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EDITORIAL PREFACE

This is sixth issue of volume three of the International Journal of Business Research and Management (IJBRM). The International Journal of Business Research and Management (IJBRM) invite papers with theoretical research/conceptual work or applied research/applications on topics related to research, practice, and teaching in all subject areas of Business, Management, Business research, Marketing, MIS-CIS, HRM, Business studies, Operations Management, Business Accounting, Economics, E-Business/E-Commerce, and related subjects. IJBRM is intended to be an outlet for theoretical and empirical research contributions for scholars and practitioners in the business field. Some important topics are business accounting, business model and strategy, e-commerce, collaborative commerce and net-enhancement, management systems and sustainable business and supply chain and demand chain management etc.

The initial efforts helped to shape the editorial policy and to sharpen the focus of the journal. Starting with 2013 issues, IJBRM will appear in more focused issues relevant to business research and management sciences subjects. Besides normal publications, IJBRM intend to organized special issues on more focused topics. Each special issue will have a designated editor (editors) – either member of the editorial board or another recognized specialist in the respective field.

IJBRM establishes an effective communication channel between decision- and policy-makers in business, government agencies, and academic and research institutions to recognize the implementation of important role effective systems in organizations. IJBRM aims to be an outlet for creative, innovative concepts, as well as effective research methodologies and emerging technologies for effective business management.

IJBRM editors understand that how much it is important for authors and researchers to have their work published with a minimum delay after submission of their papers. They also strongly believe that the direct communication between the editors and authors are important for the welfare, quality and wellbeing of the Journal and its readers. Therefore, all activities from paper submission to paper publication are controlled through electronic systems that include electronic submission, editorial panel and review system that ensures rapid decision with least delays in the publication processes.

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TABLE OF CONTENTS

Volume 3, Issue 6, December 2012

Pages

- 279 - 293 Value Creation Through Corporate Social Responsibility in Developing Countries:
A Case Study of Proctor & Gamble Pakistan
Hyder Kamran, Irfan Khurshid, Fawaz Ali, Nitin Raj Srivastava
- 294 - 306 Bid and Ask Prices Tailored to Traders' Risk Aversion and Gain Propension: a
Normative Approach
Marta Cardin, Bennett Eisenberg, Luisa Tibiletti
- 307 - 324 Workplace Environment Characteristics as Antecedents of Affective Well-being in
the Workplace
Waratta Authayarat, Hiroyuki Umemuro
- 325 - 332 Fooling the company – The Corporate Jester As Driving Force For Organizational
Change
Thomas Köllen
- 333 - 346 Linking Design, Marketing, and Innovation: Managing the Connection for
Competitive Advantage
Yen Hsu

Value Creation Through Corporate Social Responsibility in Developing Countries: A Case Study of Proctor & Gamble Pakistan

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Abstract

Consumer support for Corporate Social Responsibility (CSR) has been in practice for some years now and firms are demanded to seriously take CSR initiatives. This project has been compiled out of a wealth of literature that addresses the need and importance of CSR and business ethics in the society in great depth. A case study of CSR at Proctor and Gamble Pakistan was carried out by employing both the qualitative and quantitative data collection techniques to gather information so as to bring the attributes of triangulation in this research. The research findings outlined various views and beliefs of the respondents with regards to CSR initiatives by Proctor and Gamble Pakistan. The CSR awareness and societal veracities are the factors that encourage consumers to think ethically and make decisions in terms of who to develop associations with. The research shows a reflection of deductive approach and the researcher understood the inbuilt pros and cons of dependence upon secondary sources of information. It was attempted to adopt a hybrid strategy in this project but it mainly took a positivist look because of the nature of the questionnaire survey based upon close-ended questions aiming for quantitative data. The trend for CSR initiatives in developing countries is now growing at a decent pace and the recent advancements in technology and media have resulted in grown awareness among consumer groups to exert pressures on multinational companies to be apparent in their statements as well as practices.

Keywords: Corporate Social Responsibility, Value Creation, CSR Conceptualisation, Business Ethics, Strategic Planning

1. INTRODUCTION

A lot of debates have taken place in the past with a focus on responsibilities of a business in society and the need to be a good corporate citizen. However, this has all been limited to theory, and in practical field, no answer has yet been found with respect to how CSR should be implemented and integrated properly at an organisation's strategic level.

According to The Work Foundation (2002) and McKinsey and Company (2006), "Indeed, recent reports reveal that almost six out of ten organizations have no strategy for CSR while many companies are unclear as to how to adequately anticipate which social issues will affect their overall strategy" (Cited in: Galbreath, 2009, p.109).

This is why, on one side, the business decision makers understand the importance of competitive advantage that can be obtained from being a sustainable player in the market, but on the other hand, there appears to be lack of knowledge in terms of how to make it possible.

External pressure that has been pushing businesses to change their view and focus on ethical advancements could mainly be seen from consumers and other associated stakeholder groups. Over past few years, an upward trend has been seen in a way that now consumers being more educated consider ethical implications much seriously and are even ready to penalize businesses for not keeping their promises in promoting a sustainable environment. This is why most of the corporations now consider it valuable to promote ethics in the society and try to associate themselves with certain sustainable development projects.

1.1 Problem Discussion

Being a developing country, Pakistan does not have strict laws and regulations in place regarding CSR considerations and also there is a lack of support from the Government. Due to lack of interest and control over CSR initiatives by Pakistan government, companies somehow try to escape these practices. In this research, the author aims to investigate the impact of Corporate Social Responsibility (CSR) in developing countries in general and Pakistan in particular. The centre of attention of this research is to analyse how much emphasis is given to CSR by internationally established MNCs. Mainly, this research examines the financial, ethical, legal and philanthropic perceptions of company's stakeholders, and the desired outcome in the form of value creation for Proctor & Gamble Pakistan.

1.2 Need and Justification

Although there has been a growing influence of MNCs around the world because of the exposure created by the media, however, there has also been an increased apprehension for CSR in business world. It is favourable for companies to gain satisfaction of their associated stakeholders with their products or services and the way they operate, particularly, understanding the importance of business-consumer relationship is vital. Therefore, it is fundamental for a business not only to advance and improve its core production areas but also pay attention on social aspects that replicate company's position in the market and its considerations for the stakeholders.

Stakeholders are considered to be the centre point around which value creation for a company revolves. In the opinion of Porter and Kramer (2006), one of the major resultants of value creation is the competitive advantage which can be achieved by integrating CSR initiatives and practices within the organisation's operational policies (Cited in: Cheney, May & Munshi, 2010).

This research is aimed on how value creation becomes possible and what practices it may include to achieve and sustain such value. This may involve establishing brand image amongst consumers by offering quality products or by efficiently managing firm's resources by making efficient use of production amenities, raw materials and power etc. In addition to being a sustainable business, CSR practices include retaining probable workforce to secure future efficiency by providing healthy working atmosphere, maintaining positive relations with the

suppliers and trying to improve the organisation's image by actively taking part in social and public welfare projects.

1.3 Research Paper Aim and Objectives

This research aims to investigate the conception of Corporate Social Responsibility (CSR) and value creation through CSR with particular focus on developing countries with an evaluation of CSR initiatives approached by Proctor & Gamble in Pakistan.

1.3.1 Objectives

The main objectives of this research are:

1. To investigate the application of CSR platforms that engage multinational companies to act ethically in Pakistan
2. To examine the relationship between level of engagement of Proctor & Gamble Pakistan and the stakeholder group(s) with respect to CSR
3. To critically evaluate value creation through CSR in developing countries by Proctor & Gamble Pakistan

2. LITERATURE REVIEW

2.1 An introduction to CSR

"CSR, corporate responsibility, corporate citizenship, and sustainability all matter because they influence all aspects of business. And businesses matter because they create much of the wealth and well-being in society. As such, CSR is increasingly crucial to both business and societal success." (Werther and Chandler, 2010, p22).

Ullmann (1985) indicates that CSR is not a new topic and has been in practice by many businesses for a long time (Cited in: Gowthorpe and Blake, 2008). Highlighting the history of CSR from 1950s, Carroll (1999) argues that CSR started with individual business people and gradually it spread from being a simple trend in corporations into a totally changed viewpoint of business ethics and corporate citizenship (Cited in: Idowu and Filho, 2009).

CSR is mainly approached as establishing principles for business ethics, designing strategies and be part of projects or campaigns that would give the organisation an image of "good corporate citizen". Contrary to Friedman's (1970) publication, different management analysts started to build up academic literature around CSR concept and presented their views about responsibilities held by a firm. Crane (2008) and May et al (2007) identify the trade-off between present and future in terms of investing now and getting reward in the future.

In contrast to this, Friedman (1970) claims, " a firm need not have any additional justification for existing and that, in fact, social value is maximised when a firm focuses solely on pursuing its self-interest in attempting to maximise profit" (Cited in: Werther and Chandler, 2010, p55). CSR is a way of ruining an organisation's financial health and an organisation's sole responsibility is to maximise profits for the shareholders and ensuring maximum returns to the investors (Cited in: Werther and Chandler, 2010).

Crane (2008) and May et al (2007) further emphasise that, for a business favouring long-term growth in a sustainable manner it is essential to consider CSR as an important outlay that would generate same return if invested somewhere else.

2.2 CSR conceptualisation in developing countries

The debate on CSR conceptualisation in developing countries varies from buoyant views about the responsibility of a business in society to extremely crucial perspectives (Visser, et al, 2010). As far as CSR benchmarks such as codes and standards of practice and management systems in developing countries are concerned, the CSR in such countries shows less formalism and tends to be less institutionalised. However, the formal CSR can usually be seen in practice by high profile and multinational enterprises either those having an established global reputation or those aiming to build a brand image (Visser, et al, 2010 and Bethoux, Didry and Mias, 2007).

The literature indicates that the ethical demands in terms of social and environmental wellbeing has shown a dramatic increase which led to CSR to achieve thrust and momentum. Paetzold (2010) identifies the reason for such a thrust to be an escalating influence of multi-national enterprises (MNEs) over the global economy; hence the stakeholders i.e. consumers, employees, the community at large, government, and the natural environment should be taken into serious consideration. Visser et al (2010) maintain that CSR in developing countries is most generally linked with benevolence and donations; through corporate social investment in education, physical health, sports advancements and other such welfare practices.

In developed countries, the legislation requires companies to report on their practices and performance for environmental and social aspects. In developing countries, the changing trend is also pushing firms to report on their social responsibility and their role as a good corporate citizen.

Businesses in countries with low income levels such as Pakistan, India, Thailand, Philippines etc are heavily criticised for showing lack of social responsibility and are blamed for undermining various opportunities in terms of societal well being along with harnessing their own financial benefits. According to the Department of Economic and Social Affairs (DESA, 2007), practically, developed countries have mainly been seen as a focus of CSR in developing countries. Misani (2010) indicates that, in the past, the developing countries had hardly any CSR agendas in place at national level that could be visible globally; but over the past few years; governments, the MNCs and some non-government organisations in these countries have shown a positive concern and engagement in adapting CSR agendas.

DESA (2007) maintains that governments in some developing countries have taken initiatives to reduce the undesirable CSR effects on local communities, surrounding environments and associated markets because of the growing concerns from global supply chains and foreign direct investment. This is why many MNCs around the globe are trying to establish good repute and understand the benefits of good relations with suppliers and producers from developing countries (Bethoux, Didry, and Mias, 2007).

2.3 CSR and Stakeholders; the common perspective

Barnett (2007) argue that stakeholders having a good understanding of CSR would observe how seriously a firm takes CSR initiatives and then by making evaluations would prefer those which have CSR principles in place (Cited in: Schreck, 2009). Identifying the importance of CSR, Crane (2008); May et al (2007) and Castka et al (2004) indicate that CSR should be approached in the same manner as that of a financial investment for good return.

Werther and Chandler (2006, p285) quote that, "CSR is not about a company pursuing the favourite charitable interests of the CEO but it is about ensuring the company strives to meet the needs and address the concerns of key stakeholders".

Stakeholder theory is based on the instructions that companies have responsibilities to different stakeholders, both internal and external, that must be obeyed (Freeman, 2010; and Heath and Norman, 2004).

Freeman (2010) recommends that organisations must gauge those expectations emplaced by stakeholders and then strategic adjustments should be considered in a firm's CSR plan. Consumers are one of the important stakeholders that could add or remove value for a business. Firms that are successful in understanding the trends in customer behaviour and keep up quality and variety in their product line enable themselves to create value for the business and differentiate themselves from their competitors.

The recent advancements in technology and the availability of information is pushing firms to be transparent and get involved into activities that would present them as 'good corporate' in the society. Werther and Chandler (2010) and Roberts and Phelps (2001) argue that if consumers stop buying a certain product on the basis of their disapproval to the way it was produced, then that firm will quickly adapt or fail, therefore, stakeholders are as responsible for the corporations that survive and thrive in our society as the organisations themselves.

Urip (2010) believes that companies need to recognise the need to anticipate and take measures to avoid negative public perceptions in order to protect their goodwill and reputation by doing right and ethical CSR activities.

2.4 Value creation through CSR

Green and Peloza (2011) state that, it may not be possible to exactly measure the consumer value received by CSR but it may vary and consumers' behaviour depends upon the level of value received during the process. According their viewpoint, "Consumers do not view CSR as one, overall impression of a firm. Rather, they view each initiative presented to them in relation to how it can add to the overall value proposition for a purchase".

Meehan, Meehan and Richards (2006) believe that the presence of three Cs (consistency, connections and commitments of 3C-SR model) are the foundation for implementing effective competitive strategies around available social resources which are happily embraced by socially conscious consumers. Therefore, a firm considering implementing a strategy to gain competitive advantage and create value by endowing available resources will not be successful until there is a proper commitment and support to broadly attributed public focused practices.

Green and Peloza (2011, p.50) outline three value drivers as,

Emotional value; received when a consumer makes a purchase with a social or environmental attribute

Social value; can accrue from purchases from firms active in CSR since people make judgments about others based on the purchases they make

Functional value; relate to the actual benefit the consumer receives from the product or service

Galbreath (2009) proposes that an aligned CSR strategy with that of business strategy is vital for firms to create value. Therefore, Green and Peloza (2011) agree that once CSR is integrated successfully throughout the firm, the CSR programmes will automatically align themselves with that of organisational strategy and the business will enable itself to leverage benefits both financial and social. Figure 4.2.1 gives an indication of different forms of CSR that offer various opportunities to firms in a way to distinguish themselves from competitors and gain competitive advantage. CSR approach, if managed effectively, can surely create value for both business and society concurrently (Ali et al, 2010).

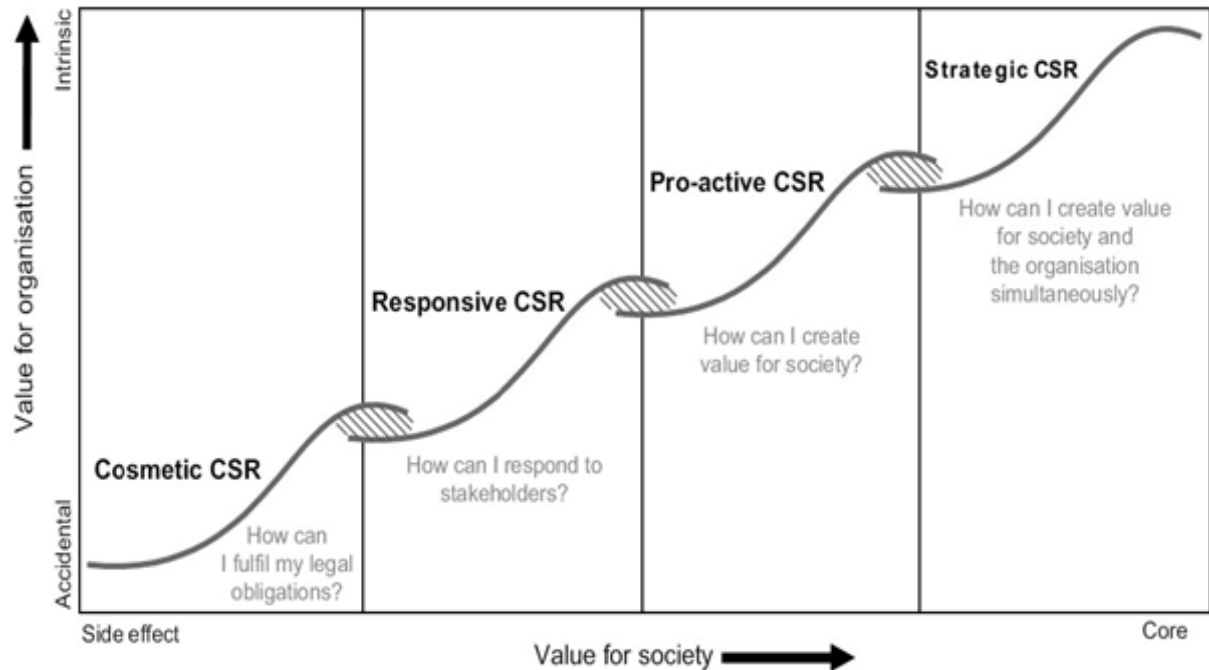


FIGURE. 2.4.1 CSR Development Framework (Nolan Norton and Co, 2009)

One of the consumer surveys conducted in America by Cone LLC (2007) examined the growing impact of CSR and its practical influence. It was found that 80% of the consumers surveyed indicated that firms must have a social responsibility and 90% agreed a company will have a positive image if involved in a cause supporting activity i.e. CSR (Nolan, 2007).

In other recent surveys conducted by Cone LLC, it was observed that 34% of consumers would happily buy environment friendly products (Cone LLC, 2009) and 80% are willing to switch brands of same price and quality to one with CSR initiatives (Cone LLC, 2010). The recent trend with respect to CSR that can be seen in practice is that companies associate themselves by providing financial support to certain not-for-profit organisations. The choice of organisation with which a firm decides to associate it-self and the nature of relationship that strengthen this bond are vital to measure that firm's perceived value in the society (Meehan, Meehan and Richards, 2006).

The understanding obtained from the discussion is that organisations considering the development in their competences in terms of social resources are suggested to adopt a holistic approach of their present values and careful consideration of their strategic management policies (Meehan, Meehan and Richards, 2006). It is apparent that ethical responsibility is crucial for any business and those who fail to adopt CSR practices will become targets of failure in the industry. Therefore, Svensson and Wood (2011) and Meehan, Meehan and Richards (2006) illustrate that a firm that recognises the importance of being socially ethical and is committed to propagate such policies at strategic level can surely enhance its competitive resources and also enjoy the benefits of value generated in the process. In fact, CSR course would then act as a momentous basis for marketplace differentiation.

2.5 An overview of CSR initiatives by Proctor and Gamble Pakistan

Proctor and Gamble (P&G) started its business in Pakistan in 1991 with an aim to be Pakistan's best consumer goods company operating locally. The company's headquarter is in Karachi. To achieve their goal of excellence, the company serves consumers in Pakistan with premium quality products under various brands such as Head & Shoulders, Pantene, Ariel, Safeguard, Pampers,

Always and others with a purpose of making people's everyday lives better (Proctor and Gamble, 2011).

P&G pays great emphasis on engaging its employees and stakeholders to deliver the company's environmental and social programs. Their objective is to endow all employees to establish sustainability philosophy and practices into their daily work pattern. The company aims to work closely with stakeholders to facilitate continued freedom to innovate in a responsible manner (Proctor and Gamble, 2011).

"Through our partnerships with stakeholders, we aim to improve the communities where we operate. At P&G Pakistan we strive to deploy initiatives that create positive impact for the society at large by addressing key needs. Our longstanding association with NGOs in fields of education, empowerment and rehabilitation are a testimony to P&G's dedication to improving lives" (P&G Pakistan Newsletter, 2009).

In 2007, P&G Pakistan started a programme "Me & My Mentor" to provide an opportunity to the employees to develop their career skills by obtaining guidance from trusted and skilled mentors from a pool of experienced managers; and in 2009 the company launched "Speed Mentoring" to further strengthen this mentoring programme (P&G Pakistan Newsletter, 2009).

Goergen et al (2010) agree that there is a link between corporate financial performance and corporate accountability to stakeholders and therefore a perfect balance needs to be maintained between profit generation and meeting stakeholder expectations. Firms that are successful in understanding the trends in customer behaviour and keep up quality and variety in their product line enable themselves to create value for the business and differentiate themselves from their competitors.

According to P&G, "For more than 170 years, P&G brands and people have touched and improved consumers' lives. This commitment extends to our social investments. Our people and our brands are our greatest assets, and together, they are a tremendous force that can make an impact that matters" (Proctor and Gamble, 2011).

For P&G sustainability provides prospects to construct their business by bringing firm's expertise and innovation to deal with the values, concerns and frustrations that consumers may come across in daily life (P&G Annual Report, 2009).

Strugatch (2011), Galbreath (2009) and Heath and Norman (2004) agree that firms need to direct their marketing activities towards CSR perspectives and once the benefits are obtained, companies will sense obligation to be part of societal well being and try meeting the stakeholders' perceptions for a better reward in return. Research indicates that people are now becoming more aware of issues related to the environment and sustainability; therefore, companies like P&G have understood their obligation towards society at large and the need to play their part as a corporate citizen. "Sustainability is about ensuring a better quality of life, now and for generations to come" (P&G Annual Report, 2009).

Svensson and Wood (2011) highlight ethical structures, processes and performance measures are the variables that a firm depends upon to practise corporate and business ethics at strategic level. Organisations always have an objective to be achieved at corporate level whenever involved in a social responsibility campaign. For example 'Live, Learn and Thrive' is P&G's corporate cause, focusing on helping children in need around the world. The programme enables children to get off to a healthy start, receive access to education and build skills for life (Proctor and Gamble, 2011).

P&G Pakistan vitally understands the importance of women rights in employment and the company encourages having an ethnic, educational and gender diversity within the organisation. With the help of a formal program of mentoring, training, networking and role-modeling, the company launched a diversity network in Pakistan to support skilled women (P&G Pakistan Newsletter, 2009).

“Diversity is a matter of ethics. Every individual in our company – and every partner with whom we do business – deserves an equal opportunity to grow, excel and succeed with Procter & Gamble” (P&G Newsletter, 2011).

Sheikh and Beise-Zee (2011) and Meehan and Richards (2006) agree that depicting a social issue in the society and then focussing firm's efforts for its improvement is considered as a desirable practice for effective communication to improve public's understanding about a firm's ethical efforts. P&G Pakistan has been in strong support of educating people about health, hygiene and the importance of washing hands with soap. A study titled “Effects of School-Based Hand washing Promotion on Students and Communities in the Developing World” was supported by P&G's soap product ‘Safeguard’ to create health and hygiene awareness among people in Pakistan. In order to convey the message of what does the company think about societal welfare, a financial or non-financial support to a cause acts as a tool for that company. Therefore, by doing this a firm can surely establish an association with CSR and enable itself to gain respect and repute in the marketplace that adds value to the company on top of good citizenship (Sheikh and Beise-Zee, 2011).

3. RESEARCH METHODOLOGY

3.1 Research Design and Strategy

The author attempted data testing, in this case a questionnaire survey has been used, and the respondents' views were tested against what has already been published about CSR, either to accept it or reject it.

Although, the focus of this study was diverted more towards deduction from theory and literature, however, inductive approach also came into play in findings and discussions part to outline suitable recommendations for wider CSR perspectives. This project, hence, adopts a ‘multi-approach’ strategy to bond the two variant approaches. The critical analysis of available literature was argued against the subject matter and it was embraced that MNCs are taking serious considerations in developing countries to adopt CSR practices. The viewpoint of stakeholders with respect to CSR was also investigated that a business-consumer relationship is vital and CSR acts as a platform to create value out of it.

The qualitative research technique enabled the author for obtaining clear understanding about how P&G Pakistan's stakeholders perceive about the company with respect to CSR and how does it operate to bridge the relationship between P&G Pakistan and its stakeholders. Therefore, the author used this method to seek information from the participants on different aspects of the interaction between consumers as stakeholders and P&G Pakistan.

