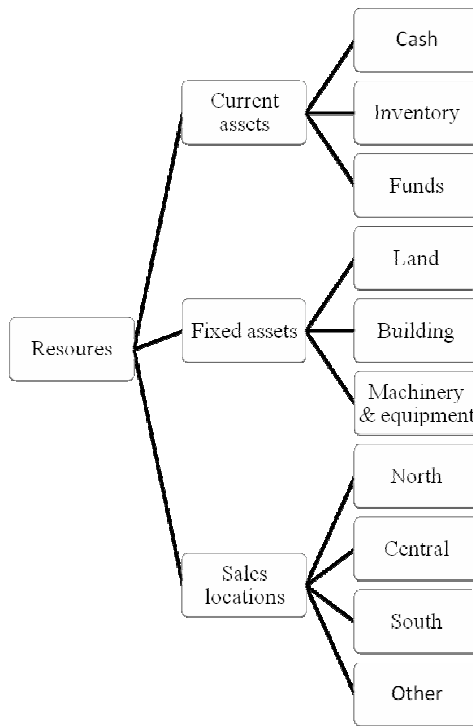
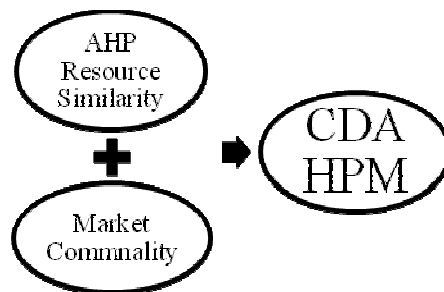Figure 2.  AHP resources and criteria of Taiwan's listed automakers



Figure 3. CDAHPM

CDAHPM was used to measure the resource similarity and establish the competitor images for competitor analysis, as well as the competition action and response pre-judgment.

Example

*Competitive Dynamics*

In the first step of the empirical study that method using Competitive Dynamics, regarding the listed automakers' market commonality, this study referred to the definition of the market commonality proposed by (Karnani and Wernerfelt, 1985; Gimeno,1994; Chen, 1996), and categorized the products into four types by the automobile license tax in Taiwan (emissions cc.) by (Pei and Ho, 2011). The market commonality calculated by applying Eq. (1) is as shown in Table 1. If Yulon Motor is regarded as the focus manufacturer: regarding market

commonality data, Yulon Motor and Ho-
tai Motor market commonality is 0.4776,
followed by the market commonality of
Yulon Motor and China Motor at 0.1324.

The market commonality between Yulon
Motor and Sanyang Industry is the low-
est at 0.0952.

Table 1. Market commonality

|  | 2201 Yulon Motor | 2204 China Motor | 2206 Sanyang Industry | 2207 Hotai Motor |
|---|---|---|---|---|
| 2201 Yulon Motor |  | 0.1324 | 0.0952 | 0.4776 |
| 2204 China Motor | 0.3078 |  | 0.1175 | 0.4193 |
| 2206 Sanyang Industry | 0.2966 | 0.1574 |  | 0.4169 |
| 2207 Hotai Motor | 0.2574 | 0.0972 | 0.0721 |  |

In resource similarity, this study re-
ferred to the definition of (Mondey et al.
1987; Taneja, 1989; Chen, 1996), and
used the differences in the number of
sales locations to measure the listed
automakers by four regions including
north, central, south, and other. The sales
location resource similarity computed by
using Eq. (2) is as shown in Table 2. If
Yulon Motor is regarded as the focus
manufacturer, in terms of sales resource
similarity, Yulon Motor and China Motor
are highly similar as the resource similar-
ity is 0.3489. The similarity between Yu-
lon Motor and Hotai Motor is 0.2582,
and the similarity between Yulon Motor

and Sanyang Industry is 0.1721, suggest-
ing that the two are different in sales re-
source.

Eq. (1) is used to compute the mar-
ket commonality as shown in Table 1,
and the resource similarity as shown in
Table 2. The competitor image is as de-
scribed in Figure4. The competitor image
of the focus manufacturer Yulon Motor
is on the top left, the competitor image of
Sanyang Industry is on the bottom left.
The competitor image of China Motor is
on the top right and the competitor image
of Hotai Motor is on the bottom right.

