

# The Myanmar JOURNAL

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## Letter from the Editor-in-Chief

The Korea Myanmar Research Institute (KOMYRA) has supported the ongoing projects on the mutual development of Myanmar and Korea in the entire field of society, economy, culture, education, science, and related industry. As a part of our efforts to provide convenient access to understand Myanmar and Korea worldwide, KOMYRA has co-published the Myanmar Journal with Yangon University of Economics (YUEco) since August 2014, and now we release the Myanmar Journal Vol. 3, No. 1.

This issue features various topics that may be of international interest, such as academic and industrial researches mainly concerning economic and social changes, labour reforms, cosmetics, tourism, etc.

We hope this journal continues to promote understanding about the present status and the potential capacities of Myanmar and Korea, and facilitate in-depth international exchange and cooperation.

I would like to express my deep gratitude to the Editorial Board and the Staff of KOMYRA who have contributed their valuable supports towards the publication of this issue of the Myanmar Journal.

Feb. 28, 2016

Youngjun Choi *yj choi*

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The Myanmar Journal (ISSN 2383-6563) is the official international journal co-published by Yangon University of Economics (YUEco) and Korea Myanmar Research Institute (KOMYRA).

This journal aims to promote the mutual cooperation and development of Myanmar and Korea through intensive researches in the entire field of society, economy, culture, and industry.

It will cover all general academic and industrial issues, and share ideas, problems and solution for development of Myanmar.

Articles for publication will be on-line released twice a year at the end of February and August every year on the Myanmar Journal webpage.

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## **Myanmar's Labour Reforms: Mixed Progress 2011–15; Prospects after 2016?**

***Trevor Wilson***

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**ABSTRACT:** Labour reforms are likely to be a high priority for the new National League for Democracy (NLD) government in Myanmar when it assumes power, presumably in March 2016. However, real improvements are likely to take some years to achieve, even if they are given high priority by a new Myanmar Government starting in 2016. A better enabling environment in Myanmar will be essential. This includes better economic conditions generally, but it also requires fairer treatment of workers in the justice system, and much more effective “safety nets” for workers, including unemployment assistance, injury compensation, and training and skills development. How Myanmar's sizeable public sector working population can benefit from labour market reforms is also not clear at this point. While potential investors in Myanmar's transitioning economy might be disconcerted by having also to confront uncertainties of labour market adjustment right now, the end result should place Myanmar's political economy on a more sustainable and more manageable footing for the future.

***Key words:*** *Myanmar, Labour Reform, ILO, MOEAF, NLD*

Labour reforms are likely to be a high priority for the new National League for Democracy (NLD) government in Myanmar when it assumes power, presumably in March 2016. Workers and worker organisations represent core support groups for the NLD, and have long been conspicuous in their vigorous advocacy for more democratic work places and fairer work practices. The NLD's official manifesto, issued in September 2015 ahead of the 2015 elections, incorporates several general commitments to improve working conditions in Myanmar.<sup>1)</sup> Among the NLD's core commitments are “to lift the living standards of our people”, “to expand opportunities”, and ensuing there are “economic benefits from being a true democracy”,<sup>2)</sup> although

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1) The NLD 2015 Manifesto is a 28-page document that was not published in full but contains a section on workers' rights consistent with the NLD's progressive approach. While the manifesto covers all aspects of NLD policy, it was deliberately not publicised as specific commitments for a post-election agenda. It was widely reported in domestic and international media after its release on 14 September 2015.

their broad strategy makes no specific mention of advancing the well-being of workers. According to an economic policy advisor to the NLD, this does not mean overturning all existing policies and programs; nor does it mean rushing into new policy initiatives.<sup>3)</sup>

When the Thein Sein government introduced its initial pro-democratic measures after 2011, these included significant liberalisations in terms of freedom of association (making it legal for workers to set up trade unions), freedom of assembly (making it legal for workers to organise protest meetings), and freedom to resort to strikes. These reforms were initiated under U (Major-General retired) Aung Kyi, a relative moderate Minister of Labour during the State Peace and Development Council (SPDC) period who had at one time (2007) been appointed “Minister for Relations” for dealing with Aung San Suu Kyi and who had also served as Minister for Information (2012-14). Aung Kyi was Deputy Minister for Labour in early 2007, before being promoted to be Labour Minister in October 2007 after the “saffron revolution” when the military regime sought to present a moderate front to the world and to mitigate the impact of new economic sanctions against Myanmar. Aung Kyi served continuously as Labour Minister from 2007–12, after being elected to parliament as a Union Solidarity & Development Party representative in November 2010. His eventual successor, retired Major-General Aye Myint, who had served previously in several more junior ministerial positions, oversaw moves to integrate labour policies with ASEAN, but was not otherwise noted as a reformer.<sup>4)</sup>