Agreeing to the viewpoint of Tashakori and Teddlie's (2003) to create better ways of collecting necessary answers to the research, triangulation was brought to practice (Cited in: Saunders et al, 2009). A combination of qualitative methodology with a quantitative one has been attempted in this study to maximise the quality of data generation process. This is because the different data generated by both methods would have produced similar results and helped pointing the author in the same general direction. This research mainly relies on in-depth interviews for qualitative data and questionnaire for the collection of quantitative data.

4. RESEARCH FINDINGS AND DISCUSSION

This research was based on the aim of evaluating to what extent multinational companies (MNCs) initiate CSR in developing countries and it was investigated in the light of case study of 'Proctor and Gamble Pakistan'.

4.1 Investigating the application of CSR platforms that engage multinational companies to act ethically in Pakistan

It is evident that CSR is rooted in consumer realisation and commonality engagements in societies of developed nations that observed the elements of social ethics in the practices and behaviour of multinational corporations. This research attempted to explore the CSR conceptualisation in Pakistan mainly from two perspectives i.e. business and consumer. Although, developing nations compared to developed ones, behave differently and present a variant agenda for CSR initiatives to be employed by the MNCs like P&G. In this research, it has been analysed that the trend for CSR initiatives in developing countries is growing at a decent pace and essentially the push is mainly from the stakeholders of a firm. In today's business world, communication is thought to play a vital role in terms of bridging the relationship between business and consumers. Although some of the participants' (3.41%) viewpoint indicates the lack of availability of CSR information, however, a stronger percentage of 46.15% believes that 'a lot' of information regarding CSR is made accessible by P&G for general public.

It is becoming noticeable that now consumers in developing countries demand organisations to inform people about the extent to which a company takes interest in social responsibility. The research findings and reviewed literature gave us an indication that P&G Pakistan pays emphasis upon the importance of ethics reporting. The company has been active since 1999 in producing an internet based global sustainability report on annual basis to comment on their practices with regards to environmental, economic and social performance. When asked from people in Pakistan, 91.45% of the respondents supported internet, 62.39% agreed with TV and radio and 49.57% argued newspapers and magazines to be the most accessible source to become aware of the CSR practices initiated by P&G Pakistan. Critically arguing, only a smaller percentage of educated people would have an easy access to internet and be able to read newspapers and magazines. Although, it is good to see the company's initiative on CSR reporting but keeping the information limited to online sources of information could be the drawback that P&G needs to consider seriously.

Supporting a CSR cause financially, is increasingly becoming popular and a need being felt by P&G Pakistan to highlight its ethical thoughts and to present its image of a good corporate citizen. From research findings it is concurred 33.33% of participants are those who strongly believed that P&G Pakistan is quite efficient in responding to the changing trends in consumer behaviour. Another 26.49% thought it occasionally happens that the company would react to take steps in line with the understanding of trends in consumer behaviour.

It has been observed from the reviewed literature that the governments' involvement in CSR in Pakistan is not very efficient. Therefore, additional support is required from the government to play its role to promote CSR by persuading MNCs so as to bring benefits for competitiveness as a whole. Overall, the CSR platforms seem to be establishing well and the businesses themselves are involved taking initiatives at organisational level. P&G Pakistan is active in educating people and creating awareness in the society by informing consumers regarding what the company perceives about the importance of business ethics.

4.2 Examining the relationship between level of engagement of Proctor & Gamble Pakistan and the stakeholder groups with respect to CSR

The knowledge gained from the literature and the analysis of primary data indicate that consumers in developing countries are now taking keen interest in CSR and encourage businesses to act in line with CSR policies and procedures. As this research was based upon a case study of Proctor and Gamble (P&G) Pakistan, it is concluded that consumers in Pakistan to a certain extent consider the importance of CSR and demand P&G to be ethical in its practices. The element of discussion to be outlined is the 'belief' that people have built in their minds for P&G to offer quality products. The research findings illustrate a response rate of 50.49%, which indicates 'international origin' of P&G to be an attribute for consumers' product purchase process.

From previous discussions it can be observed that, more knowledgeable the stakeholders (consumers) are more pressure they exert on a firm to take CSR initiatives. This further relates to combining the product quality attribute with CSR concept. This research stressed the importance of P&G's products' quality and consumer satisfaction in line with CSR to manage and retain loyal customers. 16.42% of the respondents supported the attribute of 'quality' believed by them in P&G products.

However, it may not be favourably possible to mould together the CSR actions and consumer behaviour in P&G unless the consumer satisfaction with firm's products is apparently measurable. From this research, it can be concurred that better CSR understanding the consumers will have, the better decisions they intend to make on the basis of their attitudes and beliefs with regards to CSR. The analysis of level of customer awareness regarding company's CSR actions measured through questionnaire survey provided a clear outlook of the effects of P&G's CSR practices on product purchase process and later on consumer retention behaviour. In the opinion of 18.20% of participants, the key attribute they look for when purchasing P&G products is what the company says about its products, and therefore, they trust the company to be true and ethical in its statements. After the level of consumer satisfaction was determined the effects were seen in the form of positive responses in a way that consumers were happy to pay a higher price for products by P&G through fair trade procedures.

The willingness to switch brands on the basis of ethics and pay higher price for ethical products highlighted the fact how closely a consumer relates itself with P&G which acts as a force to strengthen the business-stakeholder relationship between both parties. Therefore, it is concluded that increased ethics awareness among those consumers does have a positive influence on consumer purchase intentions which ultimately impacts on the financial health of P&G Pakistan.

This research concludes that CSR activities of P&G positively affect the consumer purchase process that leads to favourable purchase decisions. Moreover, this behaviour plays an important role in shaping and implementing firm's strategic decisions for the future. The impression of customer loyalty is examined as a merger of customers' favourable approach to a product and the repeat purchase psychology. Further analysing the primary data, a higher percentage of the sample indicates that they would switch to a different brand if P&G fails to promote ethics. When people were asked how they would react to unethical products, then 42.73% respondents showed positive ethics concern and indicated that they will stop buying P&G products if it is explored that the company is a bad corporate citizen. It is apparent that quality of the product was not the only factor to analyse consumer satisfaction for P&G Pakistan, and therefore, attentions have also been drawn to include other related aspects of analysing business-stakeholder relationship such as P&G's involvement in societal welfare and support for various causes in Pakistan all relating to the same idea of value creation through CSR. Only 13.67% (16 out of 117 people) indicated that P&G falls short to interact with general public i.e. consumers to make them feel part of the organisation. In the interviews with P&G Pakistan's managers, the participants confirmed that P&G does take initiative to involve people from the society to help and outline strategies that could help the company to design a better society. However, some of them also highlighted the fact that it was limited and needed to be promoted at wider level so as to involve

more and more people to come forward and address their concerns and be part of us (P&G Pakistan) as individuals and as an organisation.

4.3 Critically evaluating value creation through CSR in developing countries by Proctor & Gamble Pakistan

This research was primarily built on the perception of value creation through CSR given the type of value such as social, emotional and/or functional, perceived by consumers and provided by CSR initiating player. During product purchase process, it is the functional value that is argued to be more important and seems to have an influence on other two related value types of CSR i.e. social and emotional. The CSR awareness and societal realities are the factors that encourage consumers to think ethically and make decisions in terms of who to develop relationships with. It is the consumer behaviour towards P&G Pakistan that differentiates the types of CSR and the value created through them. It was observed that 35.04% of the respondents were those who strongly agreed with the fact that P&G Pakistan is a business that truly manages relationships with its customers. However, a higher percentage response of 46.15% was from those who think to some extent the company is a true player in terms of understanding the importance of business-consumer relationship.

The recent trend that can be seen in practice is that the foreign multinational investors take with them the CSR knowledge and expertise from developed countries to gain enhanced benefits by initiating same practices in developing countries. P&G Pakistan followed its same principles of individual branding strategy when operating in Pakistan. Knowing the company can generate value by managing its brands individually as it has been doing in western world has been an attribute of the firm's strategic planning and brand recognition. It is therefore understood in the light of given data that P&G Pakistan is fairly successful in following policies that enable the company to strengthen the relationship with its stakeholders. It can be argued in the light of analysis of primary and secondary information that the consumers outline three possible forms of value as mentioned above and consider CSR to be the source of these values. The value generated through these sources, however, varies and depends upon factors such as the business ethics, product offerings and so on. From research findings it was understood that some consumers associated CSR with product quality and highlighted it to be a functional value offered by P&G Pakistan. Some consumers, on the other hand, favoured social or emotional value and associated CSR with financial investments in the society. 39.31% of the sample agreed to do repeat purchases for ethical products, where as another 35.04% were in the opinion of 'may be'. Repeat purchases indicate that a customer is happy with the products offered by P&G and would like to stick with the brand in the future. This indicates that the products that are promoted through utilitarianism and are viewed as such by the consumers, encourage customers to position themselves closer to those products and also to the brand. In other case, where the value is emotional or social, the output is still the same as consumers favour a company with CSR initiatives but type of value perceived is different. 52.13% of the survey respondents were of the opinion that the CSR initiatives taken by P&G in Pakistan are true and present an image of the company as a good CSR citizen. This percentage highlights their awareness of CSR causes supported by P&G Pakistan and indicate how the company is perceived in the society. However, a little response of 14.52% was seen from those who were extremely satisfied with the steps taken by P&G Pakistan to bring betterment in the society by socially fulfilling its responsibilities.

When consumers favour functional value and intend to buy a product in connection with CSR, the prospects and expectations associated with the product can set a different impact on whole society. For example, if P&G Pakistan considers a CSR initiative and offers a product such as 'safeguard' soap to promote a healthy lifestyle, then the value created out of this is 'functional value'. However, if the product is promoted through CSR message that the company is sincere in societal wellbeing and safeguard soap is company's one way of doing it then it attaches social and emotional factor with the product. The consumers will then automatically associate emotional bonding with the product and the value generated out of this will be 'emotional' and/or 'social'.

5. RECOMMENDATIONS

Promoting Pakistan into the modern arena of social ethics requires establishing responsible competitiveness. The combined efforts need to come to practice in a need to support a culture of observance and an atmosphere that promotes responsible policies and practices. However, this may only be achievable by emphasizing on corporate social responsibility and prioritising it at national procedural level, followed by the establishment and execution of a national CSR approach supported by all associated key stakeholders. From this initial move the ethical exercises then need to progress through a foundation for CSR discourse that acts in responses to varying market demands in Pakistan.

Considering the recommendations for future research aspects, one of the important implications to be outlined is the extended need to investigate consumers' responses in greater depth with regards to CSR and the perceived value generated through this process. Although the researcher attempted to discover the consumers' views, attitudes and insights towards CSR and value creation, but there is a lack of consistency on 'types of value'. For future research, it could be recommended to investigate what level of knowledge is held by consumers regarding type of value through CSR and their perception about each type. Then dividing the respondents into smaller groups on the basis of type of value perceived and finally constructing a comparison and contrast analysis is thought to bring more rigour to the discussion.

Globalisation has played a major role in enabling businesses to extend their boundaries and reach across various territories all around the globe, where CSR practices and principles tend to differ on the basis of different variables, and culture is one of them. This research lacks considerations about culture of Pakistan and that how it reacts with CSR. Proctor and Gamble with its origins in America with a different culture operates in Pakistan where differences do occur on cultural roots. Therefore, it is suggested to add analysis of cultural divergence to future research as it would help to investigate the matter from another perspective. Also, rather than focusing on one country, a comparison between CSR practices in a developing country with that of a developed country would help the author to establish a better understanding by looking at variant aspects of the argument.

Last but not least, it is recommended to widen the pool of respondents by selecting a bigger sample. Considering the time and grading factor of this research it was hardly possible to gather primary data from a sample bigger than this. The questionnaire survey sample selected for this research involved teachers, students and people in white collar jobs having a better understanding of CSR concept. However, to bring further authenticity, validity and accuracy in future research, it is proposed to increase the number of participants to include respondents from a bigger supply chain. This is so that it would help the researcher to gather information from a sample that may act as true likeness of the whole population.

6. REFERENCES

[1] Galbreath, J. " Building corporate social responsibility into society", *European Business Review*, Vol.21. No. 2. pp. 109-127, 2009.

[2] Cheney, G., May, S. & Munshi, D. "The Handbook of Communication Ethics: Information Censorship", New York: Taylor & Francis Publishers, 2010.

[3] Werther, W. B. & Chandler, J. D. "Strategic Corporate Social Responsibility: Stakeholders in a Global Environment", London: SAGE Publications Ltd, 2010

[4] Gowthorpe, C. & Blake, J. "Ethical Issues in Accounting", London: Routledge Publishers, 2008.

[5] Idowu, S. O. & Filho, W. L. "Global Practices of Corporate Social Responsibility. Berlin", Springer-Verlag Heidelberg, 2009.

[6] Crane, A. "The Oxford Handbook of Corporate Social Responsibility", New York: Oxford University Press, 2008.

[7] May, S. K., Cheney, G. & Roper, J. "The Debate over Corporate Social Responsibility", New York: Oxford University Press, 2007.

[8] Werther, W. B. & Chandler, J. D. "Strategic Corporate Social Responsibility: Stakeholders in a Global Environment", London: SAGE Publications Ltd, 2006.

[9] Visser, et al. "The A – Z of Corporate Social Responsibility", New York: John Wiley and Sons, 2010.

[10] Bethoux, E., Didry, C. & Mias, A. "What codes of conduct tell us: corporate social responsibility and the nature of the multinational corporation", Corporate Governance, Vol. 15, No. 1, pp. 77-90, 2007

[11] Paetzold, K. "Corporate Social Responsibility: An International Marketing Approach", Hamburg: Diplomica Verlag GmbH Publishers, 2010.

[12] Department of Economic and Social Affairs, "Sustainable Development Innovation Brief. CSR and Developing Countries", February, Issue 1, 2007

[13] Schreck, P. "The Business Case for Corporate Social Responsibility: Understanding and Measuring Economic Impacts of Corporate Social Performance", Munich: Physica-Verlag Heidelberg, 2009.

[14] Crane, A. "The Oxford Handbook of Corporate Social Responsibility", New York: Oxford University Press, 2008.

[15] Castka, et al. "Integrating corporate social responsibility (CSR) into ISO management systems – in search of a feasible CSR management system framework", The TQM Magazine. Vol.6, No. 3, pp. 216 – 224, 2004.

[16] Freeman, R. E. "Stakeholder Theory: The State of The Art", New York: Cambridge University Press, 2010.

[17] Heath, J. & Norman, W. "Stakeholder theory, corporate governance and public management: what can the history of state-run enterprises teach us in the post-Enron era?", Journal of Business Ethics. Vol. 53, pp. 247-65, 2004.

[18] Roberts, J. & Phelps, S. "The impact of Customer Relation Management on Business", Journal of Applied Business Research, Vol.19. No.1, p.13-17, 2001

[19] Urip, S. "CSR Strategies: For a Competitive Edge in Emerging Markets", Singapore: John Wiley & Sons Publishers, 2010.

[20] Green, T. & Peloza, J. "How does corporate social responsibility create value for consumers?", Journal of Consumer Marketing, Vol. 28, No.1 p.48-56, 2011.

Available from: <http://www.emeraldinsight.com.ezproxy.staffs.ac.uk/journals.htm?issn=0736-3761&volume=28&issue=1&articleid=1905614&show=html> [Accessed on 11th Sep, 2012]

[21] Ali et al. "Effects of corporate social responsibility on consumer retention in cellular industry of Pakistan" , African Journal of Business Management, Vol. 4, Issue 4, pp. 475 – 485, April, 2010.

[22] Nolan, H. "Cone survey finds consumers have growing interest in CSR efforts", [Online]. July 17, 2007. Available from: PR Week. <http://www.prweekus.com/pages/login.aspx?returl=/cone-survey-finds-consumers-have-growing-interest-in-csr-efforts/article/57371/&pagetypeid=28&articleid=57371&accesslevel=2&expireddays=0&accessAndPrice=0> [Accessed: 19th March, 2012]

[23] Cone LLC. "Consumer interest in environmental purchasing not eclipsed by poor economy", [Online]. February 18, 2009. Available from: <http://www.coneinc.com/content2032> [Accessed: 17th March, 2012]

[24] Cone LLC. " Even as cause marketing grows, 83 percent of consumer still want to see more", [Online]. September 15, 2010. Available from: <http://www.coneinc.com/cause-grows-consumers-want-more> [Accessed: 27th March, 2012]

[25] Meehan., Meehan, J and Richards. "Corporate social responsibility: the 3C-SR model", International Journal of Social Economics, Vol. 33, No.5, pp.386 – 398, 2006.

[26] Svensson, G. & Wood, G. " A conceptual framework of corporate and business ethics across organisations: Structures, processes and performance". The Learning Organisation. Vol. 18, No. 1, 2011, pp. 21 – 35. 2011.

[27] Proctor and Gamble Annual Report, 2009.

[28] Proctor and Gamble Pakistan Newsletter (2009). Celebrating Diversity. [Online]. June-Sep 2009. Available from: http://www.pg.com/en_PK/library/PG_Pakistan_JA_09_Newsletter.pdf [Accessed: 16th March, 2012]

[29] Goergen et al. "Corporate Governance and Complexity Theory", Cheltenham: Edward Elgar Publishing Limited, 2010.

[30] Proctor and Gamble, 2011. Available from: <http://www.pg.com> [Accessed: 16th April, 2012]

[31] Strugatch, W. "Turning values into Valuation: Can corporate social responsibility survive hard times and emerge intact", Journal of Management Development, Vol. 30, No. 1, pp. 44 – 48, 2011.

[32] Sheikh, S. & Beise-Zee, R. "Corporate social responsibility or cause-related marketing? The role of cause specificity of CSR", Journal of Consumer Marketing, Vol. 28. Issue 1. pp. 27 – 39, 2011.

[33] Saunders, M. et al. "Research Methods for Business Students: 5th Ed", Essex: Prentice Hall, 2009.

Bid and Ask Prices Tailored to Traders' Risk Aversion and Gain Propension: a Normative Approach

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Abstract

Risky asset bid and ask prices “tailored” to the risk-aversion and the gain-propension of the traders are set up. They are calculated through the principle of the Extended Gini premium, a standard method used in non-life insurance. Explicit formulae for the most common stochastic distributions of risky returns, are calculated. Sufficient and necessary conditions for successful trading are also discussed.

Keywords: Extended Gini Index, Bid and Ask prices, Pessimism and Optimism indices.

1. INTRODUCTION

An *evergreen* debate in risk management concerns the pricing of risky assets. Clearly, the perception of the asset return variability not only depends on the individual risk-aversion and/gain-propension of the trader but also if she is acting on the market as a buyer or as a seller of the asset. Specifically, we define the bid-price as the highest price at which a buyer will buy a risky position, whereas the ask-price (or short-selling price) as the lowest one at which she will sell it short.

The aim of the paper is to propose a normative approach to calculate personalized bid and ask prices as Extended Gini (EG) premia. The definition of EG is seminal due to Yitzhaki ([1]) as an extension of the Gini index, the most popular measure of income inequality (see [2]). Although its original use was confined to the social welfare context, recently it has become familiar in non-life insurance to determine the safety loading in insurance premia (see [3]), in Quantitative Finance to calculate risk measures through the Lorenz curve (see Shalit and Yitzhaki [4], [5] and [6]), and in portfolio risk management to select the best tradeoffs between risk and returns (see [7] and [8]). Technically speaking, these prices can be represented as Choquet integrals with power-type distortion functions of order given by the agent index of pessimism and optimism, respectively (see [9] and [10]).

After having set up closed-end formulae for the most common stochastic distributions used in risk management, we discuss sufficient and necessary conditions for successful trading.

To quantify the chance of successful trading we suggest to use the so-called probability of trading. We show that the willingness to trade is driven by three factors (1) the buyer risk-

aversion, (2) the seller gain-propension and (3) the return distribution and specifically, its asymmetry. We get a confirmation of what intuition suggests: (1) the higher the buyer risk-aversion and the seller gain-propension, the higher the probability of no-trading; (2) if the density function of the asset return is decreasing (then the distribution is right-skewed) the probability of buying is higher than that of selling; and vice versa if the density function is increasing; if the asset is symmetrically distributed, the probability of buying and selling are equal. Among the distributions studied, the uniform distribution has the smallest probability of no-trade and the normal distribution has the largest one. However, for some distributions, one can have probability one or arbitrarily close to zero of successful trading.

The remainder of this paper is organized as follows. Section 2 introduces the bid and ask prices definition. In Section 3 closed-formulae and tables for the most common distributions are given. In Section 4 we discuss sufficient and necessary conditions for trading. Then we define the probability of trading and we discuss the impact of the asset skewness on the successful trading. Section 5 concludes the paper. An Appendix collects the proofs.

2. BID AND ASK PRICES AS RISK-ADJUSTED MEAN RETURN

In social welfare studies, a celebrated measure for income inequality is the Gini index that is well suited for long-tailed distributions such as those of incomes. In finance context, Yitzhaki (1982) seminally developed an extension, called the Extended Gini (EG) and subsequently thoroughly studied by Shalit and Yitzhaki S. ([4], [5] and [6]), Shalit [7] and Cardin et al. [8] among others.

The definition of EG in the literature is not unique, but they all coincide in the continuous case. To avoid technical adjustments, we assume all variables are continuous (see [11] for details for adjusting discrete variables vs continuous ones).

Definition 2.1 *Let X be a continuous random variable with cumulative distribution function F . The Extended Gini of X of order k is defined as:*

$$EG_k(X) = E(X) - E\{\min(X_1, \dots, X_k)\}, \text{ with } k \text{ a positive integer number,}$$

where X, X_1, \dots, X_k are identical independent distributed (i.i.d.) random variables.

The parameter k captures the trader perception of the variability of X . The higher k , the more weight $EG_k(X)$ attaches to the left tail¹ of X and, since the right tail of X coincides with the left tail of $-X$, the more weight $EG_k(-X)$ attaches to the right tail of X . As expected, if the distribution of X is symmetric and/or $k=2$, the dispersion on the left and right tail is equal and $EG_k(X) = EG_k(-X)$. Extended Gini of $-X$ is

$$EG_k(-X) = E(-X) - E\{\min(-X_1, \dots, -X_k)\} = E\{\max(X_1, \dots, X_k)\} - E(X)$$

It easy to check that $EG_k(X)$ and $EG_k(-X)$ assume non-negative values and, in general,

$$EG_k(X) \neq EG_k(-X).$$

Definition 2.2 $EG_k(X)$ is called the risk-premium and $EG_k(-X)$ the gain-premium of X of order k .

We now introduce the notion of bid-price and ask-price as the certainty equivalent of X . The bid-

¹Note that the definition of ask and bid prices of a firm has been recently introduced by Modesti in [12].

price coincides with the standard definition of certainty equivalent (see [11]); vice versa, that of the ask-price needs to be formulated.

Definition 2.3 Let the bid-price and the ask-price (or short-selling price) according to the Extended Gini of order k given by

$$CEG_{bid}^{(k)}(X) = E(X) - EG_k(X) = E\{\min(X_1, \dots, X_k)\}$$

$$CEG_{ask}^{(k)}(X) = E(X) + EG_k(-X) = E\{\max(X_1, \dots, X_k)\}$$

where k is a positive integer and X, X_1, \dots, X_k are i.i.d. random variables.

By definition, the higher k , the higher the risk-premium and the gain-premium, so the lower the bid-price and the higher the ask-price.

Since X is non-negative variable, then $E(X) = E(|X|) = \int_0^{\infty} (1 - F(t)) dt$ and we get

$$CEG_{bid}^{(k)}(X) = \int_0^{\infty} (1 - F(t))^k dt \text{ and } CEG_{ask}^{(k)}(X) = \int_0^{\infty} 1 - F^k(t) dt .$$

Then, $CEG_{bid}^{(k)}(X)$ coincides with the Choquet integral with power distortion function $g(t) = t^k$ and $CEG_{ask}^{(k)}(X)$ with its dual-power distortion function $\tilde{g}(t) = 1 - (1 - t)^k$. Following the terminology used by Chateauneuf *et al.* ([9], Example 4), the parameter k (with $k \geq 1$) is the buyer index of pessimism in $CEG_{bid}^{(k)}(X)$ and the seller index of greediness in $CEG_{ask}^{(k)}(X)$. Clearly, these indices may differ from each other, so it would be necessary to substitute k with k_{buyer} and k_{seller} .