Table 2. Sales locations resource similarity

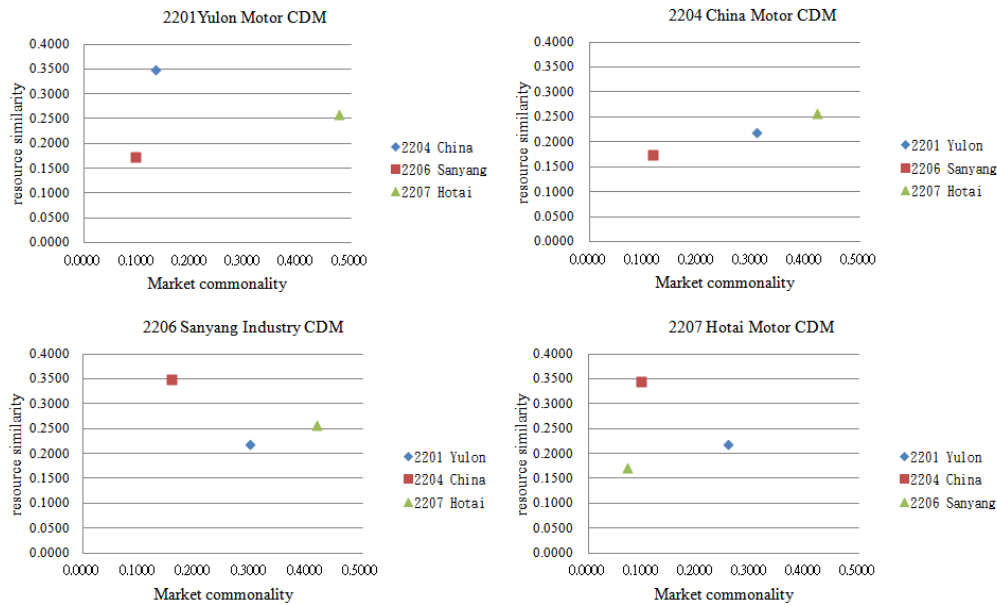|  | 2201 Yulon Motor | 2204 China Motor | 2206 Sanyang Industry | 2207 Hotai Motor |
|---|---|---|---|---|
| 2201 Yulon Motor |  | 0.3489 | 0.1721 | 0.2582 |
| 2204 China Motor | 0.2191 |  | 0.1734 | 0.2571 |
| 2206 Sanyang Industry | 0.2178 | 0.3496 |  | 0.2575 |
| 2207 Hotai Motor | 0.2178 | 0.3455 | 0.1717 |  |

Figure 4. Competitor image

Take Yulon Motor competitor image in Figure4 as an example, Yulon Motor and Hotai Motor have high product market commonality while the resource similarity between Yulon Motor and China Motor is high. Yulon Motor and Sanyang Industry are relatively different in market and resource, and their major competitor is Hotai Motor as perceived. Regarding competition attack and response, when the market commonality with the competitor is greater and the response is higher, the possibility of competition action is lower. When the resource similarity with the competitor is higher, the possibility of competition is lower and the response will be higher.

As suggested by (Cheng, 1996, 2007), since the airline fleet consists of types and number of aircrafts, each airline has different resource heterogeneity and endowment for resource similarity comparison. The traditional competitive dynamics theories usually compares in the single resource. When applying the RBT, different resource may display different competitors' situations.

CDAHPM

For this research, develop the AHP is applied to three resources (i.e., current assets, fixed assets and sales locations) and 10 criteria to design the questionnaire. The questionnaires were distributed to 15 respondents in the listed automakers, and retrieved 14 samples. After eliminating two invalid samples with C.I. below 0.25, the results of the 12 samples are described as follows: dimension C.I. =0.0017, C.R. =0.0029, dimension criteria C.I. =0.027, 0.001, 0.065; C.R. =0.047, 0.001, 0.073, suggesting the consistency. The most important dimension is Current assets, followed by sales locations, and then fixed assets. By criteria, cash is the most important item of company's resources followed by sales location of Taiwan's north. The weights are as shown in Table 3.

By the computation of Eq. (5), the resource similarities are summarized as shown in Table 4.

The resource similarity of CDAHPM is calculated based on Eq. (5). As shown in Table 4. The competitor images established by CDAHPM are as shown in Figure5 By combining Table 1 and Table 4.

According to Fig.5, Yulon Motor as the focus company, we can conduce to the results as follow:

(1) Originally, in the sales location resource as shown in Table 2, the most similar competitor is China Motor. How-ever, as shown in Figure5 the most similar competitor is Hotai Motor, suggesting that major competitors differ in resources.

(2) Regarding the perception of the competitors, the CDAHPM integrated with different resource similarity can display more explicit and accurate judgment.
(3) Sanyang Industry is the least market commonality and resource

Table 3. CDAHPM AHP analysis summary

| Dimension | | Criteria | Sequence | | Sequence | |
|---|---|---|---|---|---|---|
| | Weight | | Weight | | Weight | |
| Current assets | 0.4779 | Cash | 0.6929 | 1 | 0.3312 | 1 |
| | | Inventory | 0.2125 | 2 | 0.1016 | 4 |
| | | Funds | 0.0945 | 3 | 0.0452 | 7 |
| Fixed assets | 0.1468 | Land | 0.6685 | 1 | 0.0981 | 5 |
| | | Building | 0.1516 | 3 | 0.0222 | 10 |
| | | Machinery & equipment | 0.1799 | 2 | 0.0264 | 9 |
| Sales locations | 0.3753 | North | 0.5190 | 1 | 0.1948 | 2 |
| | | Central | 0.2759 | 2 | 0.1036 | 3 |
| | | South | 0.1323 | 3 | 0.0497 | 6 |
| | | Other | 0.0728 | 4 | 0.0273 | 8 |