All of Myanmar's domestic labour reform measures in 2011 and 2012 were quickly seized upon by Myanmar workers, who had hitherto tended to be poorly paid, and forced to work under quite poor conditions. The initial labour reforms led immediately to an upsurge in strikes, protests and confrontations between employers and employees, in which the NLD and its members often supported protesting workers. Long denied the right to organise to protect their interests, and disadvantaged in a seriously under-performing economy, Myanmar workers had traditionally been paid low wages, and worked under poor conditions without complaint; this was in effect, Myanmar's “comparative advantage” in trade and investment at this time. It was immediately clear when workers' rights were recognised after 2011, that a “missing

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2) Quoted from the NLD's unpublished but readily available “Economic Strategy and Priorities: Stabilisation, Liberalisation, Institutionalisation” of August 2015.

3) Private conversation November 2015. See also *Wall Street Journal* report by Shibani Mahtani “Aung San Suu Kyi's Party Won't Push Abrupt Economic Change” 21 December 2015.

4) Aye Myint did not seem to be personally ambitious, and played a low-key role in his ministerial posts (Sports, Religious Affairs, and briefly Industry and Science & Technology). However, he had been a long-time member of the Executive of the Union Solidarity Development Party, where he was known to represent mainstream Army views and to avoid advocating policies not supported by the Army.

link" in labour disputes was the absence of a mediator facilitating role. In some cases during this period and later, activists – such as 88 Generation leader Ko Ko Gyi, independent regional Member of Parliament Nyo Nyo Thin, and Yangon-based NLD member SuSu Nwe – assumed the role of mediators in labour disputes and were generally accepted in this role.<sup>5)</sup> In other words, active NLD support for Myanmar workers has already been demonstrated publicly and consistently.

Aung San Suu Kyi has herself at various times been quite explicit about her commitment to improving working conditions in Myanmar, including when she spoke at the annual International Labour Conference in June 2012. In that speech,<sup>6)</sup> she emphasised the importance of protecting workers' rights, and workers' education and training. She identified youth unemployment as a key concern, and called for responsible foreign investment to place Myanmar's socio-economic development on a more sustainable basis, where much still needed to be done. However, the NLD's economic strategy, issued around the same time, contains no specific undertakings in relations to labour market reforms, concentrating as it does on macro-economic policy rather than micro-economic reforms. Together, these can be taken as reflecting a certain NLD determination to push for progress in improving workers' well being, which may be needed to overcome entrenched reluctance on the part of elements of the business community.

Some resistance to improving workers' conditions in Myanmar during 2012-13 came from both the foreign and domestic business sectors, who had for several years been employing considerable numbers of lowly skilled and poorly paid Myanmar workers, particularly in the garment industry. That this resistance to change should have happened is not entirely surprising: Myanmar's Union of Myanmar Federation of Chambers of Commerce and Industry (UMFCCI) has historically been more concerned about facilitating business activities than improving workers' conditions.<sup>7)</sup> More over, both foreign and domestic firm shave long tended to depend on Myanmar's lower wages and working conditions to make Myanmar products internationally competitive. Some well-known multi-national firms were among the foreign firms involved, and during this period several multinational firms were targeted by international activist

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5) Kyaw Soe Lwin's study of the 2012 period "Understanding Recent Labour Protests in Myanmar" in *Debating Democratization in Myanmar* (Singapore, ISEAS, 2014) highlights the role of Ko Ko Gyi, who unsuccessfully sought pre-selection as an NLD candidate for the 2015 election.

6) Aung San Suu Kyi statement to the International Labour Conference, June 2012.