3. CLOSED-END FORMULAE FOR BID AND ASK PRICES FOR COMMON STOCHASTIC DISTRIBUTIONS

The bid and ask prices admit closed-end formulae for many familiar distributions used in financial and managerial modelling. They appear in the literature as special cases of more complicated expressions for moments of order statistics. For completeness some derivations are given in the Appendix. In the following, for simplicity of notation, we skip the under-symbol of k_{buyer} and k_{seller} and we write k . To compute the proper $CEG_{bid}^{(k_{buyer})}(X)$ and $CEG_{ask}^{(k_{seller})}(X)$ it is sufficient to substitute the proper values of k_{buyer} and k_{seller} in the formulae.

3.1 Uniform distribution

Let $F_{\theta}(x) = x / \theta$ for $0 \leq x \leq \theta$, i.e., the uniform distribution on $[0, \theta]$, with mean $\mu = \frac{\theta}{2}$. Due to

symmetry, $EG_k(X) = EG_k(-X) = \frac{\theta(k-1)}{2(k+1)}$ and

$$CEG_{bid}^{(k)}(X) = \frac{\theta}{k+1} \text{ and } CEG_{ask}^{(k)}(X) = \frac{k\theta}{k+1} .$$

3.2 Normal distribution

Although $E(\min(X_1, \dots, X_k))$ and $E(\max(X_1, \dots, X_k))$ for i.i.d. $X_1, \dots, X_k \sim N(\mu, \sigma^2)$ do exist and recursion formulae can be set up (see [13]), but no closed-form formulae exist even if for small k . For

$k = 2$, $EG_2(X) = EG_2(-X) = \frac{\sigma}{\sqrt{\pi}}$ so we get

$$CEG_{bid}^{(2)}(X) = \mu - \frac{\sigma}{\sqrt{\pi}} \text{ and } CEG_{ask}^{(2)}(X) = \mu + \frac{\sigma}{\sqrt{\pi}}.$$

It is also known that $EG_3(X) = EG_3(-X) = 1.5 \frac{\sigma}{\sqrt{\pi}}$ and $EG_4(X) = EG_4(-X) \approx 1.03\sigma$.

3.3 Skew-Normal distribution

In recent years the skew normal distribution has been successfully used in financial modelling (see Eling et al. [14] for applications) Since no closed-formulae exist for normals, we realistically think that achieve them for skew-normals would be a very hard task. So, again we study the case $k=2$. Let $X \sim SN(\xi, \omega^2, \alpha)$. Since $CEG_{bid}^{(k)}(X)$ and $CEG_{ask}^{(k)}(X)$ are the minimal and maximal order statistics of k copies of *i.i.d.* random variables X , for $k=2$:

$$CEG_{bid}^{(2)}(X) = E(\min(X_1, X_2)) = X_{1:2} \text{ and } CEG_{ask}^{(2)}(X) = E(\max(X_1, X_2)) = X_{2:2}$$

Rearranging a result of Jamalizadeh and Balakrishnan ([15], page 46) and imposing the independence between X_1 and X_2 and we get²

$$CEG_{bid}^{(2)}(X) = \xi + \omega \sqrt{\frac{2}{\pi(1+\alpha^2)}} \left(\alpha - \sqrt{\frac{1}{2}} \right) \text{ and } CEG_{ask}^{(2)}(X) = \xi + \omega \sqrt{\frac{2}{\pi(1+\alpha^2)}} \left(\alpha + \sqrt{\frac{1}{2}} \right).$$

As expected, $EG_2(X) = EG_2(-X) = \frac{\omega}{\sqrt{\pi(1+\alpha^2)}}$ achieves its maximum value $\frac{\omega}{\sqrt{\pi}}$ for $\alpha=0$ when

the distribution is Gaussian; whereas the minimum $\frac{\omega}{\sqrt{2\pi}}$ occurs for $\alpha=\pm 1$ when it is Half-Gaussian.

3.4 Pareto distribution

Pareto distributions are characterized by long and heavy tails modulated by a parameter $\alpha > 0$ (and $\alpha > 1$ for finite mean). For this property they are commonly used in Finance for modeling extreme events (see Embrechts and Schmidli [16]). Let $F(t) = 1 - (c/t)^\alpha$ for $t > c$ and $\alpha > 1$; and $S(t) = 1$ for $t < c$ and $S(t) = (c/t)^\alpha$ for $t > c$. A random variable with a Pareto distribution can be written as cX , where X has a Pareto distribution with $c=1$. So we consider the special case $c=1$.

Let $S(t) = 1$ for $0 \leq t \leq 1$ and $S(t) = t^{-\alpha}$ for $t > 1$. Thus

$$CEG_{bid}^{(k)}(X) = \frac{\alpha k}{\alpha k - 1} \text{ and } CEG_{ask}^{(k)}(X) = \frac{\alpha^k k!}{(\alpha k - 1) \cdots (\alpha - 1)}.$$

Just to check, for $k=1$, i.e. risk and gain neutrality, we get the mean $\mu = \alpha / (\alpha - 1)$.

For $k=2$ we have $CEG_{bid}^{(2)} = 2\alpha / (2\alpha - 1)$ and $CEG_{ask}^{(2)} = 2\alpha^2 / [(2\alpha - 1)(\alpha - 1)]$. This implies

$$EG_2(X) = EG_2(-X) = \alpha / [(2\alpha - 1)(\alpha - 1)].$$

²The skew-normal variable X has mean $\xi + \omega \sqrt{\frac{2}{\pi(1+\alpha^2)}} \alpha$ and standard deviation $\sigma = \omega \sqrt{1 - \frac{2\alpha^2}{\pi(1+\alpha^2)}}$. If

$\alpha = 0$, the skew-normal shrinks to the normal with mean $\mu = \xi$ and $\sigma = \omega$.

3.5 Weibull distribution

Let $S(x) = e^{-(x/\lambda)^m}$. Then X has a Weibull distribution with scale parameter $\lambda > 0$ and $m > 0$. The mean $\mu = \lambda \Gamma\left(1 + \frac{1}{m}\right)$. If $m = 2$, $\Gamma(3/2) = \sqrt{\pi}/2$. It follows that in the case $m = 2$, we have $\mu = \lambda\sqrt{\pi}/2$. For simplicity of the formulae, let $\lambda = 2/\sqrt{\pi}$ and $\mu = 1$. This is of no practical importance since multiplying λ by the same constant and all of the results generalize to arbitrary λ very easily. Let $S(x) = e^{-\pi x^2/4}$, then $CEG_{bid}^{(k)}(X) = \frac{1}{\sqrt{k}}$ and $CEG_{ask}^{(k)}(X) = \sum_{j=1}^k (-1)^{j+1} \binom{k}{j} \frac{1}{\sqrt{j}}$.

For the proof see the Appendix. It follows that

$$EG_k(X) = \mu - CEG_{bid}^{(k)} = 1 - \frac{1}{\sqrt{k}} \text{ and } EG_k(-X) = CEG_{ask}^{(k)} - \mu = \sum_{j=1}^k (-1)^{j+1} \binom{k}{j} \frac{1}{\sqrt{j}} - 1.$$

In the case $k = 2$, the formulae reduce to:

$$CEG_{bid}^{(2)}(X) = \frac{1}{\sqrt{2}} \text{ and } CEG_{ask}^{(2)}(X) = 2 - \frac{1}{\sqrt{2}}; \text{ and } EG_2(X) = EG_2(-X) = 1 - \frac{1}{\sqrt{2}}.$$

3.6 Exponential distribution

If $m = 1$ the Weibull distribution collapses into the exponential distribution. Let $F(t) = 1 - e^{-\lambda t}$ and $S(t) = e^{-\lambda t}$ with the rate parameter $\lambda > 0$ and mean $\mu = \frac{1}{\lambda}$ then $CEG_{bid}^{(k)}(X) = \frac{1}{\lambda k}$ and $CEG_{ask}^{(k)}(X) = \frac{1}{\lambda} \sum_{j=1}^k \frac{1}{j}$, whereas $EG_k(X) = \frac{1}{\lambda} \left(\frac{k-1}{k}\right)$ and $EG_k(-X) = \frac{1}{\lambda} \sum_{j=2}^k \frac{1}{j}$. In the special case $k = 2$, $CEG_{bid}^{(2)} = \frac{1}{2\lambda}$ and $CEG_{ask}^{(2)} = \frac{3}{2\lambda}$, and $EG_2(X) = EG_2(-X) = \frac{1}{2\lambda}$.

The results are summarized in Table 1.

		$CEG_{bid}^{(k)}$	$CEG_{ask}^{(k)}$
Uniform (θ)		$\frac{\theta}{k+1}$	$\frac{k\theta}{k+1}$
Normal (μ, σ^2)	$k = 2$	$\mu - \frac{\sigma}{\sqrt{\pi}}$	$\mu + \frac{\sigma}{\sqrt{\pi}}$
Skew-Normal SN ($0, \omega^2, \alpha$)	$k = 2$	$\xi + \omega \sqrt{\frac{2}{\pi(1+\alpha^2)}} \left(\alpha - \sqrt{\frac{1}{2}}\right)$	$\xi + \omega \sqrt{\frac{2}{\pi(1+\alpha^2)}} \left(\alpha + \sqrt{\frac{1}{2}}\right)$
Pareto ($\alpha, c = 1$)		$\frac{\alpha k}{\alpha k - 1}$	$\frac{\alpha^k k!}{(\alpha k - 1) \dots (\alpha - 1)}$
Weibull ($m = 2, \lambda = 2/\sqrt{\pi}$)		$\frac{1}{\sqrt{k}}$	$\sum_{j=1}^k (-1)^{j+1} \binom{k}{j} \frac{1}{\sqrt{j}}$
Exponential (λ)		$\frac{1}{\lambda k}$	$\frac{1}{\lambda} \sum_{j=1}^k \frac{1}{j}$

TABLE 1. The bid-price $CEG_{bid}^{(k)}$ and the ask-price $CEG_{ask}^{(k)}$.

From a practical point of view, the elicitation of the bid and ask prices needs the knowledge of the personalized orders k capturing the decision maker aversion to risk and propension to gain. A way to achieve these values is to submit to the decision maker some simple tests, see Cardin *et al.* [8].

4. THE TRADING: SUFFICIENT AND NECESSARY CONDITIONS

In the same path of Dow and Da Costa Werlang [17], Chateauneuf and Ventura [10] and Dominiak *et al.* [18], we set up conditions for successful trading. An example will set a stage of our argument.

Example Consider an asset with random return X . Three actors are in the market: (1) a buy-side investor who declares her bid-price π_{bid} , i.e. the highest price she will pay for X ; (2) a sell-side investor declaring her ask-price π_{ask} , i.e. the lowest price she will sell X short; (3) the market-maker. Let the three actors assume the same distribution for X . Successful trading depends on the market price p exogenously given. If p is greater than π_{ask} the sell-side investor feels the market reports a better-than-expected price, and is induced to go short the asset; vice versa, if p is lower than π_{bid} the buy-side investor evaluates the asset to be priced lower-than-expected and tends to go long.

Let $\pi_{bid} = CEG_{bid}^{(k_{buyer})}(X)$ and $\pi_{ask} = CEG_{ask}^{(k_{seller})}(X)$, then the investor

- 1) buys the asset X iff $p \leq \pi_{bid}$;
- 2) sells the asset X iff $p \geq \pi_{ask}$;
- 3) but trade inertia occurs if $\pi_{bid} < p < \pi_{ask}$.

4.1 Probability of trading

A spontaneous question may arise: given a risky asset X how to evaluate the chances of trading? Generally speaking one would think that the bigger the bid ask price spread the greater the chance of trading, but that is not necessarily so. Indeed, the spread is expressed in absolute terms, so it could depend on currency. The smaller the currency unit, the greater the asset value and the greater the spread. Then the spread that does not take into account the distribution of the price itself. We suggest to use as a measure of successful trading just the probability of trading. One can easily check that the probability of no-trade given below does not depend on scaling parameters or translation parameters of the probability distributions involved.

To achieve simple formulae we assume that the both traders assume the same distribution for X and $k_{buyer} = k_{seller} = k$. Clearly, if k_{buyer} differs from k_{seller} it is sufficient to substitute k with the proper value.

Definition 4.2 If the three actors on the market assume the same continuous distribution function F for X . Then

$$P(\text{buy } X) = P(p < \pi_{bid}) = F(\pi_{bid})$$

$$P(\text{sell } X) = P(p > \pi_{ask}) = 1 - F(\pi_{ask})$$

$$P(\text{trade inertia}) = P(\pi_{bid} \leq p \leq \pi_{ask}) = F(\pi_{ask}) - F(\pi_{bid})$$

These probabilities could be computed in many cases using the formulas for CEG_{bid} and CEG_{ask} given in Section 3. Just to grasp a quantitative evaluation on the impact of the distribution asymmetry and k on the probability of buying, selling, and no-trading we compute these quantities and collect them in Table 3-5.

$P(p < \pi_{bid})$	$k = 2$	$k = 3$	$k = 4$
Normal(μ, σ^2)	.2877	.1969	.1539
Skew-Normal SN ($0, \omega^2, \alpha$)	.3199		
Weibull(m=2, λ)	.3248	.2303	.1783
Uniform(θ)	.3333	.2500	.2000
Exponential (λ)	.3935	.2834	.2212
Pareto ($\alpha = 2, c = 1$)	.4375	.3056	.2344

TABLE 2. Probability of buying

$P(p > \pi_{ask})$	$k = 2$	$k = 3$	$k = 4$
Pareto ($\alpha = 2, c = 1$)	.1406	.0976	.0747
Exponential (λ)	.2231	.1599	.1245
Weibull (m=2, λ)	.2690	.1893	.1454
Normal (μ, σ^2)	.2877	.1969	.1539
Skew-Normal SN ($0, \omega^2, 1$)	.3073		
Uniform (θ)	.3333	.2500	.2000

TABLE 3. Probability of selling

$P(\pi_{bid} \leq p \leq \pi_{ask})$	$k = 2$	$k = 3$	$k = 4$
Uniform (θ)	.3333	.5000	.6000
Skew-Normal SN ($0, \omega^2, 1$)	.3728		
Exponential (λ)	.3834	.5567	.6543
Weibull (m=2, λ)	.4062	.5804	.6763
Pareto ($\alpha = 2, c = 1$)	.4219	.5968	.6909
Normal (μ, σ^2)	.4246	.6062	.6922

TABLE 4. Probability of trade-inertia.

The analysis of data in Tables 2-4 confirms what intuition suggests:

- 1) The more the probability mass is on the left-tail of X (such as the right-skewed exponential and Pareto distributions), the higher the probability that the market-price is lower than the buyer's bid-price, and consequently the higher the probability of buying. For a negatively-skewed asset the result is reversed.
- 2) For symmetrical distributions (such as the normal and uniform ones) the probability that the asset being sold or bought is the same.
- 3) Among the distributions studied, the uniform distribution has the smallest probability of no-trade and the normal distribution has the largest one. This might seem like a reasonable conjecture for all fixed k and all distributions, but the following two examples show that it is false.

Example 4.3 *One up/down jump asset: $P(\text{no-trade}) = 0$ for all k .*

Consider the classical two states asset with one up/down jump in price. Let the asset be represented by the discrete variable X where $P(X = 0) = (1 - \theta)$ and $P(X = a) = \theta$ with $a > 0$ and $0 < \theta < 1$. Then since $0 < E(\min(X_1, \dots, X_k)) \leq E(\max(X_1, \dots, X_k)) < a$ for all k , we have $P(p < E(\min(X_1, \dots, X_k))) = P(p < \pi_{bid}) = 1 - \theta$ for all k . If θ is close to 0, this probability is close to 1 and investors tend to buy. Similarly, we have $P(p > \pi_{ask}) = \theta$, so if θ is close to 1, asset-holders

tend to sell. We have $P(\pi_{bid} \leq p \leq \pi_{ask}) = 0$ for all k and all θ . Therefore the probability that this asset is traded is 1.

In conclusion, the one jump asset has probability 1 of being traded for every level of risk-aversion/gain-propension k of the investors.

That perfectly matches with intuition, when we deal with very skewed distributions. If the probability mass is highly concentrated around 0, the left-tail is short, but the right-tail may be very long if $a > 0$ is large. So the buyers tend to buy, since the bargaining seems not too risky, whereas the asset-holders tend not to sell hoping in a high stake. So, a bullish trend is expected. Vice versa, if the probability mass is highly concentrated around a , the left-tail may be very long and the right-one short. So, the risk-averse buyers tend to refuse the bargaining, whereas the asset-holders tend to get rid of the asset. So, the market is prone to undergo a bearish trend.

Of course, this is a discrete distribution. However, it can be approximated to any degree by a continuous distribution³ which gets highly concentrated around 0 and a and the results would be similar. The probability of trade-inertia might not be exactly 0, but it could be arbitrarily close to 0. There would be other distributions that give 0 probability of no trade for $k=2$, but no other distribution would have this property for all k since for a distribution on $[a, b]$, we would have $\pi_{bid} \rightarrow a$ and $\pi_{ask} \rightarrow b$ so $P(\pi_{bid} < X < \pi_{ask})$ could not be 0 for all k .

Example 4.4 *A distribution concentrated around the mean: P(no-trade) close to 1 for all k .*

Consider the discrete case, where $P(X=0) = P(X=2) = .05$ and $P(X=1) = .90$. Then $P(\max(X_1, X_2) = 0) = .0025$, $P(\max(X_1, X_2) = 1) = .9000$ and $P(\max(X_1, X_2) = 2) = .0975$. Thus $E(\max(X_1, \dots, X_k)) = .9000 + 2(.0975) = 1.095$ and by symmetry $E(\min(X_1, \dots, X_k)) = .905$. It follows $P(E(\min(X_1, \dots, X_k)) < p < E(\max(X_1, \dots, X_k))) = P(X=1) = .9$ which is greater than the value for the normal distribution as given in the Table 1. Clearly, one could make it arbitrarily close to one by making $P(X=1)$ arbitrarily close to one, making such an asset illiquid.

Again, that perfectly matches with intuition. The difference with the above Example 4.3 is that now the distribution is symmetric and as we will see in Theorem 4.6 in the following Section, the probability to buy and that to sell is equal. If the probability mass is concentrated about the mean, the both risk-premium and the gain-premium shrink to zero. So, π_{bid} and π_{ask} are both close to the mean value, making the asset be similar to a safe asset. That induces investors to have no-interest in bargaining. And, the probability of investor inertia becomes close to one.

Once again, such a distribution could be approximated arbitrarily closely by a continuous distribution, if desired. The continuous distribution would have a large probability of being very close to the expected value 1 and have very small probability of being close to 0 or 2.

4.2 Influence of the skewness

The above discrete examples have highlighted how skewness may influence the probability of trading. We formally prove that the willingness of trading is driven by the monotonicity of the density function and the index k .

Let X and Y be independent random variables with densities $f(x)$ and $g(y)$, respectively. Denote the cumulative distribution function of X by $F(x)$. Then we have

³The approximating distribution can be symmetrical if the probability mass lying on the extremes 0 and a is equal, otherwise it is asymmetrical.

Lemma: $P(X \leq Y) = E(F(Y))$.

Then we can state the main Theorem of the Section. A sufficient condition such that the probability of buying is higher than the probability of selling or vice versa. Let assume that the price p is i.i.d. distributed as X .

Theorem 4.5 Assume that X has density $f(x)$ with $f' \leq 0$ over the support of the distribution and X, p, X_1, \dots, X_k are i.i.d. random variables. Then, for all integer k

$$P(\text{buy } X) = P(p < \pi_{bid}) \geq \frac{1}{k+1} \geq P(p < \pi_{ask}) = P(\text{sell } X).$$

The reversed inequalities hold if $f' \geq 0$.

The above has a clear-cut financial interpretation. If the density is decreasing, then the distribution has a short left-tail. Since the risk of losses is small, the buyer is willing to pay more, and that increases the probability of buying.

The uniform, exponential, and Pareto distributions all satisfy the assumptions of the Theorem, since $f' \leq 0$. Thus

For $k = 2$: $P(p < \pi_{bid}) \geq \frac{1}{3} \geq P(p > \pi_{ask})$.

For $k = 3$: $P(p < \pi_{bid}) \geq \frac{1}{4} \geq P(p > \pi_{ask})$.

For $k = 4$: $P(p < \pi_{bid}) \geq \frac{1}{5} \geq P(p > \pi_{ask})$.

All of these inequalities are verified by direct calculations collected in Tables 1-3.

Theorem 4.6 Assume that X has a symmetric distribution about its mean μ . Then for all integer k

$$P(\text{buy}) = P(\text{sell})$$

In the special case of the uniform distribution the probability to sell, buy, or not trade has a clear-cut formula.

Theorem 4.7 Let for $F_\theta(x) = x/\theta$ for $0 \leq x \leq \theta$, i.e., the uniform distribution on $[0, \theta]$ probabilities. Then

$$P(\text{buy}) = P(\text{sell}) = \frac{1}{k+1} \text{ and } P(\text{no-trade}) = \frac{k-1}{k+1}.$$

It follows that as the parameter k increases, the probability of trading decreases and that of no-trading increases. That is quite intuitive, since as the buyer risk-aversion increases and the seller gain-propension increases the bid-ask spread increases and the probability of successful trading flows down.

Above formulas have another fascinating interpretation. Consider the probability that p lies between the min/max of k i.i.d. distributed draws of X (note we do no longer consider their expectation, so we do no longer deal with the bid and ask prices):

$$P(\min(X_1, \dots, X_k) < p < \max(X_1, \dots, X_k)).$$

The following lemma provides its value. Note that is valid for every distribution.

Lemma 4.8 Let the market price p and X_1, \dots, X_k is i.i.d. continuous copies of X . Then

$$P(\min(X_1, \dots, X_k) < p < \max(X_1, \dots, X_k)) = \frac{k-1}{k+1}.$$

Above has an immediate interpretation. Suppose k independent experts be asked to express their evaluation on X . They deal in a complete market, so their evaluations $X_i, i=1, \dots, k$ and p are *i.i.d.* variables. The probability that the market price p be bound by the minimum and the maximum variables expressed by the experts is given by $\frac{k-1}{k+1}$. So, if $k=2$, the probability is 0.33 and it increases till 1 if the number k of experts increases to infinity.

5. CONCLUSION

Bid and ask prices tailored to individual trader's attitudes are defined through the Extended Gini premium principle. The buyer risk-aversion and the seller gain-propension are captured by personalized parameters. On the path of Chateaufeuf and Ventura [10], we state sufficient and necessary conditions for successful trading. We use the probability of trading for measuring the chances of successful trading. Closed-end formulae and tables for these measures for the most common distributions used in risk management (uniform, normal, skew-normal, Pareto, Weibull, exponential distribution) are given. A set of guidelines is set up: (1) if the asset probability mass is decreasing from the left-tail of X to the right-one, the probability of buying exceeds that of selling and vice versa (see Theorem 4.5); (2) if the asset distribution is symmetrical then the probability of buying is equal of that of selling (see Theorem 4.6); (3) among the distributions studied, the uniform distribution has the smallest probability of no-trade although it increases as k increases and the normal distribution has the largest one. However, there exist distributions where the probability of the investor inertia is arbitrarily close to 0 or 1 for all k .

A further interesting aspect to investigate is whether the above normative pricing method matches real market exchange data, but that question is left to future research.

6. APPENDIX

Sec. 3.4 (Pareto)

Let $CEG_{bid}^{(k)} = E(\min(X_1, \dots, X_n)) = \int_0^1 1 dt + \int_1^\infty t^{-\alpha k} dt = 1 + \frac{1}{\alpha k - 1} = \frac{\alpha k}{\alpha k - 1}$

Vice versa, the density of $\max(X_1, \dots, X_k)$ is $k\alpha(1-t^{-\alpha})^{k-1}t^{-\alpha-1}$. Thus

$$CEG_{ask}^{(k)}(X) = E(\max(X_1, \dots, X_k)) = \int_1^\infty k\alpha t(1-t^{-\alpha})^{k-1}t^{-\alpha-1} dt = \int_0^1 k(1-u)^{k-1}u^{-1/\alpha} du = \frac{k\Gamma(k)\Gamma(1-1/\alpha)}{\Gamma(k+1-1/\alpha)} = \frac{k!}{\left(k - \frac{1}{\alpha}\right) \dots \left(1 - \frac{1}{\alpha}\right)}$$

.