Table 4. CDAHPM resource similarity

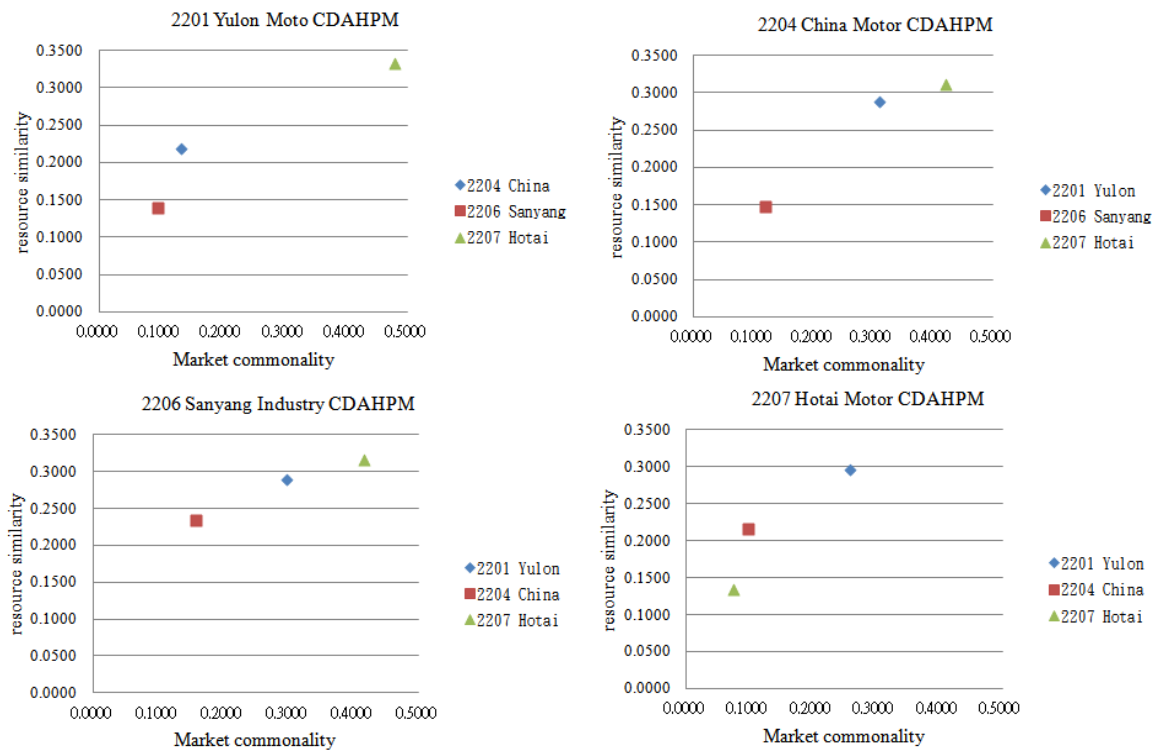| | 2201 Yulon Motor | 2204 China Motor | 2206 Sanyang Industry | 2207 Hotai Motor |
|---|---|---|---|---|
| 2201 Yulon Motor | | 0.2202 | 0.1395 | 0.3335 |
| 2204 China Motor | 0.2890 | | 0.1491 | 0.3113 |
| 2206 Sanyang Industry | 0.2897 | 0.2342 | | 0.3168 |
| 2207 Hotai Motor | 0.2974 | 0.2168 | 0.1349 | |

Figure 5. CDAHPM competitor image similarity, as shown in Figure 4. and Figure 5.

Discussion and Conclusion

In the two dimensions of market commonality and resource similarity, the competitive dynamics can analyze the competitor appearance and location through competitor image, and further illustrate and analyze the market commonality and resource similarity between the focus manufacturer and competitor. It can explain the competition behaviors and predict the response of the competitors in such an analysis framework.

Many studies have argued that resource has different dimensions. The inte

gration of multiple resources in the study results in relative relationships between competing companies. Therefore, the CDAHPM integrates different resources to establish the competitor image. By considering market commonality, and different resources, the relative action or response strategy of competitors can be established in the prediction of competition behaviors and response.

This study displayed resources in different ways. Differ from traditional competitive dynamics theory; the CDAHPM is a method that combines and summarizes multiple resources with considerations, including market commonality and resource similarity in strategic analysis.

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