7) A summary of the lukewarm Myanmar business response to the ILO's "decent work" campaign can be found in the 2013 analysis by Ross Wilson who was seconded to the ILO to assist with this campaign. Some Yangon companies had even opposed official surveys of workers carried out by the Labour Ministry in 2013, as a follow-up to the enactment of the new laws. See "Labor Laws Strengthened but Workers Still Struggle" *Public Radio International*, 16 September 2013.



groups for their poor treatment of their Myanmar employees.<sup>8)</sup> Such campaigns—and the findings in such reports—often affiliated with the Burma Campaigns in the United States and the UK, will almost certainly strengthen the resolve of the NLD government to tackle “unfair” treatment of lowly paid Myanmar workers. While there may be exceptions, Myanmar’s business sector has not so far been noticeably influenced by the NLD’s support for better treatment of workers in Myanmar. Changing this will be a challenge for an NLD Government.

Up until now, labour rights activists seem to have been carrying out rather lonely struggles in Myanmar against government and corporate stakeholders, whose “support” for economic reforms seems to have been constrained by their own economic interests. Nevertheless, these activists increasingly represent a high proportion of Myanmar’s remaining 100 or so<sup>9)</sup> political prisoners, since they are still being imprisoned essentially for their political activities, under out dated laws. Their campaigns inside Myanmar have often been undertaken with explicit or tacit support from the NLD, and they are now among the “new” political prisoners as examples of the failure of Myanmar’s judicial system. The NLD cannot really afford to ignore their cause when political power is transferred to it early in 2016. As the new government party, the NLD will be expected by its supporters to place some priority on giving effect to its rhetorical advocacy for rule of law reforms, and to remedy some of the more blatant instances of injustice being dispensed to its members and their fellow activists who have been working together against mistreatment of workers, wrongful arrests and unreasonable sentencing.

The International Labour Organisation (ILO) is, so far, the only UN Agency where Aung San Suu Kyi has made a substantive statement; it has been shifting its focus in Myanmar from problems such as forced labour, child labour and child soldiers, to striving for better working conditions, and in particular in connection with its global campaign for “decent work”.<sup>10)</sup> Significantly, the ILO is one of the international agencies most deeply engaged in encouraging reforms in Myanmar, with active, widespread and reasonably effective programs, even though its presence on the

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8) One typical report on the garment sector is the one published recently by Oxfam, entitled: “Made in Myanmar”. (Oxfam Briefing Paper No 209, December 2015.)

9) Estimates of the number of political prisoners in Myanmar as at the end of 2015 vary, with Amnesty International reporting around 93 prisoners (“less than 100”), while the Association of Political Prisoners (based in Thailand) claims the number to be 180. These figures compare with more than 2,100 in January 2011, before the “amnesties” announced by the Thein Sein government in 2013. See also Richard Horsey’s January 2014 analysis for the Conflict Prevention & Peace Forum.

10) “Decent work” has been an ILO Goal since 1999, but only became a mainstream campaign after the 2005 World Summit of the United Nations General Assembly, when “heads of States and governments of more than 150 countries recognized decent work as an international development goal.”) ILO website).

ground in Myanmar dates only to 2001. In earlier times, under military regimes, the central problems in Myanmar in terms of compliance with international obligations related to forced labour and child soldiers, politically sensitive issues where, notably, the Burmese Army was seriously implicated in abuses and misuse of its authority. The ILO has been closely involved in both internal reforms of labour policies in Myanmar, as well as in Myanmar's closer integration into regular and reform-oriented regional labour arrangements, via ASEAN, the Association of Southeast Asian Nations. Myanmar's membership of ASEAN policies is supported not only by Myanmar's former military regime, and by the Thein Sein government (2011–16) which chaired ASEAN in 2014, but also by the prospective NLD government of Myanmar. The ILO is also actively facilitating international assistance for labour reforms in Myanmar, with even the US Government recently announcing a labour capacity building program for Myanmar being organised through the ILO.