Sec. 3.5 (Weibull)

Since $P(\min(X_1, \dots, X_k) > x) = e^{-\pi k x^{2/4}}$, it follows that $E(\min(X_1, \dots, X_k)) = \frac{1}{\sqrt{k}}$. Then, since

$$E(\max(X_1, \dots, X_k)) = \int_0^\infty 1 - (1 - e^{-\pi x^{2/4}})^k dx = \int_0^\infty \sum_{j=1}^k \binom{k}{j} (-1)^{j+1} e^{-\pi j x^{2/4}} dx = \sum_{j=1}^k (-1)^{j+1} \binom{k}{j} \frac{1}{\sqrt{j}}$$

and it proves our thesis.

Sec. 3.6 (Exponential)

Let $CEG_{bid}^{(k)} = \int_0^\infty e^{-\lambda k x} dx = \frac{1}{\lambda k}$ so $EG_k(X) = \frac{k-1}{\lambda k}$. Then $CEG_{ask}^{(k)} = \int_0^\infty 1 - (1 - e^{-\lambda x})^k dx = \frac{1}{\lambda} \sum_{j=1}^k \frac{1}{j}$.

Proof of Lemma in Sec. 4.2

$$P(X \leq Y) = \int_{-\infty}^{\infty} \int_{-\infty}^y f(x)g(y)dx dy = \int_{-\infty}^{\infty} F(y)g(y)dy = E(F(Y)) .$$

Proof of Theorem 4.5

It follows from the assumption that $F'' \leq 0$ so F is a concave function. Thus from Jensen's inequality (for concave, not convex functions), we have

$$F(E(\min(X_1, \dots, X_k))) \geq E(F(\min(X_1, \dots, X_k))) ,$$

where the left side is just $P(p \geq E(\max(X_1, \dots, X_k)))$ and by the Lemma, the right side is $P(p \leq E(\min(X_1, \dots, X_k)))$. Since p, X_1, \dots, X_k are *i.i.d.* continuous random variables, this last probability is just $1/(k+1)$ by symmetry. We thus have proved the inequality.

To prove the second inequality we note that $S(x) = 1 - F(x)$ is a convex function. Thus from Jensen's inequality, we have

$$S(E(\max(X_1, \dots, X_k))) \leq E(S(\max(X_1, \dots, X_k))) ,$$

where the left side is just $P(p \geq (\max(X_1, \dots, X_k)))$ and the right side is $E(P(p \geq (\max(X_1, \dots, X_k))))$. Since p, X_1, \dots, X_k are *i.i.d.* continuous random variables, this last probability is just $1/(k+1)$ by symmetry. We thus have thus proved the second inequality.

Vice versa, if $f' \geq 0$ F will be convex and S will be concave and the reversed inequalities hold.

Proof of Theorem 4.6

For simplicity assume first that X is symmetric about 0. Then X has the same distribution as $-X$. Thus $\max(X_1, \dots, X_k)$ has the same distribution as $\max(-X_1, \dots, -X_k) = -\min(X_1, \dots, X_k)$. Hence $E(\max(X_1, \dots, X_k)) = -E(\min(X_1, \dots, X_k))$. Since p is symmetric, $P(p < -a) = P(p > a)$ for all a . In particular,

$$P(p < E(\min(X_1, \dots, X_k))) = P(p < -E(\max(X_1, \dots, X_k))) = (p > E(\max(X_1, \dots, X_k))) .$$

If symmetric about μ , then $X - \mu$ is symmetric about 0, so

$$P(p - \mu < E(\min(X_1 - \mu, \dots, X_k - \mu))) = P(p - \mu > E(\max(X_1 - \mu, \dots, X_k - \mu))) .$$

Thus

$$P(p - \mu < E(\min((X_1, \dots, X_k) - \mu))) = P(p - \mu > E(\max(X_1, \dots, X_k) - \mu)) .$$

Adding μ , it follows that

$$P(p < E(\min(X_1, \dots, X_k))) = P(p > E(\max(X_1, \dots, X_k))) .$$

Proof of Lemma 4.8

By continuity of the random variables, we may assume that exactly one random variable takes the maximum value and one random variable takes the minimum value. The complement of the event $A = P(\min(X_1, \dots, X_k) < p < \max(X_1, \dots, X_k))$ is thus the union of the events $B = \{p = \min(X_1, \dots, X_k, p)\}$ and $C = \{p = \max(X_1, \dots, X_k, p)\}$. By symmetry, each random variable has an equal probability of being the maximum or minimum of $\{X_1, \dots, X_k, p\}$. Thus $P(B) = P(C) = \frac{1}{k+1}$

and $P(A) = 1 - \frac{2}{k+1} = \frac{k-1}{k+1}$.

Proof of Theorem 4.7

Since $E(\min(X_1, \dots, X_k)) = \frac{\theta}{k+1}$, $E(\max(X_1, \dots, X_k)) = \frac{k\theta}{k+1}$, it follows

$$P(\pi_{bid} < p < \pi_{ask}) = \frac{k-1}{k+1}$$

That is the probability given in the Lemma 4.8. Since the distribution is symmetric

$$P(p < \pi_{bid}) = P(p > \pi_{ask}) = \frac{1}{2} \left(1 - \frac{k-1}{k+1} \right) = \frac{1}{k+1}.$$

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7. REFERENCES

- [1] S. Yitzhaki. "Stochastic dominance, mean variance and Gini's mean difference", *American Economic Review*, 72, pp. 78-85, 1982.
- [2] C. Gini. "Variabilita' e mutabilita': contributo allo studio delle distribuzioni e delle relazioni statistiche", in *Studi Economico-giuridici della Regia Facolta' Giurisprudenza*, anno III, parte II, Cuppini, Bologna, 1921.
- [3] D. Denneberg. "Premium Calculation: Why Standard Deviation Should Be Replaced By Absolute Deviation", *Astin Bulletin*, 20(2), pp. 181-190, 1990.
- [4] H. Shalit, S.Yitzhaki. "Mean-Gini, Portfolio Theory, and the Pricing of Risky Assets", *Journal of Finance*, 39, pp. 1449-1468, 1984.
- [5] H. Shalit, S. Yitzhaki. "Capital Market Equilibrium with Heterogeneous Investors", *Quantitative Finance*, 9(6), pp. 757-766, 2009.
- [6] H. Shalit, S. Yitzhaki. "How does beta explain stochastic dominance efficiency?", *Review of Quantitative Finance and Accounting*, 35, pp. 431-444, 2010.
- [7] H. Shalit. "Finding Better Securities while Holding Portfolios", *Journal of Portfolio Management*, 37(1), pp.31-44, 2010.
- [8] M. Cardin, B. Eisenberg, L. Tibiletti. "Mean-Extended Gini portfolios personalized to investor's profile", *Journal of Modelling in Management*, 8(1), 2013 forthcoming.
- [9] A. Chateauneuf, M. Cohen, I. Meilijson. "More pessimism than greediness: A characterization of monotone risk aversion in the rank dependent expected utility model", *Economic Theory*, 25, pp. 649-667, 2005.
- [10] A. Chateauneuf, C. Ventura. "The no-trade interval of Dow and Werlang: some clarifications", *Mathematical Social Sciences*, 59(1), pp. 1-14, 2010.
- [11] S. Yitzhaki, E. Schechtman. "The properties of the extended Gini measures of variability and inequality", *METRON - International Journal of Statistics*, vol. LXIII (3), pp. 401-433, 2005.
- [12] P. Modesti, "Measures for firms value in random scenarios", *Preferences and decisions: models and applications, Studies in Fuzziness and Soft Computing*, 257, 2010, 305-319.
- [13] H.A. David, N.H. Nagaraja. *Order Statistics*, Wiles Series in Probability and Statistics, John Wiles & Sons, Hoboken, New Jersey, 2003.
- [14] M. Eling, S. Farinelli, D. Rossello, L. Tibiletti. "Tail Risk in Hedge Funds: Classical Skewness Coefficients vs Azzalini's Skewness Parameter", *International Journal of Managerial Finance*, 6(4), pp. 290-304, 2010.
- [15] A. Jamalizadeh, N. Balakrishnan. "On order statistics from bivariate skew-normal and skew-t distributions", *Journal of Statistical Planning and Inference*, 138, pp.4187-4197, 2008.
- [16] P. Embrechts, H. Schmidli. "Modelling of extreme events in insurance and finance", *Mathematical Methods of Operations Research*, 39(1), pp. 1-34, 1994.

- [17] J. Dow , S. Ribeiro da Costa Werlang. "Uncertainty aversion, risk aversion, and the optimal choice of portfolio", *Econometrica*, 60(1), pp. 197-204, 1992.
- [18] A. Dominiak, J. Eichberger, J.P.Lefort. "Agreeable trade with optimism and pessimism", *Mathematical Social Sciences*, 64(2), pp. 119-126, 2012.
- [19] S. Heilpern. "Using Choquet integral in economics", *Statistical Papers*, 43, pp. 53-73, 2001.
- [20] C. Kleiber, S. Kotz. "A characterization of income distributions in terms of generalized Gini coefficients", *Social Choice and Welfare*, 19, pp. 789-794, 2002.

Workplace Environment Characteristics as Antecedents of Affective Well-being in the Workplace

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Abstract

Workplace environment characteristics may positively or negatively evoke an individual's affective experiences, and these experiences can influence affective experiences of others. This study investigates the relations between employees' affective experiences and workplace environment characteristics. A questionnaire-based investigation was conducted with employees in Thai companies. Participants were asked to evaluate various aspects of their own workplace environments and their affective well-being at work. A factor analysis revealed eight workplace environment factors that contribute to the overall affective experiences of employees. These eight factors were confirmed to significantly correlate with overall affective well-being and its five sub-dimensions. With *t*-test analysis, this study also found gender differences in the perceptions of affective well-being at work and workplace environment characteristics. Finally, regression analyses showed that seven workplace environment factors, job goodness, less conflict, autonomy, camaraderie, authentic leadership, fitness, role clarity, as well as positive and negative personality traits are significant predictors of affective well-being in the workplace.

Keywords: Workplace environment, Antecedents, Affective well-being, Affective experience

1. INTRODUCTION

Affective responses from individuals toward their workplace environment characteristics are significant, as they not only influence the individual but also most probably others in the workplace [1], [2]. However, there is still a lack of knowledge regarding those features of the workplace that are likely to produce particular moods and emotions among people at work [1], [3]. In other words, the relationship between workplace environment characteristics and particular affective experiences is still undetermined. Thus, it is necessary to identify precisely which workplace factors evoke an individual's positive and negative affective experiences at work, especially particular emotions or moods, to reduce negative affective experiences, which can influence co-workers, and to maximize organizational outcomes.

The aim of this study is to investigate the relationship between characteristics in the workplace and affective experiences in the workplace. Workplace environment characteristics and affective well-being in the workplace were measured and relations among them were investigated to show whether those work characteristics are significant in predicting affective well-being in the workplace.

2. RELATED LITERATURE AND HYPOTHESES

2.1 Necessity of Having Affective Experiences at Work

Undesirable features of a workplace setting may decrease both a particular individual's positive experiences at work [4] and, as a consequence, decrease the positive experiences of others. This occurs via the sharing of affective experiences, called affective climate [5], affective group [6], or emotional contagion [7], [8], where the emotions of others are mimicked, thus, extending the range of emotions present [2].

Although positive affect seems to be short-lived, unlike negative ones, it can have deep and enduring effects such as increasing long-term intellectual, psychological, and social resources among people in the community [9]. Thus, it is crucial to pay more attention to aspects that relate to one's affective experiences in workplace settings where sharing experiences can influence team performance [6], [10], [11].

2.2 Workplace Characteristics that Contribute to Affective Experiences

2.2.1 Internal Contribution

- **Gender**

Although gender differences in emotion have been widely reported, the results are varied across personality, society, and task characteristics, because men and women are often socialized for different motives and goals [12]. A previous study found that when respondents were asked to report their overall emotion over a week women reported significantly less positive affect than men [13]. In terms of emotional contagion, women report higher levels of influencing the emotions of others than men do [14].

Regarding negative experiences, it has been found that women report a higher intensity and longer duration than men [13] and report greater hurt and disappointment after expressing anger in an experimental setting [15]. Thus, it seems likely that women more easily experience negative emotions than men. Undesirable workplace environment characteristics may evoke a greater degree of negative experiences in women than men, resulting in lower levels of overall affective well-being for women than men.

Negative affect in individuals is also associated with a negative bias in interpreting life experiences [16]. Thus, the interpretation or perception of workplace environments between women and men are likely to be different. These discussions derive the following hypothesis.

Hypothesis 1a: Women tend to have lower-leveled perceptions of workplace environments.

Hypothesis 1b: Women have less positive experiences in the workplace than men.

- **Affectivity Personality Traits**

Positive and negative personality traits have been consistently associated with subjective well-being [17]. Individuals who have high positive trait seem to habitually construe events differently from those with high negative trait [4]. Individuals with positive trait are optimistic and have more strategies to deal with problems compared with less happy individuals [18], [19]. In contrast, persons in high negative trait tend to over-report unpleasant experiences [16], [20]. Thus, positive and negative traits are assumed to relate to how individuals interpret affective well-being at work. Hence, the second hypothesis is derived.

Hypothesis 2a: Employees with positive trait experience greater affective well-being at work.

Hypothesis 2b: Employees with negative trait experience lower affective well-being at work.

2.2.2 External Contribution

- **Conflict**

Perceptions of conflict among group members have been negatively associated with group performance and satisfaction [21], [22]. Emotional expressions regarding conflict concern the

ability to transmit and maintain emotions through group socialization [23]. People in groups with high levels of consensus regarding task issues express greater satisfaction and a desire to stay in that same groups [24].

In contrast, regarding conflicts in relationships among work group members, Walton and Dutton cited in [22] discussed that employees may experience frustration, strain, and uneasiness when they dislike or are disliked by others in the group.

Conflicts in workplaces are likely to evoke negative affective experiences in individuals. Thus, less conflict at work will maximize the positive affective experiences of employees. Hence, the third hypothesis can be drawn as follows.

Hypothesis 3: Employees with perceptions of less conflict at work will experience greater affective well-being at work.

- **Camaraderie**

Camaraderie in organizations is a major source of workplace satisfaction and plays an essential role in meeting social and security supports that relate to positive and negative affects, such as comfort, enthusiasm, loneliness [25], [26], [27]. People can provide and receive the support that is essential in everyone's life affective experiences because all societies worldwide are built on structures and ways of living together that maintain the advantage of social contact [28]. Thus, the greater an employee's perception of positive social contact, the more feelings fulfilling colleagues and one's needs of being in society they have, in turn positively influencing greater affective experiences. From this the fourth hypothesis is drawn.

Hypothesis 4: Employees with positive perceptions of camaraderie will experience greater affective well-being at work.

- **Autonomy**

According to the theory of self-determination [29], everybody has the need to feel autonomous. In the workplace, autonomy is how the rights of individual to freedom and dignity manifest [30]. When people feel autonomous, they feel free to choose to do things that they find interesting or personally meaningful to them, and in turn, this results in better workplace motivation, productivity, and well-being [4], [31], [32]. Thus, in the workplace where managers support autonomy, employees will feel good and positive about most things, and the opposite is true for employees who receive no such supports [33]. Thus, the fifth hypothesis can be derived.

Hypothesis 5: Employees with positive perceptions of autonomy in their workplace will experience greater affective well-being.

- **Job Goodness**

The characteristics of job "goodness" can be explained as the sense of personal value contributing to an organization and the matching of organizational quality. Features of workplace environments that are important to individuals may vary regarding personal values that serve as personal indicators [34]. Some people may desire to work in a workplace with highly valued role, contribution, levels of innovativeness or creativity, while others may wish to work with an organization that fits with their personal values. Desirable workplace features refer to one's own attainment of what is personally valued, and this determines one's welfare in the workplace [35].

Thus, when a person's desire or requirements meet the organization's workplace environment, outcomes [36] and job satisfaction [35], [37], [38] should be optimized. This derives the sixth hypothesis.

Hypothesis 6: Employees with perceptions of a job goodness which matches to their desires and is provided by the organization will experience higher affective well-being at work.

- **Authentic Leadership**

Employees are likely to consider a workplace leader as being effective in terms of authenticity, trust, and confidence, if they identify similarly with them, and if that leader improves positive emotional reactions among employees [39] and their well-being [40]. A leader with a high level of effectiveness increases cooperative behavior among colleagues, leading to both pleasant affects [41] such as feelings of emotional support [40] and unpleasant affects such as jealous and envy [42].

In addition, displays of emotion from leaders can have a powerful impact upon employees' emotions and emotional climate of the workplace [43], [44], thereby, influencing employees' perceptions of their leaders' emotional intelligence. Thus, authentic leadership is hypothesized to essentially influence affective experiences.

Hypothesis 7: Employees with perceptions of greater authentic leadership will experience higher affective well-being at work.

- **Fitness**

Person-job fit is the compatible fit between an individual and a specific job. It was defined as the fit between the ability of an individual and the demands of the job [37]. Person-job fit is critical for an employee's well-being and the misfit of a person and job may cause strain and stresses [45]. In contrast, when a person is put into the right job, there are opportunities for that person to minimize boredom and anxiety and maximize effort and enjoyment; this concept can be described as flow [46] and engagement [47]. Selecting a person whose inherent talents match job demands can also reduce turnover rates, as cited in [48]. Thus, the eighth hypothesis can be derived as shown below.

Hypothesis 8: Employees with positive perceptions of positive fitness will experience greater affective well-being at work.

- **Growth and Development**

Positive perceptions of opportunities for personal growth and development may provide workers with greater upward movement and security [28] and feelings of well-being [49]. It is human nature for people to dislike being stuck in one place [48]. People who perceive better opportunities for personal development tend to develop more drive and enthusiasm at work, feeling more motivated and rewarded, and experiencing greater enjoyment and meaningfulness [27].

In contrast, low-level job growth and insecurity are associated with high levels of tension and anxiety in employees and their families [28]. Even though an employee holds a position, substantial worry produces negative affective experiences. Thus, the hypothesis below on the opportunity for growth and development may be derived.

Hypothesis 9: Employees with positive perceptions of growth and development will experience greater affective well-being at work.

- **Role Clarity**

An employee's role at work can influence negative affective experiences such as stress when expectations regarding employee behavior are unclear or when in meeting one's own expectations it becomes difficult to meet those of others [50], [51], [52]. Less role clarity increases the probability that a person will be more dissatisfied with one's role and experience feeling of anxiety [51]. These discussions derive the following hypothesis.

Hypothesis 10: Employees with perceptions of role clarity will experience greater affective well-being at work.

3. METHOD

3.1 Participants and Procedure

Employees at various large organizations in Thailand participated in a questionnaire-based investigation. Aiming for general insights across a broad range of workplaces, we collected samples representing employees from numerous different organizations. Before the distribution of the questionnaire, a telephone interview was conducted with general managers or head of institutions of the target organizations to confirm the characteristics of the various jobs and workplaces of prospective participants. Finally, 14 organizations were included (6 state enterprises, 5 private organizations, and 3 large public institutions). The questionnaires were distributed at the workplaces of the participating organizations, and collected one week later by one of the authors. Participants were guaranteed confidentiality.

The questionnaire yielded a response rate of 86.7% (690 questionnaires were distributed and 598 returned). The average age of the participants was 33.5 years old ($SD = 8.40$). Among participants, 45.3% were males, 71.5% held a bachelor's degree, and 25.4 % reported a master's degree. In their responses, 38.0% of participants reported their work content as administrative work and 45.1% as professional work. Among participants, 39.6% belonged to public institutions, 35.2% to state enterprises, and 25.3% to private organizations.

3.2 Measures

The first part of the questionnaire consisted of measures of workplace environment characteristics that are expected to influence affective experiences. This part of the questionnaire included question items that assessed participants' perceptions of job goodness, conflicts, autonomy, camaraderie, authentic leadership, support for growth and development, and role clarity. Participants were asked to rate to what extent each item matched their own workplace environment using 7-point scales.

Question items included in this part are listed in Table 1. Items for job goodness were adopted from [36] 14-item of the Organizational Supplies Scale. Conflict was assessed using four items from [22] measure of relationship conflict and six items from [53] measure of task conflict. Job autonomy was assessed using three items from [54] and one item adopted from [55]. Camaraderie was assessed with four items from [55] workgroup characteristics. Leadership was assessed with five items from [55] characteristics of leadership and one additional item from the authors: "pleasant and safe physical environments are promoted." Fit between person and job was assessed using items adopted from [48]. Opportunities for growth and development were assessed using four items from [55] organizational characteristics sub-category and one item from job challenge under job and role characteristics. Role clarity was assessed using two items adopted from [55].

The second part contained the positive and negative affect schedule (PANAS) scale to assess participants' affectivity personality trait [56]. The PANAS scale consisted of two lists of 10-item positive and negative emotions. Thus, with this scale, independent measures of positive and negative personality traits of individuals were provided. Participants were asked to rate the extent to which they experienced each particular emotion within a specified time period ("at this moment" used in this study) using a 7-point scale (1 = Very slightly or Not at all, 4 = Moderately, 7 = Extremely).

In the third part, affective experiences at work were measured using an affective well-being at work scale [25]. This scale consists of five bi-polar sub-dimensions that represent the presence of positive and negative affective experiences. Five sub-dimensions are anxiety-comfort, depression-pleasure, boredom-enthusiasm, tiredness-vigor, and anger-placidity. The scale consisted of 30 bi-polar question items, 6 items for each of the 5 dimensions. Participants were asked to score to what extent they experienced each feeling at work over past week with 7-point scales (1 = Never, 7 = Always). Scores for each sub-dimension were calculated as the average

response to the six question items belonging to the sub-dimension (after reversing the scoring for negative items that were specified in [25]). High scores for each sub-dimension indicated good affective well-being at work. The overall affective well-being score, representing overall affective well-being at work, was calculated as the average of the five scores for the five sub-dimensions.

Finally, the fourth part consisted of demographic and job-related questions such as gender, age, status, education, work experience, content of work, and industrial sectors of the organization.

4. RESULTS

4.1 Workplace Environment Antecedents

To identify the factor structure of workplace environment antecedents, an exploratory factor analysis with principle axis factoring with a Varimax rotation was conducted on the response scores to the question items for workplace environment. The Kaiser-Meyer-Olkin measure of sampling adequacy was 0.95, and Bartlett's test of sphericity was approximately $\chi^2_{1378} = 23669.09$, $p < 0.001$, which indicated that the collected data were appropriate for functioning factor analysis. The factor analysis yielded an eight-factor structure with eigenvalues greater than 1.0 and all Cronbach's alpha coefficient value of eight factors were higher than 0.70 regarding [57]. The cumulative contribution of the eight factors was 63.03%. Table 1 shows the summary of factor analysis results.

Items highly loaded on the first factor related to how well matched the organization was to a person in terms of a general evaluation of how "good" the job was. Thus, this factor was labeled "job goodness." For the second factor, highly loaded items especially related to either task conflicts or relationship conflicts. Thus, this factor was labeled "conflict". For the third factor, highly loaded items related to the freedom to complete work their own way, such as in making decisions or designing work methods. Therefore, this factor was labeled "autonomy". The remaining factors were interpreted in a similar way and labeled as follows: the fourth factor as "camaraderie"; fifth factor as "authentic leadership"; sixth factor as "job fit"; seventh factor as "opportunities for growth and development"; and eighth factor as "role clarity".

4.2 Gender Differences in Perceptions of Workplace Environment

Table 2 summarizes factor scores for workplace environment factors by gender, as well as results of *t*-tests between gender groups. The factor score for the second "conflict" factor was reversed (indicated as R in Table 2) so that the greater value represents positive meanings for all eight factors. As seen in Table 2, males tend to show higher scores than females, except for work autonomy. Males perceived workplace environment characteristics such as job goodness ($t = 3.20$, $p < 0.01$) and the opportunity for advancement ($t = 2.49$, $p < 0.05$) significantly higher than females. Males also had the tendency to perceive camaraderie, which is relationship among colleagues higher than females ($t = 2.37$, $p < 0.05$). Thus, H1a was partially accepted.

4.3 Affective Well-being at Work Scores and Gender Differences

Table 3 summarizes affective well-being scores by gender as well as the results of the gender comparison. High affective well-being scores imply a positive experience for each dimension, while low scores represent negative experiences. Results of the *t*-tests showed that males tend to perceive positive affective experiences significantly more than females. This result supports H1b.

Table 1: Factor analysis results for workplace environment variables

Workplace environment variables	Factors (% of variance, Cronbach's alpha coefficient)							
	1 (15%, 0.93)	2 (15%, 0.96)	3 (7%, 0.90)	4 (7%, 0.89)	5 (6%, 0.92)	6 (6%, 0.89)	7 (4%, 0.84)	8 (3%, 0.86)
How much is "your contribution" present in your work?	0.724							
How much is "problem solving" present in your work?	0.719							
How much is "respect" present in your work?	0.693							
How much is "creativity" present in your work?	0.685							
How much are "knowledge and technique" present in your work?	0.671							
How much is "innovation" present in your work?	0.655							
How much is "variety in duty" present in your work?	0.632							
How much is "job stability" present in your work?	0.617							
How much is "superiority" present in your work?	0.614							
How much are "colleagues" present in your work?	0.589							
How much are "rule and procedure" present in your work?	0.569							
How much is "pay" present in your work?	0.519							
How much is "autonomy" present in your work?	0.478		0.458					
Pleasant and safe physical environments are promoted	0.475							
Organization policies are consistently and fairly applied	0.431							
How frequently do people in your work team disagree about opinions? (R)		0.860						
How frequently are there conflicts about the delegation of tasks within your work team? (R)		0.858						
How much emotional conflict is there among members in your work unit? (R)		0.843						
How frequently do members of your work team disagree about the way to complete a team task? (R)		0.833						
How much are personality conflicts evident in your work unit? (R)		0.823						
How much tension is there among members in your work unit? (R)		0.823						
How frequently do members of your work team disagree about who should do what? (R)		0.822						
How much friction is there among members in your work unit? (R)		0.812						
How frequently are there conflicts because of different points of view about work content in your work unit? (R)		0.811						
How frequently do members of your work team disagree about the tasks that your team has to carry out? (R)		0.706						
The job gives me considerable opportunity for independence and freedom to how I do the work			0.774					
How much do you have autonomy in making decision?			0.744					
People are free to express their personalities at work			0.742					
Your job permit you to decide on your own how to go about doing the work			0.708					
I have freedom in my work life			0.555					

Table 1: Factor analysis results for workplace environment variables (continued)

Workplace environment variables	Factors (% of variance, Cronbach's alpha coefficient)							
	1 (15%, 0.93)	2 (15%, 0.96)	3 (7%, 0.90)	4 (7%, 0.89)	5 (6%, 0.92)	6 (6%, 0.89)	7 (4%, 0.84)	8 (3%, 0.86)
There is open communication and trust among members of a workgroup and the atmosphere is characterized by friendly relations				0.721				
Members take pride in their group				0.713				
There are friendly, cooperative interactions between departments				0.691				
There is cooperative efforts among individuals to carry out difficult tasks				0.686				
A good job gives the individual a chance to use his skills and abilities				0.454				
Supervisor's ability to plan and coordinate the group's activities so that maximum performance is possible					0.741			
Group members' feelings of trust and confidence in the supervisor					0.692			
Supervisor encourages the development of close, mutually satisfying relationships within the group					0.641			
The supervisor is aware of and responsive to the needs of subordinates. Supervisor enhances others' feelings of personal worth and importance					0.575			
Supervisor helps achieve goal attainment through such as providing materials, equipment, and technology supports and other facilities					0.574			
My job is fit to my interest						0.826		
I am fit to job						0.771		
I am fulfilled with my job						0.690		
I have the opportunity for growth and advancement in my work life	0.409					0.467		
An organization rewards individuals for performance rather than seniority or other non-performance reasons							0.501	
An individual feels that the organization provides a vehicle for development and of desired personal skills, goals, and rewards	0.408						0.487	
An individual believes his organization performs an important function and offers unique opportunity for growth and reward							0.482	
An individual believes his profession has a good image to outsiders and provides opportunities for growth and advancement							0.418	
Your activities are specified in writing								0.653
Job responsibilities are defined								0.612

Note: Factor loadings less than 0.40 are suppressed; (R) indicates reversed score. In case of an item appeared in more than one factor, an item was counted for a factor which the highest loading appeared.

Table 2: Means and standard deviations of factor scores of workplace environments by gender

Workplace environment factors	Participants (n = 549)		t
	Male (n = 250) M (SD)	Female (n = 299) M (SD)	
1. Job goodness	0.138 (0.884)	-0.116 (0.967)	3.199**
2. Conflict (R)	0.007 (0.921)	-0.006 (1.025)	0.156
3. Autonomy	-0.053 (0.953)	0.044 (0.906)	-1.221
4. Camaraderie	0.102 (0.775)	-0.085 (1.023)	2.368*
5. Authentic leadership	0.007 (0.897)	-0.006 (0.927)	0.163
6. Fitness	0.022 (0.914)	-0.020 (0.949)	0.495
7. Growth / development	0.100 (0.782)	-0.082 (0.886)	2.487*
8. Role clarity	0.061 (0.848)	-0.051 (0.849)	1.535

Note: * $p < 0.05$, ** $p < 0.01$; (R) indicates reversed score.

Table 3: Means and standard deviations of affective well-being scores

Affective well-being dimensions	Participants (n = 598)		t
	Male (n = 271) M (SD)	Female (n = 327) M (SD)	
Anxiety-Comfort	4.653 (1.062)	4.388 (1.016)	3.108**
Depression-Pleasure	5.181 (1.087)	4.978 (1.092)	2.261*
Boredom-Enthusiasm	4.759 (0.953)	4.533 (0.985)	2.829**
Tiredness-Vigor	4.518 (0.985)	4.218 (1.049)	3.573**
Anger-Placidity	5.066 (0.965)	4.911 (0.889)	2.045*
Overall affective well-being	4.835 (0.869)	4.606 (0.843)	3.261**

Note: * $p < 0.05$, ** $p < 0.01$.

Table 4: Pearson’s correlation coefficients between workplace environment factor scores and affective well-being scores

Workplace environment factors	Affective well-being sub dimensions					Overall affective well-being
	Anxiety-comfort	Depressio n-pleasure	Boredom-enthusiasm	Tiredness-vigor	Anger-placidity	
1. Job goodness	0.121**	0.188**	0.230**	0.166**	0.199**	0.212**
2. Conflict (R)	0.258**	0.259**	0.163**	0.168**	0.246**	0.258**
3. Autonomy	0.136**	0.139**	0.169**	0.157**	0.060	0.157**
4. Camaraderie	0.216**	0.307**	0.214**	0.185**	0.270**	0.282**
5. Authentic leadership	0.156**	0.183**	0.154**	0.128**	0.234**	0.200**
6. Fitness	0.173**	0.258**	0.365**	0.231**	0.260**	0.302**
7. Growth / Development	0.044	0.030	0.168**	0.154**	0.076	0.110*
8. Role clarity	0.200**	0.188**	0.220**	0.200**	0.232**	0.244**

Note: * $p < 0.05$, ** $p < 0.01$; n = 523; (R) indicates reversed score.

4.4 Correlations Between Workplace Environment Characteristics and Affective Experiences

Table 4 summarizes the results of the correlation analysis between the factor scores of eight workplace environment factors and affective well-being scores (overall and its sub-dimensions). As can be seen in Table 4, all of eight workplace environment factors showed significant correlations with the overall affective well-being score. Furthermore, there was a correlation between most of the factors and five sub-dimensions—except for a few combination of affective well-being sub-dimensions and workplace environment factors (such as autonomy and the opportunity for growth and development).

4.5 Correlations Between Affectivity Personality Trait and Affective Experiences

The affectivity personality trait scores of the individual participants showed significant correlations with the overall affective well-being score (positive affectivity: $r = 0.477$, $p < 0.01$; negative affectivity: $r = -0.547$, $p < 0.01$). These results are in line with previous studies that state that personality traits tend to significantly correlate with job satisfaction or happiness at work [58], [59].

4.6 Workplace Environment Factors as Predictors of Affective Well-being at Work

Hierarchical multiple regression analysis using the enter method was conducted to determine whether workplace environment factors with control variables (work content, gender, and trait affectivity personality) can predict affective well-being at work. The combination of twelve variables including seven workplace environment factor scores and two personality trait scores that significantly predicted affective well-being at work ($F(11, 522) = 7.943$, $p < 0.01$, at step 4). The adjusted R^2 was 0.602. According to the criteria [60], the variance inflation factor (VIF) values were indicated no multicollinearity problem. The Durbin-Watson value in this study was fell in the acceptable range of no-autocorrelation between adjacent residuals. The standardized regression coefficients shown in Table 5 suggest that different background of work contents and genders of participants were not significant predictors of affective well-being. On the other hand, two types of affectivity personality trait and workplace environment characteristics (except for the opportunities for growth and development) were also significantly predictors to affective well-being at work. Although the opportunity for growth and development factor was not found to be a significant predictor of affective well-being here, the result of the correlation analysis still indicated its significance in terms of its potential correlation with affective well-being in the workplace. Thus, H2a, H2b, H3, H4, H5, H6, H7, H8, and H10 were accepted but H9 was only partially supported for the correlation with affective well-being at work.

TABLE 5: Summary of hierarchical multiple regression analysis with work content, gender, trait affectivity, workplace environment factors scores as independent variables and affective well-being as dependent variables.

Variables	Step 1		Step 2		Step 3		Step 4	
	β	VIF	β	VIF	β	VIF	β	VIF
Work content	.006	1.000	.009	1.000	.037	1.002	.045	1.012
Gender			-.149**	1.000	-.049	1.003	-.045	1.062
Positive trait					.475*	1.029	.356**	1.512
Negative trait					-.578**	1.003	-.473**	1.254
Job goodness							.059*	1.124
Conflict (R)							.131**	1.105
Autonomy							.075**	1.043
Camaraderie							.119**	1.121
Authentic leadership							.064*	1.058
Fitness							.109**	1.197
Growth/ Development							.020	1.064
Role clarity							.092**	1.044
Adjust R^2	-.002		.019		.560		.602	
df	533		532		530		522	
F	.018		12.116**		328.419**		7.943**	
Durbin-Watson							1.800	

Note: * $p < 0.05$, ** $p < 0.01$; (R) indicates reversed score.

5. DISCUSSION

5.1 Gender Differences

In this study, significant gender differences were found in the evaluation of three workplace environment characteristics, job goodness, camaraderie, and opportunity for growth and development, and in affective well-being scores of all five sub-dimensions. Males perceived all

workplace environment characteristics higher (except for autonomy) and had higher levels of positive affective well-being in the overall score and for all sub-dimensions than females.

One possible explanation for this result could be culture-specific characteristics of the samples in this study. Although gender roles have become more equal in many countries, Thai women might still perceive less chance for growth in their jobs, as women's social roles are still lower than men in Thailand. A lower perception of job goodness for women implies less opportunity to choose or to be chosen to perform meaningful tasks in a job. Thai women might have fewer alternatives to choose jobs than men do. As gender roles may be different across cultures, it is possible that these differences may be smaller or not significant when conducted in other countries with more gender equality.

Females also perceived less workplace camaraderie, which may imply that being friendly and building trust and friendships among Thai women is more challenging than for men. This could result in less positive affective experiences for females toward colleagues when compared with male participants. Similarly, as shown in Table 2, though differences were not statistically significant, female samples also perceived other workplace environment characteristics (except for autonomy) at lower levels than the male samples. The lower-leveled perceptions may result in having less positive affective experiences at work for women than men (see Table 3). These results support the discussion that women are more likely to experience negative emotions [61], and when negative experiences exist, it is hard to extricate them because negative experiences seem to be long-lived compared with positive experiences [9]. It is noteworthy that psychological and behavioral characteristics in social relations may differ across cultures. Thus cross-cultural comparative studies are worth conducting on this point as well.

5.2 Predictors of Affective Well-being in the Workplace

5.2.1 Affectivity Personality Trait

Positive and negative personality traits of individuals were found to be major predictors of affective well-being at work as shown in regression analysis in Section 4.6. This result confirms previous literature that claimed that an individual's personality traits can predict positive affective experiences [58], [59]. The results of regression analysis illustrate that even after merging personality traits with the effects of workplace characteristics in step 4, seven of eight workplace environment factors (excluding the opportunities for growth and development) still significantly contributed to predict affective well-being. This implies that workplace characteristic variables should be considered in combination of the personality traits of individuals if one wishes to promote a higher level of affective well-being in employees in the workplace.

5.2.2 Job Goodness

Job goodness is the concept emphasizing the quality of work such as the opportunity to solve problems, opportunity to contribute, or being respected by others. These elements relate to job meaningfulness and reinforce employees' role identification [47], thus tending to increase level of enthusiasm (from highly correlation with boredom-enthusiasm sub-dimension of affective well-being). It is likely that the opportunity to solve problems by using one own implicit knowledge or to share knowledge to others would increase realization of individual's values and result in increasing the willing to work. The results suggest that employees with a high perception of job goodness are likely to focus on job goals, which improve levels of affective well-being, such as motivation and enthusiasm to devote themselves to complete tasks.

5.2.3 Less Conflict

This study also finds that less conflict is a major predictor among proposed workplace characteristics for affective well-being at work. In addition, significant correlations between less conflict and pleasure and comfortable are observed. This result conforms to study of [24] which reported employees with less conflict in the workplace expressed more satisfaction toward group members. Less conflict in the workplace also implies to better social contact among colleagues in which everyone will provide best support to each other, resulting in the possibility of improving in

pleasure experience. On the other hand, the existence of high conflict might be likely to evoke anxiety and depression among individuals as rising up of unsatisfactory of employee who may face to dislike others or to be disliked from others. These negative affective experiences in turn could result in contagion from one individual to others because negative affects are more easily detected than positive affects and may have a longer life [9]. Thus, these negative feelings may not only reduce cooperation among members but encourage employees to leave [24].

5.2.4 Autonomy

Autonomy is also able to predict the level of affective well-being at work. Autonomy increases an individual's meaningfulness at work and one's ability to control situations; it also increases psychological well-being [62] and happiness [32]. In this study, autonomy shows significant correlations with the overall score and four sub-dimensions, but not with anger-placidity. Employees with autonomy probably tend to have more comfortable, energetic, and happy to actively complete tasks at their pace, using their methods, and with the feeling of social support from colleagues. Since everyone can work on their own fashion, this may decrease conflict at work which may be caused by controlling or inflexibility of the way to complete tasks. Thus, autonomy is considered to represent a sense of activity and energy context and may not be correlated with placidity in affective well-being.

5.2.5 Camaraderie

Camaraderie is a major predictor among other workplace characteristic variables and shows a particularly high correlation with depression-pleasure sub-dimension of affective well-being dimensions. Camaraderie likely increases affective well-being through the experiences of harmony and unity among colleagues, resulting in more compromising and pertaining to high pleasurable feelings. Meaningful conversations or discussions among colleagues either work-related or non-work-related can reinforce the positive relationship between them. Activities fostering family-friendly practicing or cooperation-oriented (rather than competition-oriented) may strengthen the bonding between workers in the positive way. Although the degree of camaraderie can vary across types of workplaces (e.g., open-plan layouts or separated spaces), community, or culture, every society still holds in common adaptive ways to engage in social contact or to live together [28]. For example, the common area where can encourage employees to have face-to-face conversation or the workplace layout which allow employee to have easily contact should be promoted in order to increase social interaction among employees.

5.2.6 Authentic Leadership

The findings also suggest that authentic leadership influences the affective well-being at work. In addition, there is a strong correlation between a positive perception of leadership and anger-placidity sub-dimension. This suggests that workplaces where employees perceive their leaders to possess a high level of leadership qualities are environments that are less likely to harbor angry climates. It implies that employees likely feel safe in a workplace when they perceive authentic leadership such as supportiveness or the ability to keep employee resistance at a low level, resulting in a highly placid climate. This sense of supportiveness from leaders is not limited to the workplace context but may enter other areas of life. When struggling with work or personal problems, employees tend to know where to turn and seek support. Thus, leadership is one of important predictor for affective well-being at work.

5.2.7 Job Fitness

Findings also show that job fitness has a stronger correlation with boredom-enthusiasm sub-dimension than any other sub-dimensions and strong influence to affective well-being. Job fitness is the connection between a person and their job, which results in the optimization of work functions and by building positive emotional responses such as motivation and enthusiasm to complete work. This echoes the concept of flow or motivation reinforcement [46]. The great fit shall increase the willingness to come to work and enjoy working with long hours by being absorbed in the involved activity with time flies, persisting to complete job and probably producing the better work quality from activity engagement, because flow state will strengthen bonding between task and an individual. Thus, job recruitment and assignment are also considered to be

the most important issues, which are correlated with employees' enthusiastic affective experiences.

5.2.8 Role Clarity

Having greater role clarity influences affective well-being and correlates with placidity and suppresses feelings of anger. The results of this study are in line with [47]; clear and consistent expectations of work create a safe environment. Greater consistency in work probably results in safer and more placid experiences. This might also explain how role clarity may decrease conflict in the workplace and increase employee support because there is no overlapping regarding work roles. Thus, negative feelings such as anger may decrease and positive feelings such as pleasure and comfort may increase.

5.3 Implications for Managers

Encouraging affective well-being at work is desirable and valuable in itself without any proof of beneficial outcomes. Eight of the workplace environment factors are proposed as potential characteristics of workplaces that increase positive experiences and seven out of them are significant predictors of affective well-being at work.

This study also reported the correlations between individual workplace environment factors and sub-dimension of affective well-being. Management does not necessarily have to implement all of the eight workplace environment characteristics at once. Instead, a focus on any of the smaller issues regarding workplace environment factors may contribute to improve affective well-being by increasing levels of positive affect among individuals in the workplace.

Despite the potential burdens and costs, promoting affective well-being at work would actually benefit the organization in terms of high group connection, hospitality among members, work commitment, and low turnover rate. Through high work commitment, workers may over time develop into professional employees with greater experiences, resulting in greater performances. In the long-term, affective well-being at work can benefit the organization to increase its level of sustainability. All levels of an organization, including top management, managers, leaders, as well as workers, can take advantage of the results of this study, and use them as guidelines to improve their affective well-being in the workplace.

Finally, the results of this study also suggest the importance of taking employees' gender and affectivity personality traits as well as workplace characteristics into consideration for workplace management. As genders differ in the perceptions of affective well-being and affectivity personality traits are significant predictors of affective well-being, it is recommended for managers to appropriately understand the traits of employees in the workplace and gender differences, and conduct the workplace management based on the knowledge.

5.4 Limitations

Besides implications, this study does have limitations. Firstly, the data were collected at just one specific time. Antecedents such as workplace environment characteristics may influence affective well-being with time delays as long as months or years. Long-term observations might be necessary to identify causality relations. Also, affective experiences and its relations with antecedents may change over time. Thus, a longitudinal study could also be necessary.

Secondly, although the relationships between workplace characteristics and specific affective experiences were proved their significant correlations in this study, the causal analysis among them is suggested to carry out in the future study in order to justify the findings and proper practice in the workplace.

Thirdly, participants in this study were from a single country. Further investigations with samples from broader cultures and/or regions should be conducted to determine which of the results of this study can be generalized and which are culture-dependent. This also counts for further investigation in gender differences across cultures as discussed in Section 5.1. The expected

results of these cross-cultural comparative studies would be beneficial for management to optimize the promotion of affective workplace management depending on regions and cultures where the workplace is located.

Finally, the participants of this study were mainly working in professional and administrative roles. Further studies with a broader range of jobs and workplaces should be pursued in order to generalize the findings of this study and to identify antecedents depending on the nature of jobs.

6. CONCLUSION

This study investigated the relationship between workplace environment factors, personality traits and affective well-being dimensions. The overall results showed that eight factors representing workplace environment characteristics were positively correlated with the overall affective well-being score and its five sub-dimensions. The results also suggest that personality traits and seven workplace environment factors were significant predictors of affective well-being in the workplace. Organizational managers may make use of results of this study as a guideline to improve or promote affective well-being in their workplace. According to limitations in this study, there are still some opportunities for further studies.

7. REFERENCES

- [1] V. González-Romá, J. M. Peiró, M. Subirats, and M. A. Mañas. "The validity of affective work team climates," in *Innovative theories, tools, and practices in work and organizational Psychology*, 1st ed., M. Vartiainen, E. Avallone, & N. Anderson, Eds. Gottingen Germany: Hogrefe & Huber Publishers, 2000, pp. 97–107.
- [2] S. Hareli and A. Rafaeli. "Emotion cycles: On the social influence of emotion in organizations." *Reviews of Organizational Behavior*, Vol. 28, pp. 35–59, 2008.
- [3] A. P. Brief and H. M. Weiss. "Organizational behavior: Affect in the Workplace." *Annual Review Psychology*, Vol. 53, pp. 279–307, 2002.
- [4] C. D. Fisher. "Happiness at work." *International Journal of Management Reviews*, Vol. 12, pp. 384–412, 2010.
- [5] N. Gamero, V. González-Romá, and J. M. Peiró. "The influence of intra-team conflict on work teams' affective climate: A longitudinal study." *Journal of Occupational and Organizational psychology*, Vol. 81, pp. 47–69, 2008.
- [6] J. M. George. "Personality, affect, and behavior in groups." *Journal of Applied Psychology*, Vol. 75, pp. 107–116, 1990.
- [7] S. G. Barsade. "The ripple effect: emotional contagion and its influence on group behavior." *Administrative Science Quarterly*, Vol. 47, pp. 644–675, 2002.
- [8] J. E. Bono and R. Ilies. "Charisma, positive emotions and mood contagion." *Leadership Quarterly*, Vol. 17, pp. 317–334, 2006.
- [9] B. L. Fredrickson. "The value of positive emotions." *American Scientist*, Vol. 91, pp. 330–335, 2003.
- [10] S. G. Barsade, A. J. Ward, J. D. E. Turner, and J. A. Sonnenfeld. "To your heart's content: A model of affective diversity in top management teams." *Administrative Science Quarterly*, Vol. 45, pp. 802–836, 2000.