In Myanmar, the Ministry of Labour, historically played an interventionist role - encouraging workers education, regulating (and inspecting) working conditions, as well as enforcing bans on trade unions and strikes. The Ministry thus played a role, under authoritarian governments, in harassing and repressing workers, and supporting government and business interests rather than workers' rights. Even in early 2015, for example, the ministry called on workers to stop their (by then, legal) strike actions against garment manufacturers. However, it was also one of only a few ministries under the Thein Sein government to initiate administrative reforms. Major changes to Myanmar's Labour Organisations Law and Settlement of Labour Disputes Law came into effect in March 2012, allowing trade unions and strikes for the first time in more than two decades. In early 2012 the Ministry of Labour merged with the Ministry of Social Welfare to become the Ministry of Labour, Employment and Social Security. (In earlier times, one minister had occasionally occupied both posts, reflecting the synergies between them.) This marked an increase in the importance of employment creation and social welfare policies, which was in fact a move away from centralised planning in the direction of people-oriented policies. One important labour reform which received backing from the Ministry in 2015 was the achievement of a fair minimum wage.<sup>11)</sup> A new Myanmar NGO, the Myanmar Overseas Employment Agencies Federation (MOEAF) now helps the Ministry of Labour to support Myanmar workers overseas, and has already set up offices in Thailand, Malaysia and Japan.

Successive Myanmar governments since the 1960s followed the pattern of many developing country governments to regularise, facilitate and even encourage Myanmar

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11) The campaign for a minimum wage illustrates some of the difficulties of achieving labour market reforms in Myanmar. A new law introducing a minimum wage was approved in principle by the Myanmar parliament in 2012, but it took protracted negotiations between stakeholders before final agreement was reached on the details in August 2015.

workers to seek overseas employment. For many years, under the auspices of the Ministry of Transport, Myanmar seamen were the main single category of overseas Myanmar workers. Of course, remittances from Myanmar workers overseas were valued by Myanmar governments, as well as the families involved, but they were only worthwhile if they were properly subject to taxation. To this end, the Myanmar Government sought to ensure that Myanmar workers taking up overseas employment did this legally, rather than illegally. The Ministry of Labour also initiated programs to encourage Myanmar workers to work overseas legally, extending the initial target destinations of Southeast Asian neighbours to countries of the Middle East after around 2000 when large scale construction projects began there and labour was apparently in short supply in the Gulf states in particular.<sup>12)</sup> Later, the Thein Sein Government would also contemplate labour migration arrangements with Japan and Korea.

It is no mere coincidence that, especially after 2011, the Myanmar government began playing more attention to efforts being made through ASEAN to improve labour mobility. As data on regional labour movements were developed, with international assistance from the ILO and from international donors after 2012, statistics showed that Myanmar had the highest number of migrant workers in ASEAN countries (an estimated 2.2 million officially recognised workers).<sup>13)</sup> Regional mechanisms being supported by ASEAN included the mutual recognition of qualifications, payment of reasonable wages, allowing registered overseas workers access to complaints mechanisms, compensation and social security assistance, and general bureaucratic capacity building. Thereafter, overseas labour issues assumed a dramatically higher profile in Myanmar as government-to-government labour agreements were concluded with more countries (such as Japan and the Republic of Korea) and assigning Labour Attaches to more Myanmar embassies. As a result, when some of the 5 million or so Myanmar nationals working overseas<sup>14)</sup> were victims of discriminatory or illegal work practices after 2011, the official Myanmar representatives overseas would occasionally lend support to their claims. All of these measures were intended to form part of the ASEAN Economic Community, (AEC) scheduled to start from December 2015, to which Myanmar was formally committed. Australia has provided some assistance to ASEAN's labour migration capacity strengthening AEC

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12) This is partly why embassies from Middle Eastern countries were opened in Yangon after around 2005, and why direct air services to/from some of these countries also began.

13) The International Labour Migration Statistics (ILMS) Database for ASEAN was launched in 2014. See: <http://apmigration.ilo.org/asean-labour-migration-statistics>

14) Official figures indicate around 1,800,000 Myanmar nationals are working in Thailand, 250,000 in Malaysia, and Singapore, and slightly lower numbers in Japan and Korea. In the last decade or two, the number of Myanmar citizens working on infrastructure projects in the Middle East has also increased considerably.

programs in which Myanmar has participated.

Myanmar's immediate economic and social interests benefit quite directly from having such a large number of workers overseas. Remittances from Myanmar national overseas supplement otherwise low family incomes, and provide training and development in modern skills, as well as professional experience and opportunities that cannot yet be gained by working in Myanmar. In the case of seamen, this has long been recognised by successive Myanmar governments who, through the Ministry of Transportation, authorised and regulated the recruitment, employment, and training of Myanmar seamen overseas, which became an important source of income through taxation as well. There is no reason for a new Myanmar government to disturb most of these long-standing and convenient arrangements, which military rule also left more or less untouched. However, in the future, more attention might focus on the situation of unskilled Myanmar workers overseas, such as domestic assistance workers, who can suffer from discrimination and exploitation, and a new Myanmar government could well feel moved to tighten up these practices to protect their own nationals better.