- [11] J. M. George and A. P. Brief. "Feeling good-doing good: A conceptual analysis of the mood at work-organizational spontaneity relationship." *Psychological Bulletin*, Vol. 112, pp. 310–329, 1992.
- [12] L. R. Brody and J. A. Hall. "Gender and emotion in context." in *Handbook of emotion*, 3rd ed., M. Lewis, J. M. Haviland-Jones, L. F. Barrett, Eds. New York: The Guilford Press, 2010, pp.395–408.
- [13] R. W. Simon and L. E. Nath. "Gender and emotion in the United States: Do men and women differ in self-reports of feelings and expressive behavior?." *American Journal of Sociology*, Vol. 109, pp. 1137-1176, 2004.
- [14] R. W. Doherty. "The emotional contagion scale: A measure of individual differences." *Journal of Nonverbal behavior*, Vol. 21, pp. 131–154, 1997.
- [15] A. M. Kring. "Gender and anger." in *Gender and emotion: Social psychological perspectives*, A. H. Fischer, Ed. New York, NY: Cambridge University Press, 2000, pp. 211–231.
- [16] I. Levin and J. P. Stokes. "Dispositional approach to job satisfaction: Role of negative affectivity." *Journal of Applied Psychology*, Vol. 74, pp. 752–758, 1989.
- [17] P. Steel, J. Schmidt, and J. Shultz. "Refining the relationship between personality and subjective well-being." *Psychological Bulletin*, Vol. 134, pp. 138–161, 2008.
- [18] S. Lyubomirsky. "Why are some people happier than others? The role of cognitive and motivational processes in well-being." *American Psychologist*, Vol. 56, pp. 239–249, 2001.
- [19] S. Lyubomirsky and L. Ross. "Hedonic consequences of social comparison: a contrast of happy and unhappy people." *Journal of Personality and Social Psychology*, Vol. 73, pp. 1141–1157, 1997.
- [20] J. Schaubroeck, D. C. Ganster, and M. L. Fox. "Dispositional affect and work-related stress." *Journal of Applied Psychology*, Vol. 77(3), pp. 322–335, 1992.
- [21] C. K. W. De Dreu and L. R. Weingart. "Task versus relationship conflict, team performance, and team member satisfaction: A meta-analysis." *Journal of Applied Psychology*, Vol. 88(4), pp. 741–749, 2003.
- [22] K. A. Jehn. "A multimethod examination of the benefits and detriments of intragroup conflict." *Administrative Science Quarterly*, Vol. 40, pp. 256–282, 1995.
- [23] J. R. Kelly and S. G. Barsade. "Mood and emotions in small groups and work teams." *Organizational Behavior and Human Decision Processes*, Vol. 86, pp. 99–130, 2001.
- [24] D. M. Schweiger, W. R. Sandberg, and J. W. Ragan. "Group approaches for improving strategic decision making: A comparative analysis of dialectical inquiry, devil's advocacy, and consensus." *Academy of Management Journal*, Vol. 29(1), pp. 51–71, 1986.
- [25] K. Daniels. "Measures of five aspects of affective well-being at work." *Human Relations*, Vol. 53, pp. 275–294, 2000.
- [26] T. Kiefer. "Feeling bad: Antecedents and consequences of negative emotions in ongoing change." *Journal of Organizational Behavior*, Vol. 26, pp. 875–897, 2005.
- [27] A. Rego and M. P. Cunha. "Authentic climates and employee happiness: Pathways to individual performance?" *Journal of Business Research*, Vol. 61, pp. 739–752, 2008.

- [28] P. Warr and G. Clapperton. *The joy of work? Jobs, happiness, and you*. New York: Routledge, 2010.
- [29] E. L. Deci and R. M. Ryan. "The general causality orientations scale: Self-determination in personality." *Journal of Research in Personality*, Vol. 19, pp. 109–134, 1985.
- [30] M. Gagné and D. Bhave. "Autonomy in the workplace: An essential ingredient to employee engagement and well-being in every culture." in *Human autonomy in cross-cultural context: Perspectives on the psychology of agency, freedom, and well-being*, V. I. Chirkov, R. M. Ryan, and K. M. Sheldon, Eds. Dordrecht: Springer, 2011, pp. 163–187.
- [31] M. Gagné and E. L. Deci. "Self-determination theory and work motivation." *Journal of Organizational Behavior*, Vol. 26, pp. 331–362, 2005.
- [32] R. M. Ryan, V. Huta, and E. L. Deci. "Living well: a self-determination theory perspective on eudaimonia." *Journal of Happiness Studies*, Vol. 9, pp. 139–170, 2008.
- [33] E. L. Deci, J. P. Connell, and R. M. Ryan. "Self-determination in a work organization." *Journal of Applied Psychology*, Vol. 74(4), pp. 580–590, 1989.
- [34] L. A. James and L. R. James. "Integrating work environment perceptions: Explorations into the measurement of meaning." *Journal of Applied Psychology*, Vol. 74, pp. 739–751, 1989.
- [35] R. Dawis and L. H. Lofquist. *A psychological theory of work adjustment: An individual-differences model and its applications*. Minneapolis, MN: The University of Minnesota, 1984.
- [36] D. M. Cable and J. R. Edwards. "Complementary and supplementary fit: a theoretical and empirical integration." *Journal of Applied Psychology*, Vol. 5, pp. 822–834, 2004.
- [37] J. R. Edwards. "Person-job fit: a conceptual integration, literature review, and methodological critique." in *International review of industrial and organizational psychology*, Vol. 6, C. L. Cooper and I. T. Robertson, Eds. New York: Wiley, 1991, pp. 283–357.
- [38] J. W. Westerman and L. A. Cyr. "An integrative analysis of person-organization fit theories." *International Journal of Selection and Assessment*, vol. 12(3), pp. 252–261, 2004.
- [39] R. Ilies, F. P. Morgeson, J. D. Nahrgang. "Authentic leadership and eudaemonic well-being." *Leadership Quarterly*, Vol. 16, pp. 373–394, 2005.
- [40] Z. Aycan and M. Eskin. "Relative contributions of childcare, spousal support, and organizational support in reducing work-family conflict for men and women: the case of Turkey." *Sex Roles*, Vol. 53(7/8), pp. 453–471, 2005.
- [41] O. Herrbach and K. Mignonac. "How organizational image affects employee attitudes." *Human Resource Management Journal*, Vol. 14(4), pp. 76–88, 2004.
- [42] R. P. Vecchio. "Negative emotion in the workplace: Employee jealousy and envy." *International Journal of Stress Management*, Vol. 7(3), pp. 161–179, 2000.
- [43] J. M. George. "Emotions and leadership: The role of emotional intelligence." *Human Relations*, Vol. 53, pp. 1027–1055, 2000.
- [44] N. M. Dasborough and N. M. Ashkanasy. "Emotion and attribution of intentionality in leader-member relationships." *The Leadership Quarterly*, Vol. 13, pp. 615–634, 2002.

- [45] L. Q. Yang, H. S. Che, and P. E. Spector. "Job stress and well-being: an examination from the view of person-environment fit." *Journal of Occupational and Organizational Psychology*, Vol. 81, pp. 567–587, 2008.
- [46] M. Csikszentmihalyi. *Flow*. New York: HarperCollins, 1991.
- [47] W. A. Kahn. "Psychological conditions of personal engagement and disengagement at work." *Academy of Management Journal*, Vol. 33(4), pp. 692–724, 1990.
- [48] J. K. Harter and N. Blacksmith. "Employee engagement and the psychology of joining, staying in, and leaving organizations." in *Oxford handbook of positive psychology and work*, P. A. Linley, S. Harrington, and N. Garcea, Eds. New York: Oxford University Press, 2010, pp. 121–130.
- [49] E. Diener and E. M. Suh. "National differences in subjective well-being." in *Well-being the foundations of hedonic psychology*, D. Kahneman, E. Diener, and N. Schwartz, Eds. New York: Russell-Sage, 1999, pp. 434–450.
- [50] R. T. Keller. "Role conflict and ambiguity: Correlates with job satisfaction and values." *Personnel Psychology*, Vol. 28, pp. 57–64, 1975.
- [51] A. Koustelios, N. Theodorakis, and D. Goulimaris. "Role ambiguity, role conflict and job satisfaction among physical education teachers in Greece." *International Journal of Educational Management*, Vol. 18(2), pp. 87–92, 2004.
- [52] M. Siegall. "Putting the stress back into role stress: Improving the measurement of role conflict and role ambiguity." *Journal of Managerial Psychology*, Vol. 15(5), pp. 427–439, 1999.
- [53] P. P. Shah and K. A. Jehn. "Do friends perform better than acquaintances? The interaction of friendship, conflict, and task." *Group Decision and Negotiation*, Vol. 2, pp. 149–165, 1993.
- [54] J. R. Hackman and G. R. Oldham. "Development of the job diagnostic survey." *Journal of Applied Psychology*, Vol. 60, pp. 159–170, 1975.
- [55] A. P. Jones and L. R. James. "Psychological climate: Dimensions and relationships of individual and aggregated work environment perceptions." *Organizational Behavior and Human Performance*, Vol. 23, pp. 201–250, 1979.
- [56] D. Watson, L. A. Clark, and A. Tellegen. "Development and validation of brief measures of positive and negative affect: The PANAS scales." *Journal of Personality and Social Psychology*, Vol. 54, pp. 1063–1070, 1988.
- [57] J. C. Nunnally. *Psychometric theory*. New York: McGraw-Hill, 1978.
- [58] A. O. Agho, J. L. Price, and C. W. Mueller. "Discriminant validity of measures of job satisfaction, positive affectivity and negative affectivity." *Journal of Occupational Organization Psychology*, Vol. 65(3), pp. 185–96, 1992.
- [59] R. Cropanzano, K. James, and M. A. Konovsky. "Dispositional affectivity as a predictor of work attitudes and job performance." *Journal of Organizational Behavior*, Vol. 14, pp. 595–606, 1993.
- [60] R. M. O'Brien. "A caution regarding rules of thumb for variance inflation factors." *Quality & Quantity*, Vol. 41, pp. 673–690, 2007.

[61] A. R. Hochschild. *The managed heart*. California, CA: University of California Press, 1983.

[62] C. D. Ryff. and C. L. M. Keyes. "The structure of psychological well-being revisited." *Journal of Personality and Social Psychology*, Vol. 69(4), pp. 719–727, 1995.

fooling the company – The Corporate Jester As Driving Force For Organizational Change

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Abstract

This conceptual article proposes the establishing of the position of a corporate jester to support organizational change processes. The article focuses on the inevitable transformations companies have to go through, given the diversification and pluralization of the workforce. The corporate jester theoretically is framed as part of an organizational “comical artifact staging”, that by utilizing humor as an element of organizational change, experiences more openness and less resistance than more educative tools.

Keywords: corporate jester, humor, organizational change, diversity management, inclusion

1. INTRODUCTION

In this paper the corporate jester is conceptualized and proposed as an innovative instrument of organizational diversity management programs to initiate and support organizational change processes in order to create a corporate climate of inclusion. Within companies a lot of stereotype-based mechanisms of exclusion operate alongside all dimensions of diversity (for example sexual orientation, nationality, ethnicity, age, gender, skin color, etc.). These mechanisms lead to a stabilization of existing segregations and hierarchization among the particular manifestations of each dimension. The emphases of this paper are the organizational mechanisms that are related to the dimensions nationality, sexual orientation and gender, but the fundamental structure that underlies these mechanisms is transferable to every dimension of diversity.

Against that background a corporate jester as an element of a “comical artifact staging”¹-strategy can contribute to uncover these mechanisms and activate processes of reflection to reduce the tendencies of segregation. On the individual level the overcoming of these tendencies would broaden the vocational room for maneuver. Taking into account that capacities and talents are not connected to certain manifestations of diversity dimensions a stereotypic and segregating allocation of working power within companies cannot be the most effective. Therefore a weakening of these mechanisms of exclusion can also have a positive economical impact on the organizational level [1]. In order to conceptualize the corporate jester it is important to deepen the understanding of these mechanisms of exclusion und the underlying stereotyping and sense-making processes.

2. STEREOTYPES, ATTRIBUTIONS AND SENSE MAKING

Basically, stereotypes are ascriptions of characteristics or behavioral patterns to humans or groups of humans humans [1]. The function of stereotypes is to reduce complexity and, for humans, they facilitate and accelerate their capability of acting. Stereotypes immediately enable the individual to assign sense to experiences, and to order a complex environment [2]. Beside

¹ This concept was developed together with my colleagues Helga Gartner and Heike Mensi-Klarbach

this constructive function stereotypes can also reinforce mechanisms of exclusion that provoke inequality and discrimination.

At the workplace these mechanisms of exclusion hamper the accession to higher organizational hierarchy levels for (to take two examples) women and non-domestics. For women this phenomenon is often labeled “the glass ceiling” [3].

Furthermore, access to certain task-related corporate sectors may be restricted to either men or women. In the case of gays and lesbians, these mechanisms mean that, the higher they climb on the organizational hierarchy ladder, the more they may have to mask or to deny their homosexuality [4]. Analogous to the “glass ceiling” this phenomenon can be labeled as “the gay glass ceiling” [5] or “the lavender ceiling” [6]. Beside this horizontal segregation these mechanisms cause the tendency of vertical segregation for openly working gays and lesbians that work in adequately stereotyped divisions [7], [8]. In terms of nationality and gender, equivalent mechanisms impede the access of employees perceived as non-domestic, and female employees, to higher organizational hierarchy levels or to certain task-related corporate divisions [9], [10]. On the one hand, the exclusion and segregation is based on the internalization of certain stereotypes by the stereotyped themselves [11]. On the other, the exclusion is based on hidden mechanisms that impede the accession to certain areas [12], [13]. As an example, an informal evening meeting, where the unspoken expectation is for employees to bring a partner of the opposite sex. In summary, these mechanisms lead to a horizontal and vertical segregation of e.g. women and men, domestics and non domestics and also of heterosexuals, or closeted working homosexuals and openly working homosexuals [14].

2.1 Sexual Orientation- and Gender-Related Stereotypes in Organizations

A basic assumption of this article is that the belonging to a certain nationality, gender, sexual orientation, or any other manifestation of any diversity dimension, does not allow any direct conclusion about an individual's capacities and abilities. Therefore any attribution of vocational characteristics or capacities that is solely derived from manifestations of any diversity dimension is based on stereotypical attributions alone.

In this context, gender stereotypes, like any other diversity stereotypes, can be defined as “cognitive structures that consist of socially shared knowledge about the characteristics of men and women, gays and lesbians, natives and foreigners, etc. They are special cases of terms that structure individuals` knowledge about the world, and at the same time are building stones of understanding” [15]. An illustrative example of stereotyping as a generalizing attributive denomination is given by Ricarda Huch when she describes female poetry: “...male is the creating power, shaping and designing; the filling and animating the picture is female: male is the architectonic and plastic, female the picturesque and musical, and within the arts again the male is the constructive and female the decorative” [16]. Eckes summarizes the stereotypic male characteristics as instrumental, and the female ones as expressive. Consequently, because of their bipolar relationship, at opposite ends of an imaginary scale, one person can have either expressive, or instrumental characteristics, never both [15].

The stereotypic localization by gender is strongly connected with sexual orientation, as far as gender is also defined by heterosexual desire, for example masculine men have to desire women [17]. Thus lesbians by tendency get ascribed more male attributes, and gays more female ones [18], [19]. These attributions of typical male or female characteristics determine the expectations about the behavior and acting of men and women. The stereotypes control the role, and behavioral expectations, which may lead to sanctions in case of non-compliance [20, 21]. These gender and sexuality related stereotypic attributions may have changed in the course of time and lost some of their intensity [22]. Even so today – at least by trend – there is still an observable division between a male connoted, instrumental, working world, and a female connoted, expressive, private world [23]. Male-coded behavior is still perceived as adequate and appropriate for working contexts and it is reproduced in media, the staging of management in biographies of successful managers and also in cartoons [24].

Besides the stereotypical shifting of masculinity and femininity in connection with homosexuality [18], there are more specific attributes related to sexuality and sexual orientation that also work in organizations. Buba und Vaskovics [25] point out that one essential generalizing pre-assumption gays and lesbians are confronted with is connected to the equation of sexuality and homosexuality. Gays and lesbians are perceived as over-sexualized and their sexuality becomes the main feature of their personality and overshadows every other part of their personality. In conjunction with the fiction of asexuality as an essential condition for a productive workplace [26], this over-sexualizing is the basis for the assumption that homosexual employees might be less productive. Furthermore, the tendency to see sexuality as taboo in the workplace and in economic contexts, in connection with the perception of gays and lesbians as oversexed, causes a latent reserve to assign them jobs that demand a seemingly high degree of economical rationality [27].

Because of these interdependencies, companies often fill vacant gender- or sexuality-connoted job profiles appropriate to the stereotype. Out of probabilistic considerations this kind of allocation of resources cannot be the most effective in an economic way [28], [29]. Thus for gaining or retaining competitive advantages enterprises have to find measures to counteract these organizational practices.

This is the connecting point of the proposed organizational concept of intervention. Its starting point is to weaken the constraining effect of these stereotypes by making them visible within the framework of a “comic artifact staging”.

3. COMIC ARTIFACT STAGING

The concept of artifacts in this paper is based on Schein [30]. Within organizations artifacts are the expression of commonly shared values (and therefore also of shared stereotypes), but because of their reciprocal conditionality artifacts can also be the starting point for interventions to initiate processes of changing organizational values [30]. In that approach artifacts can be any kind of expression of certain value structures and they are not limited to material or tangible phenomena.

The reference to comicality and theories of comicality [31], [32], [33] eases the dealing with contradictions in the organizational social structure and its visualization. Beyond that it facilitates the thematization of taboos and their underlying norms. Resistance that is primarily based on the constructive function of stereotypes can be reduced and shifted by comicality. Another positive impact of the use of comicality is that it allows the non-reproduction of common shared stereotypes, and therefore does not contribute to their stabilization [34].

Staging in this paper means the process to stage or to showcase someone or something. The crucial point is that the staging itself to a certain degree can influence how something is perceived and experienced. Staging is applicable to indicate unstable, alterable and contingent relations because it does not take objectifiable realities as a starting point but refers to aesthetic processes of construction [35].

Elements of a “comic artifact staging” proposed in this paper are instruments of denaturalizing the dichotomizing sexuality and gender patterns by alienating strategies like obvious masquerades and exhibited posing [36]. In this paper, these elements are conceptualized in the shape of a corporate jester. The focus remains on the diversity dimensions of sexuality and gender, but an extension of the concept in other dimensions is possible because the mode of operation of stereotypic attribution does not differ between the different dimensions.

4. THE CORPORATE JESTER

This paper proposes the concept of an organizational jester or a corporate jester, based on the figure of the court jester. In Europe in the late 16th century until the early modern age the jester incorporated the role of an advisor to the king. Most commonly the jesters were male [37] and

highly-esteemed specialists or educated academics. They had the privilege that they were allowed to irritate and to be provocative. In literature two types of jesters are described: the natural jester, usually mentally or physically disabled persons, and the artificial jester, persons who simulate folly [38]. The usefulness of a jester for the king derives from the enormous imbalance of power in medieval royal councils. By tendency no one had the courage to question decisions that were made by the king or queen, out of fear of losing favor with them. In contrast, the jester explicitly had the permission to question, to criticize and to express doubts without having the fear of reprisals.

Assuming that nowadays top-managers also operate within a high imbalance of power, concepts like the court jester again might be of certain importance to overcome deeply-rooted maldevelopments. A corporate jester could counteract the systematical constraints and the tacit fears in a productive way. He or she would have the privilege to challenge the management hierarchies without having to fear negative consequences because the jester is not involved in corporate hierarchies.

The corporate jester, as a person, could have different organizational functions. He or she could be the intermediary between the workforce and the management, but could also operate within the workforce to initiate change processes. Because of his or her position outside of the organizational hierarchies the jester has immense scope for action.

Figure 1 shows one possible direction the jester could act as an instrument of an organizational diversity management strategy. He can address the stereotypic basic assumptions that cause and stabilize the tendencies of organizational segregation in terms of sexuality and gender. The jester has to recognize the mechanisms of exclusion and communicate these to the top. That does not mean that the workforce itself is conscious of these mechanisms. The jester does not have to fear negative consequences, neither from the top-management nor from the workforce.

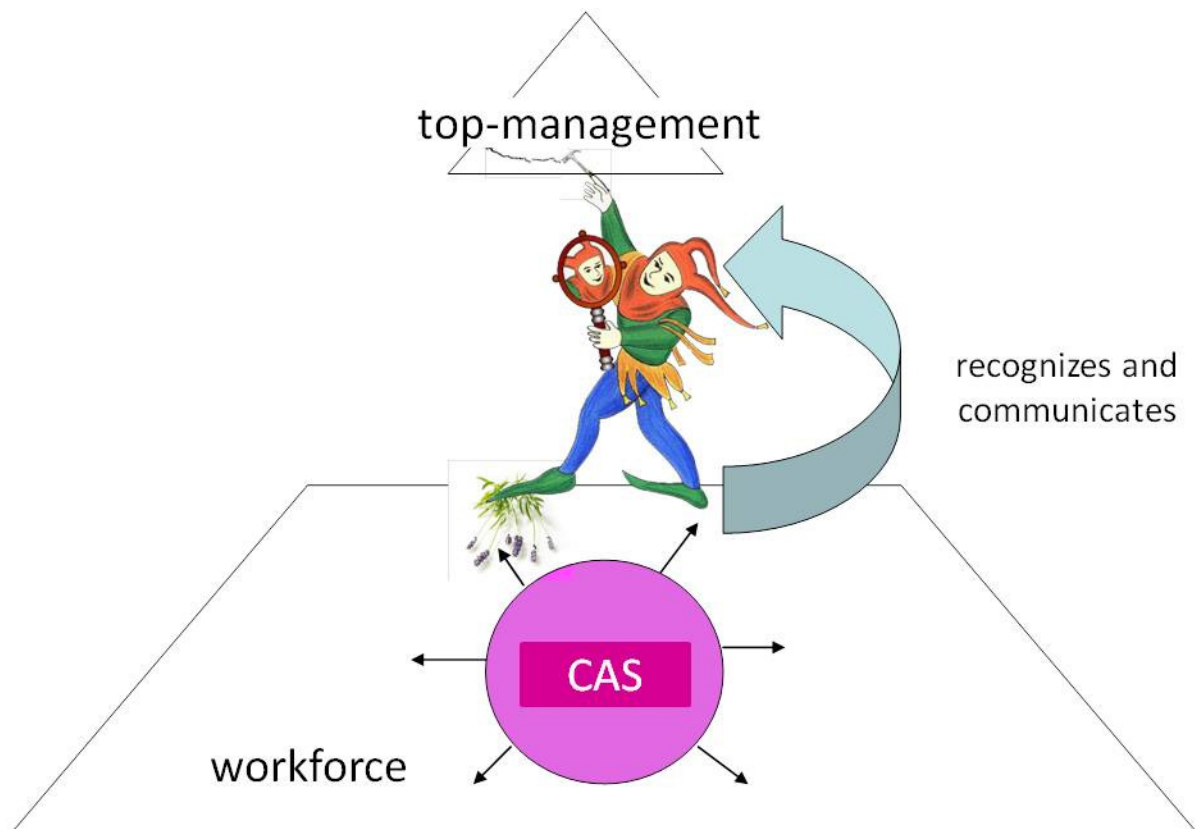


FIGURE 1: Corporate jester

From the perspective of horizontal segregation, the hammer in the jester's hand symbolizes the smashing of the "glass ceiling" and the treading down of the lavender symbolizes the abolition of the "lavender ceiling".

The pink ball represents the possibility that the jester can also operate in the middle of the workforce to achieve a broad impact. For instance, the jester can stage plays in the sense of an organizational theatre approach [39] that, as comical artifact staging, tries to reach the employees and initiates and supports change processes. The jester also could use paintings, comic-strips, music or any other kind of artifact that can be perceived by the workforce. It is important that these artifacts are positioned in a way within the organization, whereby as many employees as possible can experience them. These artifacts, for example, can overdraw commonly shared stereotypes or even contradict them to initially trigger jocularity and amusement, and subsequently to initiate processes of reflection and discussion within the workforce.

By permanently changing the artifacts and mixing up techniques including exaggeration, discontinuity, contradiction, decontextualizing, scenic isolation, etc, the jester can try to avoid a moralizing effect that would face a bigger resistance than a comic and humorous staging.

5. CONCLUSION AND OUTLOOK

The concept of a corporate jester as an element of a comic artifact staging seems to be a promising new approach in discussing organizational change processes. In practice, organizations tend to copy each others' diversity approaches, and thus follow a risk-minimizing strategy that largely prevents new types of diversity measures being tried out. Against this background, the concept of a corporate jester can be a starting point for organizations to break out of this self-referential circle of homogenous implementation patterns. Although theoretically its impact can be derived and explained, a certain risk still remains when it comes to its practical implementation, because of its experimental character. Utilizing humor in an impersonalized and embodied way can help reduce organizational resistance, and make the management and workforce more amenable to trying to break new ground. A number of questions still remain open. In particular, one would need to discuss and elaborate upon the artifacts - beside the jester - that could be utilized in initiating the intended change processes. Furthermore, in the case of a jester being employed, one would need to discuss where in the company he or she could be located and paid (in order to keep him or her outside the hierarchies), how such a person can be found, and what qualifications the jester has to have. Beside these concrete jester-related questions, future research could generally focus on the potential role of humor for organizational change processes. Experimental research projects as well as conceptual and theoretical research can contribute to develop further the understanding of these interrelations, also extending beyond change processes that are related to diversity issues.

6. REFERENCES

- [1] J.-P. Leyens, V. Yzerbyt, and G. Schadron. *Stereotypes and social cognition*. London: Sage Publications, 1994.
- [2] K. E. Weick, K. M. Sutcliffe, and D. Obstfeld. "Organizing and the Process of Sensemaking", *Organization Science*, vol. 16(4), pp. 409-421, 2005.
- [3] C. Rigg and J. Sparrow. "Gender, Diversity and Working Styles", *Women in Management Review*, vol. 9(1), pp. 9-16, 1994.
- [4] J. Maas. *Identität und Stigma-Management von homosexuellen Führungskräften*. Wiesbaden: Deutscher Universitäts-Verlag, 1999.
- [5] J. Frank. "Gay Glass Ceilings", *Economica*, vol. 73, pp. 485-508, 2006.

- [6] M. Pope. "Crashing through the "lavender ceiling" in the leadership of the counseling professions" in *Deconstructing heterosexism in the counseling professions: A narrative approach*. J.M. Croteau, et al., Ed. Thousand Oaks: Sage, 2005, pp. 121-128.
- [7] C. J. C. Housc. "Integrating barriers to Caucasian lesbians' career development and super's life-span, life-space approach", *Career Development Quarterly*, vol. 52(3), pp. 246-255, 2004.
- [8] J. Maas. *Identität und Stigma-Management von homosexuellen Führungskräften*. Wiesbaden: Deutscher Universitäts-Verlag, 1999.
- [9] K. S. Lyness and M. E. Heilman. "When Fit is Fundamental: Performance Evaluations and Promotions of Upper-Level Female and Male Managers", *Journal of Applied Psychology*, vol. 91(4), pp. 777-785, 2006.
- [10] M. Gmür. "Was ist ein "idealer Manager" und was ist eine "ideale Managerin"? Geschlechtsrollenstereotypen und ihre Bedeutung für die Eigenschaftsbeurteilung von Männern und Frauen in Führungspositionen.", *Zeitschrift für Personalforschung*, vol. 18(4), pp. 396-417, 2004.
- [11] A. H. Eagly. *Sex differences in social behavior: A social-role interpretation*. Hillsdale: Erlbaum, 1987.
- [12] M. S. Mizruchi. "The Stability of the American Business Elite: Discrimination, Competence or Connections?", *Industrial and Corporate Change*, vol. 9, pp. 545-553, 2000.
- [13] K. A. Eddleston, J. F. Veiga, and G. N. Powell. "Explaining Sex Differences in Managerial Career Satisfier Preferences: The Role of Gender Self-Schema", *Journal of Applied Psychology*, vol. 91(2), pp. 437-445, 2006.
- [14] B. Orser. "Sex role stereotypes and requisite management characteristics: An international perspective", *Women in Management Review*, vol. 9(4), pp. 11-19, 1994.
- [15] T. Eckes. *Geschlechterstereotype. Frau und Mann in sozialpsychologischer Sicht*. Pfaffenweiler: Centaurus Verlag, 2003.
- [16] A. Kämmerer. "Kreativität und Geschlecht" in *Kreativität*. R. Holm-Hadulla, Ed. Heidelberg: Springer Verlag, 2000.
- [17] J. Butler. *Das Unbehagen der Geschlechter*. Frankfurt am Main: Suhrkamp, 1991.
- [18] M. E. Kite and K. Deaux. "Gender Belief Systems - Homosexuality and the Implicit Inversion Theory", *Psychology of Women Quarterly*, vol. 11(1), pp. 83-96, 1987.
- [19] K. Lehavot and A. J. Lambert. "Toward a greater understanding of antigay prejudice: On the role of sexual orientation and gender role violation", *Basic and Applied Social Psychology*, vol. 29(3), pp. 279-292, 2007.
- [20] L. A. Rudman. "Self-promotion as a risk factor for women: The costs and benefits of counterstereotypical impression management", *Journal Of Personality And Social Psychology*, vol. 74(3), pp. 629-645, 1998.
- [21] L. A. Rudman and J. E. Phelan. "Backlash effects for disconfirming gender stereotypes in organizations", *Research in Organizational Behavior*, vol. 28, pp. 61-79, 2008.

- [22] H. Gartner. Die Darstellung der ersten Akademikerinnen im Film bis 1930, in Institut für Theaterwissenschaften. Wien: Universität Wien, 2011.
- [23] E. Hanappi-Egger. The Triple M of Organizations: Man, Management and Myth. Heidelberg: Springer Verlag, 2011.
- [24] A. Sheridan. "Managers in cartoons - They are still men in the Harvard Business Review", Women in Management Review, vol. 9(4), pp. 20-24, 1994.
- [25] H. P. Buba and L. A. Vaskovics. Benachteiligung gleichgeschlechtlich orientierter Personen und Paare. Köln: Bundesanzeiger Verlag GmbH, 2001.
- [26] G. Burrell. "Sex and Organizational Analysis", Organization Studies, vol. 5(2), pp. 97-118, 1984.
- [27] T. Köllen. "Privatsache und unerheblich für Unternehmen? Der Stand der Personalforschung zur "sexuellen Orientierung"", Zeitschrift für Personalforschung, vol. 26(2), pp. 143-166, 2012.
- [28] E. Hanappi-Egger, H. Hanappi, and T. Köllen. Modellierung von Kosten-Nutzen-Effekten von gendersensiblen Maßnahmen auf betrieblicher Ebene. Wien: Forschungsinstitut für Gender und Diversität in Organisationen, 2006.
- [29] H. Mensi-Klarbach. Diversity und Diversity Management – die Business Case Perspektive: Eine kritische Analyse. Hamburg: Verlag Dr. Kovač, 2010.
- [30] E. H. Schein. Organizational Culture and Leadership. San Francisco: Jossey-Bass, 1985.
- [31] M. Bachtin. Literatur und Karneval: Zur Romantheorie und Lachkultur. Frankfurt am Main: Fischer, 1990.
- [32] S. Freud. Der Witz und seine Beziehung zum Unbewussten. Leipzig - Wien: Franz Deuticke, 1905.
- [33] W. Preisendanz and R. H. Warning. Das Komische. München: Wilhelm Fink Verlag, 1976.
- [34] M. Oster, W. Ernst, and M. Gerards. Performativität und Performance. Geschlecht in Musik, Theater und MedienKunst. Münster: Lit Verlag, 2008.
- [35] K. Pewny. "What's left of theatre? Zur Politik theater- und performancetheoretischer Konstruktionen" in Under construction? Konstruktivistische Perspektiven in feministischer Theorie und Forschungspraxis. U. Helduser, D. Marx, T. Paulitz, and K. Pühl, Ed. Frankfurt am Main: Campus, 2004, pp. 223-236.
- [36] M. Dreysse. "Cross Dressing. Zur (De)Konstruktion von Geschlechtsidentität im zeitgenössischen Theater" in Performativität und Performance. Geschlecht in Musik, Theater und Medien, M. Oster, W. Ernst, and M. Gerards, Ed. Münster: Lit Verlag, 2008, pp. 36-47.
- [37] A. Bauer. Die Närrin des Königs. Berlin, Weimar: Aufbau Verlag, 2008.
- [38] J. Melters. "Ein fröhlich gemüt zu machen in schweren Zeiten..." Der Schwankroman in Mittelalter und Früher Neuzeit. Berlin: Erich Schmidt Verlag, 2004.

- [39] A. Heindl. *Theatrale Interventionen: Von der mittelalterlichen Konfliktregelung zur zeitgenössischen Aufstellungs- und Theaterarbeit in Organisationen*. Heidelberg: Carl-Auer-Verlag, 2012.

Linking Design, Marketing, and Innovation: Managing the Connection for Competitive Advantage

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Abstract

Marketing should closely coordinate with product innovation. Not only will an effective connection of the marketing activity and design trigger product innovation in enterprises, it is a key factor to the product success in the market place. In practice, how to process product design so as to reach the goal of marketing during the innovation procedure? In the past, enterprises did have some concrete actions but empirical studies regarding the correlation model between marketing strategy and design strategy or even between marketing strategy and innovation are rarely seen. In the study, the author first synthesized viewpoints from literature on marketing strategy, product innovation strategy, and design strategy. Then managers at marketing divisions and R&D departments of the Taiwanese consumer electronic industry were interviewed. The fitness of theoretical models and the observed data was then verified by Structural Equation Modeling (SEM). From the 265 effective questionnaires, a proper fitness was found for the correlation theoretical model of marketing strategy, product innovation strategy, and design strategy, and the observed data. In enterprises, marketing strategy will influence design strategy, and at the same time, the marketing strategy will also influence design strategy through innovation strategy. Among these three variables, innovation strategy serves as an independent variable and intervene variable to design strategy.

Keywords: Marketing strategy, Innovation strategy, Design strategy, Product design.

1. INTRODUCTION

Product design and marketing are closely related to each other (Roy and Bruce, 1984; Souder and Moenaert, 1992; Souder and Song, 1997; Zhang et al., 2007; Luchs and Swan, 2011). During the process for a new product to enter the market, marketing department should exchange information and interact with design department continuously (Petiot and Grognet, 2006; Conway, 2007; Paul and Martin, 2007). An effective connection of the marketing activity and design is what triggers the product innovation (Gupta and Wilemon, 1990; Sherman, et al., 2000). It is a popular concept that “a product can be closer to the market if design guides marketing” and that “enterprises sell not only products but also design”(Sara and Michael, 2008; Bloch, 2011); namely, a good design not only brings profits to the enterprise but also provides consumers with cognition to product and good value of the enterprise image (Olins, 1990).

Taiwan electronics products feature modern appearance and diversity in function, creating many famous global brands such as Acer, Asus, Benq, HTC (Figure 1), the labor division and cooperation in marketing and design. For R&D personnel and product designers in these enterprises, not only do they have to pay close attention to the challenges from the change in the market place and take immediate responses to the actions from competitors, but they also need to complete the new product development by subtle product design according to the innovation strategy in the enterprises (Hsieh et al., 2006; Tsai, 2006; Luchs and Swan, 2011).

Souder and Moenaert (1992) consider it calls for the integration of R&D and marketing sectors in a company to successfully apply techniques. From a study on the interaction between R&D and

marketing departments, Gupta and Wilemon (1990) point out that the product innovation of hi-tech industry depends on the close coordination of R&D and marketing divisions. As a result, Sherman et al. (2000) claim that the functional integration of R&D and marketing sectors is a key factor for product development. Many scholars consider the integration of product design procedure can promote the NPD performance in enterprises (Carlsson, 1991; Griffin and Hauser, 1996; Gupta et al., 1985; Ruekert and Walker, 1987; Pinto et al., 1993; Rusinko, 1997; Song et al., 1997; Olson, 1994; Durward et al., 1998; Lau et al., 2007).



FIGURE 1: Famous electronics products of Taiwan.

In addition, many researchers assert that design can be an important integral resource to enterprises, a key mechanism for new product integration in enterprises and an important serial loop in the whole value chain of enterprises (Baxter, 1995; Olins, 1990; Fujimoto, 1991; Bruce and Jevanker, 1998; Twigg, 1998; Ge and Wang, 2007; Aydin et al., 2007). From studies of Chang and Hsu (2004) and Hsu (2006), it has been found that in terms of product design there are some special strategies and measures in Taiwanese enterprises. However, empirical studies regarding the correlation of marketing and strategies, especially the cooperation mode of enterprises are not seen.

In this study, managers at the marketing department and R&D department of Taiwanese consumer electronic industry are interviewed. The fitness of the correlation model and data observed was first verified. Then the influences marketing strategy of enterprises has on product innovation and design were analyzed. At last, the effects of marketing strategy on innovation strategy were examined to see whether the design strategies of products are influenced by marketing strategy.

2. LITERATURE REVIEW AND FRAMEWORK DEVELOPMENT

2.1 Effects of marketing strategy on innovation strategy

To attain the goal of product-variety marketing and provide varying products for customers, enterprises will emphasize the innovation strategies of their products for market segmentation in their product innovation (Hsu, 2011a). According to Baxter (1995), product innovations contain styling context, product symbolism, product function, and the like points of view. From the viewpoint of product design specification (PDS), Pugh (1991) looks into the perspectives of product performance, product life in service, maintenance, product size, product weight, aesthetics, appearance and finish, materials, product life span, standards and specifications, ergonomics, quality and reliability, product shelf life, testing, safety, product legal liability, installation and operation, and product disposal. Chang (1998) categorized the key points of product innovation into the following five facets: (1) change in product function, for example, change of product capability, function, and structure; (2) change in product use such as change in operation, carry along, maintenance, and storage; (3) change in product style including the change in product form, color, and graphics; (4) change in product cost including change of the

manufacturing cost and marketing cost; and (5) change in product package such as change of product packaging design as a part of the product innovation strategy. In addition, the marketing strategy is also related to the product innovation (Souder and Song, 1997), and marketing strategy can guide and enhance the quality of product innovations (Jeremy et al., 2005) and the execution procedure of product innovation (Luchs and Swan, 2011). David (2010) and Hsu (2011b) claim that product innovation can make possible the marketization of marketing strategy and can serve as the concrete criteria for the innovation analysis. Another hypothesis, therefore, is offered in this study:

H1. Marketing strategy has a positive effect on product innovation strategy.

2.2 Effects of marketing strategy on design strategy

Kotler (1997) defined marketing strategy as a series of principles for enterprises to serve their customers and to reach their goal of profit. Armstrong and Kotler (2003) claim that marketing strategy can guide enterprises to make most of their resources with an aim at better satisfying the target user group's needs so as to reach the marketing goal of the enterprise. Cravens et al. (1999) maintained that marketing strategy might cover branding strategy, low-cost strategy, channel strategy and innovation strategy. From the viewpoint of innovation strategy, there is a close tie between marketing strategy and product innovation. Besides, researchers have different ideas about marketing strategy. Among them, the combination of 4Ps (product price, place, promotion) is the most popular one for the category of marketing strategy (Kotler, 1997).

In launching new products to the market, it is necessary for units in every strategic layer to coordinate and fully fulfill the enterprise's strategy (Silbiger, 2005; Marxt and Hacklin, 2005; Veryzer and Mozota, 2005; Renee et al., 2007). Gupta and Wilemon (1990) claim that product innovation in hi-tech industry calls for the close coordination between R&D and marketing sectors in an enterprise. In addition, Sherman et al. (2000) also state that the cross-organizational function integration is a key factor that will influence the new product development cycle.

Many scholars claim that design is considered as an integral resource in enterprises, a mechanism for the integration of product development, and a serial loop in the total value chain of enterprises (Baxter, 1995; Olins, 1990; Fujimoto, 1991; Bruce and Jevanker, 1998; Twigg, 1998; Ge and Wang, 2007; Aydin et al., 2007). Consequently, enterprises need to integrate their resources and finish the new product through communication and coordination among different sectors according to the goal set in their marketing strategy and practical product design strategy (Souder and Song, 1997; Bloch, 2011; Luchs and Swan, 2011). Based upon the discussion of impact of marketing strategy on design strategy, the following hypothesis is offered:

H2. Marketing strategy has a positive effect on design strategy.

2.3 Effects of innovation strategy on design strategy

Innovation strategy refers to the idea that an enterprise is able to provide an environment for creativity and innovation condition in which it can offer unique products or services different from other competitors (Schuler and Jackson, 1987). With their resources and techniques, enterprises can process various combinations to generate different innovation strategies from which they can execute their enterprise policy and promote their performance (Tidd and Bessant, 2009 ; Gilbert, 1994 ; Dziura, 2001). Literature related to innovation strategy can be roughly divided into three categories: (1) Technical innovation strategy including a higher ratio of R&D expense in the revenue (Kuczarski, 1992), being aggressive in the application of logo, royalty, and patents (Dziura, 2001), frequent introduction of new techniques to improve production or manufacturing procedure (Kuczarski, 1992; Ulrich and Eppinger, 2004), constant improvement of the production procedure (Gobeli and Brown, 1987), and the like to achieve enterprises' goal; (2) Commercial innovation strategy including to bring up innovative products or services (Johne, 1999; Yoon and Lilien, 1985), to improve, renew, or extend current products or add new product lines (Kuczarski, 1992; Ulrich and Eppinger, 2004), to change or relocate the target customer group (Atuahene-Gima, 1996), and so on; (3) Management innovation strategy includes the timely adoption of proper response strategy, build up and control the distribution channel so as to

cope with the change in outer environment (Chacko, 1988; Johne, 1999), to solve the customer's complaints in time (Johne, 1999), to adopt new management methods to promote the performance in the organization and to encourage customers to innovate by raising wage or welfare system (Subramanian and Nilakanta, 1996; Higgins, 1995), to stimulate R&D personnel to innovate by a proper performance measurement system (Gilbert, 1994), etc.

In processing product innovation, each strategic hierarchy in the enterprise should operate in coordination to implement the total policy of the company (Silbiger, 2005; Marx and Hacklin, 2005; Veryzer and Mozota, 2005; Renee et al, 2007). According to the goal set in innovation strategy, in addition, an enterprise needs to collocate the practical product design task and integrate the innovation resource in the enterprise so as to work out new products through cross-organization communication and coordination (Sung and Gilmour, 2002; Mozota, 2006; Dell'Era and Verganti, 2007; Sari et al., 2007). Based upon the above concepts of innovation strategy, a hypothesis is offered for the relationship between innovation strategy and design strategy. It is listed below:

H3. Innovation strategy has a positive effect on design strategy.

According to the above literature review, a conceptual research framework covering H1~H3 is illustrated in Figure 2.

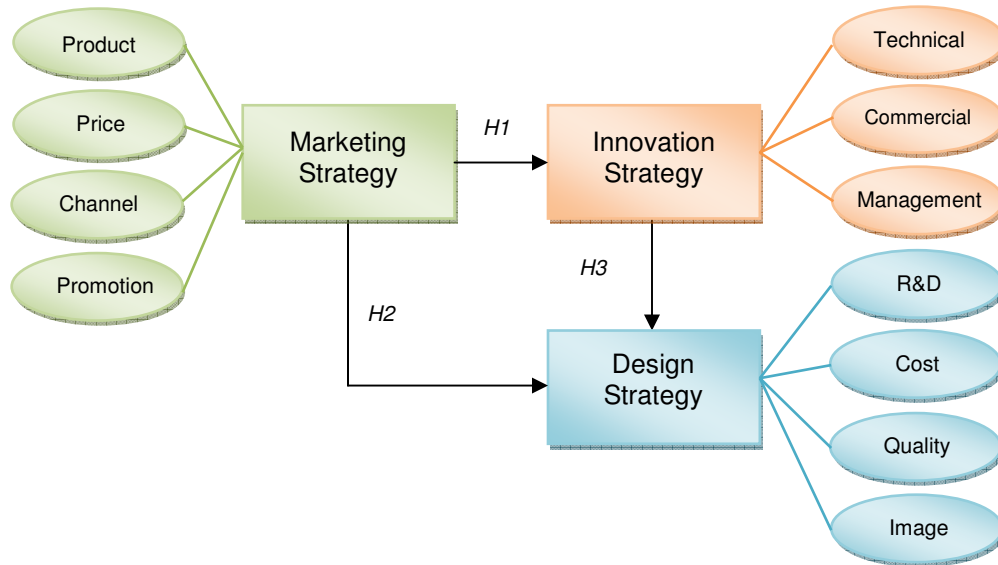


FIGURE 2: The correlation model of marketing strategy, innovation strategy, and design strategies.

3. METHOD

3.1 Effects of marketing strategy on innovation strategy

The definitions of variables investigated in this study are listed in Appendix. Variable measurements regarding marketing strategy cover four major strategic dimensions, including product, price, channel, and promotion. They are selected from Kotler (1997), McCarthy and Perreault (2003), Thorpe and Morgan (2007), and Hughes and Morgan (2007). Regarding the measurement of design strategy, four major dimensions are taken into consideration in this study, covering to reinforce R&D capacity, to reduce production cost, to ensure product quality, and to uplift enterprise image. They are selected from Sung and You (1999) and Hsu (2011a). At last, variables related to innovation strategy cover three major strategic dimensions. The variables regarding technical innovation strategy are primarily selected from Kuczmarski (1996), Dziura (2001), Ulrich and Eppinger (2004), and Gobeli and Brown (1987). The variables about

commercial innovation strategy are principally from Johne (1999), Yoon and Lilien (1985), Kuczmariski (1996), Ulrich and Eppinger (2004), and Atuahene-Gima (1996). The variables about management innovation strategy are mainly chosen from Chacko (1988), Johne (1999), Subramanian and Nilakanta (1996), Higgins (1995), and Gilbert (1994).

3.2 Research setting, sample and data collection

In this study, the members in Taiwan Electrical and Electronic Manufacturers' Association (TEEMA) were used as the survey pool. The survey is divided into the pilot test and the formal questionnaire survey.

At the pilot test stage, focus group interview (FGI) was used to specify the target user group, the research limit, and the relations among variable dimensions. Seven experts (four experienced managers and three expert scholars) were invited to verify whether the variables extracted from literature were suitable. In the pilot test, the experts were asked to respond their degrees of agreement in each question on a 5-point Likert scale. On the scale, 1 means "never or do not agree at all" and 5 means "always or totally agree." In this stage, 40 enterprises were obtained. From factor analysis and reliability analysis, the construct validity and reliability were examined. The result demonstrated that the extracted factor could fully explain the variance, indicating a high construct validity. Moreover, the Cronbach's α for each variable was higher than 0.8, meaning that the survey questions had proper reliability.

In the formal questionnaire survey, 1000 enterprises were randomly selected from TEEMA, from which managers at the NPD divisions were interviewed. After repeated contacts, 265 enterprises were obtained, reaching 26.5% of effective survey samples.

4. DATA ANALYSIS AND RESULTS

4.1 Data accuracy analysis

Table 1 lists the mean, standard deviation, and correlation matrix of each dimension. Table 2 lists the composite reliability (CR) for each dimension: 0.91, 0.89, 0.88 respectively and the total CR of 0.89, beyond the standard 0.70 (Hulland, 1999), indicating a good inner consistency in the model. In addition, the average variance extracted (AVE) for each dimension was 0.87, 0.71, 0.85 respectively. More importantly, the total AVE was 0.82, higher than the standard value of 0.5 (Fornell and Larcker, 1981).

	Mean	Sd	MS	IS	DS
Marketing strategy	4.135	0.908	1.000	--	--
Innovation strategy	3.946	0.761	0.658	1.000	--
Design strategy	3.757	0.937	0.692	0.860	1.000

MS: Marketing strategy; IS: Innovation strategy; DS: Design strategy

TABLE 1: Basic statistics.

Core Constructs	Item	SL	SE	t-value	CR	AVE
Marketing strategy	MS1	0.97	0.43	10.84	0.91	0.87
	MS2	0.88	0.33	14.60		
	MS3	0.87	0.32	19.72		
	MS4	0.93	0.46	10.89		
Design strategy	DS1	0.95	0.22	34.50	0.89	0.71
	DS2	0.95	0.28	19.22		
	DS3	0.91	0.50	10.19		
	DS4	0.88	0.28	19.44		
Innovation strategy	IS1	0.93	0.30	18.53	0.88	0.85
	IS2	0.94	0.43	11.45		
	IS3	0.89	0.39	11.29		

SL: Standardized loading; SE: Standardized error; CR: Composite reliability; AVE: average variance extracted

TABLE 2: Accuracy analysis statistics.

4.2 Research model fit assessment

In this study, Lisrel 8.8 was used in the Structural Equation modeling (SEM) for the research model fit assessment by the Maximum likelihood method. The results indicated that χ^2/df (the ratio of chi square over the degrees of freedom) = 1.765, goodness-of-fit (GFI) = 0.989, adjusted goodness of fit index (AGFI) = 0.985, comparative fit index (CFI) = 0.983, incremental fit index (IFI) = 0.986, the root mean square error of approximation (RMSEA) = 0.048. Because the evaluation criteria χ^2/df was smaller than 2.0 and because GFI, AGFI, CFI, and IFI were bigger than 0.90, RMSEA was smaller than 0.05 (Gefen et al. 2011; Hair et al., 1998; Atuahene-Gima and Li, 2002; Baker et al., 2002; Brown et al., 2000; Cannon and Homburg, 2001; Noble and Mokwa, 1999). This indicates a proper total Goodness-of-fit.