The return from exile in September 2012 of U Maung Maung,<sup>15)</sup> the head of the former Federation of Trade Unions of Burma (FTUB), made it politically possible for all those involved in labour negotiations – workers groups, all political parties, government officials – to work together on labour problems, perhaps for the first time this had ever happened in a meaningful way. In theory, workers organisations in Myanmar should also have become stronger with the consolidation of workers groups into the new Federation of Trade Unions of Myanmar (FTUM), acting as a single voice for workers, including in dealings with business groups such as the UMFCCI. Maung Maung's prominent affiliation with the former International Confederation of Free Trade Unions (ICFTU), could also assist in regularising Myanmar's position in the global labour movement, now represented in the International Trade Union Confederation (ITUC).

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15) Maung Maung was among the around 6,000 Burmese who had been placed on the military regime's "black list" of Burmese who had fled Burma after 1988 and were not permitted to return to Myanmar. In August 2012, the Thein Sein government abolished the list. See statement by ITUC Chair Sharan Burrow welcoming this at: <http://www.ituc-csi.org/burmese-union-leader-maung-maung?lang=en>.

## Conclusion

Even in Myanmar's partially reformed labour market after 2011, Myanmar workers learned how to campaign for better pay and better conditions; they also recognised after 2012 that Myanmar's newly liberalised media could be very supportive of their claims. But Myanmar's workplace reforms are still only partial, and substantial improvements in working conditions in Myanmar are urgently needed if Myanmar's economic development is to gather momentum. However, real improvements are likely to take some years to achieve, even if they are given high priority by a new Myanmar Government starting in 2016. A better enabling environment in Myanmar will be essential. This includes better economic conditions generally, but it also requires fairer treatment of workers in the justice system, and much more effective "safety nets" for workers, including unemployment assistance, injury compensation, and training and skills development. How Myanmar's sizeable public sector working population can benefit from labour market reforms is also not clear at this point. While potential investors in Myanmar's transitioning economy might be disconcerted by having also to confront uncertainties of labour market adjustment right now, the end result should place Myanmar's political economy on a more sustainable and more manageable footing for the future.

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## K-Wave influencing on the Attitude and Purchase Intention of Korean Cosmetics in Myanmar Consumer Market\*

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**ABSTRACT:** This research is about the role of the K-wave (*especially K-Pop*) influencing on the Purchase Intention of Korean cosmetics in Myanmar's consumers. Especially, it try to find whether the K-wave plays a role as moderating variables or independent variables, when the consumption values attribute on the purchase attitude of Korean cosmetics. Based on the Sheth's model of the consumption values, and other previous papers related with the Attitude and the Purchase Intention, the research model was developed and analyzed by SPSS regression analysis with data surveyed 220 people in Myanmar Yangon and Taunggyi Residential consumers who experienced to use Korean cosmetics. The results of this study, in the case of the Korean Wave was moderating effect appeared only when the conditional value of consumption is worth, there was no moderating effect other consumption values. For the implications of this study are K-pop recognized in the vicinity of Korean cosmetics for Myanmar consumers, when personal values, identity, impression, evaluation, etc. are important, affect may be formed in the way of a favorable attitude and purchase intention in Myanmar. It implies K-wave, as improve the conditional value of Korean cosmetics to form positive attitude in Myanmar consumers, and, affect direct influence on the positive influence on the purchase attitude of Korean cosmetics in Myanmar consumer market, along with Korean national image.

**Key Words:** K-Wave, Consumption Value, Functional Value, Emotional Value, Social Value, Epistemic Value, Conditional Value, Attitude, Intention.

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## **I. Background and Purpose of Study**

Korean wave's effect is great nowadays in consuming markets all over the world including Southeast Asia. K-pop, Korean movie, drama and webzine, etc., are surely cultural factors affecting on consumer attitude and purchase intention. Korean wave has meant a trend of Korean popular culture but currently is interpreted as a phenomenon of Korea preference happening abroad in a broad sense". Chen Xi(2010), and Kim Sung-Reup(2011) defined Korean wave as "everything related to Korea which draws attention of foreigners abroad as a phenomenon of following and yearning for Korean popular culture that has usually occurred in Asian country with China as center. And Kim Beom-sang (2013) presented Korean wave as Korean popular culture contents including movie, drama and K-pop which are related to Korean wave.