4.3 Hypotheses tests

The theoretical model investigated in this study contains potential dependent variables and potential independent variables. The influences among potential variables cover direct effects, indirect effect, and total effect.

In Table 3, it is clear that marketing strategy has a direct effect on innovation strategy and design strategy. The direct effect value marketing strategy has on innovation strategy is 0.46 ($\beta = 0.46$, $t = 3.97$, $p < 0.01$), reaching the significant level. And the direct effect value marketing strategy has on design strategy is 0.26 ($\beta = 0.26$, $t = 4.27$, $p < 0.01$), also reaching the significant level.

Besides, innovation strategy also has a direct effect on design strategy, with the direct effect value of 0.57 ($\beta = 0.57$, $t = 6.57$, $p < 0.001$), reaching the significant level. Among all direct effects, innovation strategy has the biggest direct effect on design strategy, with the direct effect value of 0.57; marketing strategy has a direct effect value of 0.46 on innovation strategy; marketing strategy has the lowest direct effect 0.26 on design strategy.

Table 3 also demonstrates that marketing strategy also has an indirect effect on design characteristics on the effect path of marketing strategy → innovation strategy → design strategy. On the path analysis of indirect effects, the effect value is 0.23 ($\beta = 0.23$, $t = 3.55$, $p < 0.05$), reaching the significant level.

The above analysis indicates that marketing strategy will directly influence design strategy, with a direct effect value of 0.26. In addition, marketing strategy can influence design strategy through the intervene variable of innovation strategy (indirect effect value = 0.23). Overall, marketing strategy will have a total effect of 0.52 on design strategy, indicating the important role marketing strategy plays on design strategy. From the analysis of Table 3 and Table 4, H1, H2, and H3 are confirmed and supported.

		Innovation strategy		Design strategy	
		β -value	t-value	β -value	t-value
Marketing strategy	Direct effect	0.46	3.97**	0.26	4.27**
	Indirect effect	--	--	0.23	3.55*
	Total effect	0.46	3.97**	0.52	5.47*
Innovation strategy	Direct effect			0.57	6.57***
	Indirect effect			--	--
	Total effect			0.57	6.57***

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

TABLE 3: Direct, indirect, and total effect rules.

Hypotheses	Paths	Expected signs	Effect	Results
H1	Marketing strategy → Innovation strategy	+	0.46	Supported
H2	Marketing strategy → Design strategy	+	0.26	Supported
H3	Innovation strategy → Design strategy	+	0.51	Supported

TABLE 4: Hypotheses rules.

5. DISCUSSIONS AND CONCLUSION

Related literature reveals that if an enterprise is not active in product design innovation and marketing activity, it may be wiped out in the market due to the shortage of evident added values in their products (Millett, 1990; Cooper and Press, 1995). On the contrary, if enterprises can efficiently launch new products that can better satisfy the customers than the competitors, they can make more profits and enter a new market section earlier and build up a rivalry disorder (Wheelwright and Clark, 1992; Kuczmarski, 1992; Song and Xie, 2000; Claudio and Roberto, 2007). However, these studies are only cases or conceptual proposals, lacking in the theoretical combination and empirical evidences, neither are the empirical evidences for the correlation between these variables and design innovation-related factors.

Many studies regarding concrete product design issue are conducted by specific enterprises or product cases (Feit, 2009; Hsu, 2009; Bloch, 2011; Hsu, 2011a). Because these cases are likely to be influenced by the design capacity and marketing factors, it is hard to clarify the correlation among marketing strategy, innovation strategy, and design strategy. Furthermore, past studies about design strategy. are short of thorough scale of measurement.

Therefore, in this study, the actual executors of product marketing strategy were studied regarding the correlation among marketing, product design, product innovation, and the like details in enterprises. Such a theoretical and empirical study is hoped to make contribution to the theoretical and practical domains of product marketing and design innovation.

The result of confirmatory factor analysis indicated a proper construct validity, i.e., the convergent validity and discriminant validity for each variable reaching the statistical requirement. Moreover, results of structural equation modeling also demonstrated a good fitness in the theoretical model and the observed data. The three hypothesis proposed in the study were supported. In other words, the product design strategy will be influenced by the enterprise marketing strategy and innovation strategy. Therefore, enterprises can carry out their product innovation through the coordination of practical product design and the goal set up in the marketing strategy by a more efficient integration of R&D resources and cross-organization coordination in an enterprise. The results obtained in this study can reinforce the results in related studies (for example, Petiot and Grognet, 2006; Conway, 2007; Paul and Martin, 2007), and confirm the idea that an effective connection of marketing activity and design procedure is fundamental to enterprise innovation (Roy and Bruce, 1984; Souder and Moenaert, 1992; Gupta and Wilemon, 1990; Sherman, et al., 2000; Zhang et al., 2007; Luchs and Swan, 2011).

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6. REFERENCES

- [1] K. Atuahene-Gima, "Market orientation and innovation," *Journal of Business Research*, vol. 35, no. 2, 1996, pp. 93-103.
- [2] K. Atuahene-Gima, and H. Li, "When does trust matter? Antecedents and contingent effects of supervisee trust on performance in selling new products in China and the United States," *Journal of Marketing*, vol. 66, no. 3, 2002, pp. 61-81.
- [3] S. Aydin, A. Cetin, and G. Ozer, "The relationship between marketing and product development process and their effects on firm performance," *Academy of Marketing Studies Journal*, vol. 11, no. 1, 2007, pp. 53-68.
- [4] J. Baker, A. Parasuraman, D. Grewal et al., "The influence of multiple store environment cues on perceived merchandise value and patronage intentions," *Journal of Marketing*, vol. 66, no. 2, 2002, pp. 120-141.

- [5] M. Baxter, *Product design: a practical guide to systematic methods of new product development*, London: Chapman & Hall, 1995.
- [6] P. Bloch, "Product Design and Marketing: Reflections After Fifteen Years," *The Journal of Product Innovation Management*, vol. 28, no. 3, 2011, pp. 378-380.
- [7] J. R. Brown, C. S. Dev, and D.-J. Lee, "Managing marketing channel opportunism: The efficacy of alternative governance mechanisms," *Journal of Marketing*, vol. 64, no. 2, 2000, pp. 51-65.
- [8] M. Bruce, and B. H. Jevnaker, *Management of Design Alliances: Sustaining Competitive Advantage*, England: John Wiley & Sons, 1998.
- [9] J. P. Cannon, and C. Homburg, "Buyers-supplier relationships and customer firm costs," *Journal of Marketing*, vol. 65, no. 1, 2001, pp. 29-41.
- [10] M. Carlsson, "Aspects of the Integration of Technical Functions for Efficient Product Development," *R & D Management*, vol. 21, no. 1, 1991, pp. 55-66.
- [11] G. K. Chacko, *Technology management: applications to corporate markets and military missions*: Praeger, 1988.
- [12] W. Chang, "A study of design policy and design strategy in product design," *Industrial Design*, vol. 27, no. 1, 1998, pp. 2-7.
- [13] W. Chang, and Y. Hsu, "A comparative study of performance of the design strategic groups and design strategies," *International Journal of Innovation Technology Management*, vol. 1, no. 3, 2004, pp. 133-154.
- [14] D. E. Claudio, and V. Roberto, "Strategies of Innovation and Imitation of Product Languages," *The Journal of Product Innovation Management*, vol. 24, no. 6, 2007, pp. 580-599.
- [15] L. L. Conway, "Forecasting sales for a B2B product category: case of auto component product," *The Journal of Business & Industrial Marketing*, vol. 22, no. 4, 2007, pp. 228-235.
- [16] R. Cooper, and M. Press, *The design agenda: a guide to successful design management*: Wiley, 1995.
- [17] D. W. Cravens, W. J. Merrilees, and R. H. Walker, *Strategic marketing management for the Pacific region*: McGraw-Hill Book, 1999.
- [18] M. K. David, "'In Pursuit of Elegance': Less Is More in the Arts, Product Design, Marketing," *McClatchy - Tribune Business News*, 2010.
- [19] C. Dell'Era, and R. Verganti, "Strategies of Innovation and Imitation of Product Languages*," *The Journal of Product Innovation Management*, vol. 24, no. 6, 2007, pp. 580-599.
- [20] K. S. Durward, II, K. L. Jeffrey, and C. W. Allen, "Another look at how Toyota integrates product development," *Harvard Business Review*, vol. 76, no. 4, 1998, pp. 36-49.
- [21] M. J. Dziura, "Innovation: Sources and strategies," *International Journal of Technology Management*, vol. 21, no. 5,6, 2001, pp. 612-627.

- [22] E. Feit, "Essays on integrating product design and marketing research," 3392616, University of Michigan, United States -- Michigan, 2009.
- [23] T. Fujimoto, "Product integrity and the role of designer-as-integrator," *Design Management Journal*, vol. 2, no. 2, 1991, pp. 29-34 (Spring).
- [24] C. P. Ge, and B. Wang, "An activity-based modelling approach for assessing the key stakeholder's corporation in the eco-conscious design of electronic products," *Journal of Engineering Design*, vol. 18, no. 1, 2007, pp. 55-71.
- [25] D. Gefen, E. Rigdon, and D. Straub, "An Update and Extension to SEM Guidelines for Administrative and Social Science Research," *MIS Quarterly*, vol. 35, no. 2, 2011, pp. III.
- [26] J. T. Gilbert, "Choosing an innovation strategy: Theory and practice," *Business Horizons*, vol. 37, no. 6, 1994, pp. 16-22.
- [27] D. H. Gobeli, and D. J. Brown, "Analyzing Product Innovations," *Research Management*, vol. 30, no. 4, 1987, pp. 25-31.
- [28] A. Griffin, and J. R. Hauser, "Integrating R&D and marketing: A review and analysis of the literature," *The Journal of Product Innovation Management*, vol. 13, no. 3, 1996, pp. 191-215.
- [29] A. K. Gupta, S. P. Raj, and D. L. Wilemon, "R & D and Marketing Dialogue in High-Tech Firms," *Industrial Marketing Management*, vol. 14, no. 4, 1985, pp. 289-300.
- [30] A. K. Gupta, and D. L. Wilemon, "Accelerating the Development of Technology-Based New Products," *California Management Review*, vol. 32, no. 2, 1990, pp. 24-44.
- [31] J. F. Hair, *Multivariate data analysis*: Prentice Hall, 1998.
- [32] J. M. Higgins, "Innovation: The core competence," *Planning Review*, vol. 23, no. 6, 1995, pp. 32-36.
- [33] M.-H. Hsieh, K.-H. Tsai, and E. J. Hultink, "The Relationships between Resource Configurations and Launch Strategies in Taiwan's IC Design Industry: An Exploratory Study," *The Journal of Product Innovation Management*, vol. 23, no. 3, 2006, pp. 259-273.
- [34] Y. Hsu, "Comparative study of product design strategy and related design issues," *Journal of Engineering Design*, vol. 17, no. 4, 2006, pp. 357-370.
- [35] Y. Hsu, "Exploring design innovation and performance: the roles of issue related to design strategy," *Journal of Engineering Design*, vol. 20, no. 6, 2009, pp. 555-569.
- [36] Y. Hsu, "Design innovation and marketing strategy in successful product competition," *The Journal of Business & Industrial Marketing*, vol. 26, no. 4, 2011a, pp. 223-236.
- [37] Y. Hsu, "Relationships between product development strategies and product design issues," *Journal of Engineering Design*, vol. 22, no. 6, 2011b, pp. 407-426.
- [38] P. Hughes, and J. R. E. Morgan, "A resource-advantage perspective of product-market strategy performance & strategic capital in high technology firms," *Industrial Marketing Management*, vol. 36, no. 4, 2007, pp. 503-517.

- [39] J. M. Jeremy, M. F. Fred, and Y. P. Panos, "Linking Marketing and Engineering Product Design Decisions via Analytical Target Cascading," *The Journal of Product Innovation Management*, vol. 22, no. 1, 2005, pp. 42-62.
- [40] A. Johne, "Using market vision to steer innovation," *Technovation*, vol. 19, no. 4, 1999, pp. 203-207.
- [41] P. Kotler, *Marketing management: Analysis, planning, implementation, and control*, 9 ed., NJ: Prentice Hall, 1997.
- [42] P. Kotler, *Marketing Management*, 11 ed., NJ: Pearson Education Inc., 2003.
- [43] T. D. Kuczmarski, *Managing new products: the power of innovation*: Prentice Hall, 1992.
- [44] T. D. Kuczmarski, *Innovation: leadership strategies for the competitive edge*: American Marketing Association, 1996.
- [45] K. W. Lau, C. M. Yam, and P. Y. Tang, "Supply chain product co-development, product modularity and product performance," *Industrial Management + Data Systems*, vol. 107, no. 7, 2007, pp. 1036-1065.
- [46] M. Luchs, and K. Swan, "Perspective: The Emergence of Product Design as a Field of Marketing Inquiry," *The Journal of Product Innovation Management*, vol. 28, no. 3, 2011, pp. 327-345.
- [47] C. Marxt, and F. Hacklin, "Design, product development, innovation: all the same in the end? A short discussion on terminology," *Journal of Engineering Design*, vol. 16, no. 4, 2005, pp. 413-421.
- [48] S. M. Millett, "The Strategic Management of Technological R&D: An Ideal Process for the 1990s," *International Journal of Technology Management*, vol. 5, no. 2, 1990, pp. 153-163.
- [49] B. B. d. Mozota, "The Four Powers of Design: A Value Model in Design Management," *Design Management Review*, vol. 17, no. 2, 2006, pp. 44-93.
- [50] C. H. Noble, and M. P. Mokwa, "Implementing marketing strategies: Developing and testing a managerial theory," *Journal of Marketing*, vol. 63, no. 4, 1999, pp. 57-73.
- [51] W. Olins, *Corporate identity: Making business strategy visible through design*, Boston, Mass.: Harvard Business School Press 1990.
- [52] E. M. Olson, "Interdependence, Conflict, and Conflict Resolution: Design's Relationships with R & D, Marketing, and Manufacturing," *Design Management Journal*, vol. 5, no. 4, 1994, pp. 60-66.
- [53] E. R. Paul, and S. H. Martin, "Products Liability Law and Its Implications for Engineering Practice," *Engineering Management Journal*, vol. 19, no. 2, 2007, pp. 23-30.
- [54] J.-F. Petiot, and S. Grognet, "Product design: a vectors field-based approach for preference modelling," *Journal of Engineering Design*, vol. 17, no. 3, 2006, pp. 217-233.
- [55] M. B. Pinto, J. K. Pinto, and J. E. Prescott, "Antecedents and consequences of project team cross-functional cooperation," *Management Science*, vol. 39, no. 10, 1993, pp. 1281-1297.

- [56] S. Pugh, Total design: integrated methods for successful product engineering: Addison-Wesley Pub. Co., 1991.
- [57] W. Renee, B. Casper, M. Thomas et al., "Increasing the benefits of product-level benchmarking for strategic eco-efficient decision making," *Benchmarking*, vol. 14, no. 6, 2007, pp. 711-727.
- [58] R. Roy, and M. Bruce, *Product Design, Innovation and Competition in British Manufacturing: Background, Aims, and Methods.*: Milton Keynes, England: Open University., 1984.
- [59] R. W. Ruekert, and O. C. Walker, Jr., "Interactions Between Marketing and R&D Departments in Implementing Different Business Strategies," *Strategic Management Journal*, vol. 8, no. 3, 1987, pp. 233-248.
- [60] C. Rusinko, "Design-manufacturing integration to improve new product development: The effects of some organization- and group-level practices," *Project Management Journal*, vol. 28, no. 2, 1997, pp. 37-46.
- [61] L. B. Sara, and B. Michael, "Innovation as a Learning Process: Embedding Design Thinking," *California Management Review*, vol. 50, no. 1, 2007, pp. 25.
- [62] S. Sari, T. Leena, S. Mikko et al., "Executive views concerning decision support tools," *European Journal of Operational Research*, vol. 181, no. 2, 2007, pp. 929-938.
- [63] R. S. Schuler, and S. E. Jackson, "Linking Competitive Strategies With Human Resource Managem," *The Academy of Management Executive*, vol. 1, no. 3, 1987, pp. 207-220.
- [64] J. D. Sherman, E. S. William, and A. J. Svern, "Differential effects of the primary forms of cross functional integration on product development cycle time," *The Journal of Product Innovation Management*, vol. 17, no. 4, 2000, pp. 257.
- [65] S. Silbiger, *The ten-day MBA: a step-by-step guide to mastering the skills taught in America's top business schools*: Collins, 2005.
- [66] M. Song, and J. Xie, "Does innovativeness moderate the relationship between cross-functional integration and product performance?," *Journal of International Marketing*, vol. 8, no. 4, 2000, pp. 61.
- [67] X. M. Song, M. M. Montoya-Weiss, and J. B. Schmidt, "Antecedents and consequences of cross-functional cooperation: A comparison of R&D, manufacturing, and marketing perspectives," *The Journal of Product Innovation Management*, vol. 14, no. 1, 1997, pp. 35-47.
- [68] W. E. Souder, and R. K. Moenaert, "Integrating Marketing and R&D Project Personnel within Innovation Projects: An Information Uncertainty Model.," *Journal of Management Studies*, vol. 29, no. 4, 1992, pp. 485-511.
- [69] W. E. Souder, and R. K. Moenaert, "Integrating Marketing and R&D Project Personnel Within Innovation Projects: An Information Uncertainty Model," *The Journal of Management Studies*, vol. 29, no. 4, 1992, pp. 485-512.
- [70] W. E. Souder, and X. M. Song, "Contingent product design and marketing strategies influencing new product success and failure in U.S. and Japanese electronics firms," *The Journal of Product Innovation Management*, vol. 14, no. 1, 1997, pp. 21-34.

- [71] A. Subramanian, and S. Nilakanta, "Organizational innovativeness: Exploring the relationship between organizational determinants of innovation, types of innovations, and measures of organizational performance," *Omega*, vol. 24, no. 6, 1996, pp. 631-647.
- [72] T. J. Sung, and M. You, "An Empirical study on design strategy and design performance of information firms in Taiwan," *Journal of Design*, vol. 4, no. 1, 1999, pp. 47-59.
- [73] T.-J. Sung, and P. Gilmour, "An empirical examination of the relationship between design, the NPI process and strategy implementation," *International Journal of Technology Management*, vol. 24, no. 5,6, 2002, pp. 542-556.
- [74] E. R. Thorpe, and R. E. Morgan, "In pursuit of the "ideal approach" to successful marketing strategy implementation," *European Journal of Marketing*, vol. 41, no. 5/6, 2007, pp. 659-677.
- [75] J. Tidd, and J. Bessant, *Managing innovation: integrating technological, market and organizational change*: Wiley, 2009.
- [76] Y.-C. Tsai, "Effect of Social Capital and Absorptive Capability on Innovation in Internet Marketing," *International Journal of Management*, vol. 23, no. 1, 2006, pp. 157-166.
- [77] D. Twigg, "Managing product development within a design chain," *International Journal of Operations & Production Management*, vol. 18, no. 5, 1998, pp. 508-524.
- [78] K. T. Ulrich, and S. D. Eppinger, *Product design and development*: McGraw-Hill/Irwin, 2004.
- [79] R. W. Veryzer, and B. B. d. Mozota, "The Impact of User-Oriented Design on New Product Development: An Examination of Fundamental Relationships," *The Journal of Product Innovation Management*, vol. 22, no. 2, 2005, pp. 128-143.
- [80] S. C. Wheelwright, and K. B. Clark, *Revolutionizing product development: quantum leaps in speed, efficiency, and quality*: Free Press, 1992.
- [81] E. Yoon, and G. L. Lilien, "New Industrial Product Performance: The Effects of Market Characteristics and Strategy," *The Journal of Product Innovation Management*, vol. 2, no. 3, 1985, pp. 134-144.
- [82] Y. Zhang, J. Jiao, and Y. Ma, "Market segmentation for product family positioning based on fuzzy clustering," *Journal of Engineering Design*, vol. 18, no. 3, 2007, pp. 227-241.

APPENDIX

1. Variables for the measurement of marketing strategy
 - (1) Product
 - Commodity or service to satisfy the target user group's needs.
 - Profits the product brings to the customer in quality, function, core value, and the like communication aspects.
 - Emphasize product appearance or inner features.
 - Emphasize the width of the product line.
 - Emphasize the depth of product line.
 - Have a good intellectual property right management system.
 - (2) Price

- To compete for the growth of sales volume and market share.
- To compete for the best profit.
- The price setting meets the regulation of consumer law.
- Satisfy customers in different market sectors.
- (3) Channel
 - Deliver products in an economical and efficient way.
 - Adapt channel timely to cope with the change in environment.
 - The channel matches the product image.
 - Offer better reward for the channel dealer.
- (4) Promotion
 - Product can offer extra incentives for customers to purchase.
 - Adopt promotion to trigger the free customer to purchase.
 - Add the customer's identification to the company, brand or product quality.
 - Add the understanding and communication among customer, company, and product.
- 2. Variables for the measurement of design strategy
 - (1) Reinforcing R&D ability
 - Work out new products through the acquisition or cooperation with advanced manufacturer.
 - Increase the ratio of R&D and design expense in the revenue to uplift product design and R&D abilities.
 - Reinforce professional NPD know how to improve the efficiency in product design and development.
 - Apply new or current techniques and parts to work out products of unique functions.
 - (2) Reducing production cost
 - Reduce the total product production cost through subtle selection of parts and materials in the way of working together with other divisions.
 - Add functions and values to products under the cost limit through professional design skills.
 - Subtly respond to the change in outer environment through the application of product design ability.
 - Integrate parts so that it is easy to assembly and maintain through modulization and standardization in design.
 - Uplift the product competition ability through mutual supports in design and production from manufacturers.
 - (3) Ensuring product quality
 - Uplift the product reliability, durability, and maintenance to enhance the total product quality standard.
 - Ensure products meet the safety regulations and standards.
 - Reduce the consumption of energy, materials, and chemicals, minimizing the pollution to the environment.
 - Create social and cultural utilities of products through emotional, affective, and life style consideration.

- Apply human factors technique to meet the user's operational needs in hardware or software design of products.
- (4) Uplifting enterprise image
 - Reinforce company and brand images to build up a good reputation in counterparts and customers.
 - Enrich competition ability in the market by product differentiation.
 - Create and uplift the image or value of enterprise, product, and brand through unique aesthetics, semantic representation, and product form.
 - Work out modern and unique products through particular product form feature, colors, and texture.
 - Offer better design services and reinforce the promotion in sales by commodity exhibition, advertising, and display.
 - Develop new products for different user groups to meet their requirements.
- 3. Variables for the measurement innovation strategy
 - (1) Technical innovation
 - Invest a higher ratio of R&D expense from the revenue than the counterpart.
 - Have a good intelligent royalty management system.
 - Being aggressive in the application of patents.
 - Have enough key techniques and patents.
 - Improve R&D procedure to reach the company goal.
 - Quick launch new products in the market.
 - Introduce new techniques to improve manufacturing procedure.
 - (2) Commercial innovation
 - Work as a leader in the new product market.
 - Fast in adjusting the current product line.
 - Offer new products or services that can better meet the customer's demands.
 - Commercialize a product faster than the competitors.
 - Change or relocate the target customer group for market segmentation.
 - New products or techniques are often copied by the competitors.
 - (3) Management innovation
 - Take advantage of information technology to accelerate product development and supply chain management.
 - Encourage customers to innovate by raising wage or welfare system.
 - Stimulate R&D personnel to innovate by a proper performance measurement system.
 - Being flexible and efficient in production and shipment.
 - Be able to handle customers' complaints and solve their problems.
 - Adopt proper response strategy in time to cope with the change in outer environment.

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