Recent studies on effect of Korean wave on consumer attitude and purchase intention (Kim Seong-Pil, Kim Song-Juk, Lee Min Soon 2013) presents that Korean wave directly affects purchase intention. However, there is a need to verify if Korean wave has a moderating effect on the attitude formation. Studies on what influence Korean wave has on attitude toward Korean products and purchase intention can be mainly found in countries where reform and openness are active such as China, Japan and Vietnam while study on the same subject in Myanmar is rarely found. For that reason, the present study was conducted on Myanmar consumers to investigate what influences Korean wave in Myanmar have on their consumption value on Korean cosmetics, attitude toward products and purchase intention.

## **II Theoretical Background and Establishment of Hypothesis**

### **2.1 Consumption Value and Attitude toward Products**

Consumption value means consumer's preference or faith for product attributes or achievement and this is an important criterion when consumers make a decision about if they will purchase certain products, particularly Korean cosmetics in this study. Consumers have different values on even the same product. Consumption value is divided into functional value, conditional value, emotional value, epistemic value and social value, depending on which consumers have different purchase attitude and make a purchase decision and selection (Sheth et, al., 1991). The study on the effect that consumption value on products of social enterprises has on attitude and purchase intention, which was conducted by Jung Su-hyun, Kim Suk-yeon et al. (2013), investigated what influence the four consumption values except conditional value among aforementioned 5 consumption values presented by Sheth have on attitude and purchase intention. In the result, the four consumption values (functional, emotional, epistemic and social values) were found to have a significant influence on



consumers' attitude toward products. According to the study of Lee Jung-woo and Kim Mi-young (2010), type and price of cosmetics that consumers prefer and origin of brands had difference depending on type of consumers' consumption value on cosmetics.

The present study was based on the model of Sheth et al. (1991) by using an epistemic & emotional value model, the combination of epistemic value and emotional value in verifying consumption value on cosmetics. And the following hypotheses were established to investigate if consumption value on Korean cosmetics has an influence on Myanmar consumers' attitude and purchase intention.

**H1:** Consumption value on Korean cosmetics will have a positive influence on Myanmar consumers' attitude toward Korean cosmetics.

H1(a) : Functional value on Korean cosmetics will have a positive influence on Myanmar consumers' attitude toward Korean cosmetics.

H1(b) : Conditional value on Korean cosmetics will have a positive influence on Myanmar consumers' attitude toward Korean cosmetics.

H1(c) : Emotional value on Korean cosmetics will have a positive influence on Myanmar consumers' attitude toward Korean cosmetics.

H1(d) : Epistemic value on Korean cosmetics will have a positive influence on Myanmar consumers' attitude toward Korean cosmetics.

H1(e) : Social value on Korean cosmetics will have a positive influence on Myanmar consumers' attitude toward Korean cosmetics.

## **2.2. Consumption Value and Attitude toward Products: Effect of Korean wave**

In the result of analysis on relationship between Korean wave and consumption value, Korean wave was found to have a positive influence on consumers' consumption value on Korean cosmetics. (Ha Ya-Ying 2014; Yang Jie 2015)classified the components of consumption value as three values; Korean products' variety value, quality value and Korean wave value and analyzed the effect of Korean wave on consumption value. The result showed Korean wave was found to have a positive influence on all of the three components of consumption value. However, it is believed the fact that Korean wave has a direct influence on products' consumption value damages inherent value of product itself and when products' consumption value influences attitude, Korean wave plays a role as a moderating effect. Although there is no clear distinction in the definition of Korean wave, as the most influential elements are K-pop, movie and drama, this study was conducted focusing on the spread of K-pop. As it is believed that Korean wave including K-pop will have a moderating effect on relationship between consumption value on Korean cosmetics and attitude toward Korean cosmetics, the following hypothesis was established in this study.

**H2:** Korean wave will have a moderating effect on the effect that consumption value on Korean cosmetics has on Myanmar consumers' attitude toward Korean cosmetics.

H2(a) : Korean wave will have a moderating effect on the effect that functional value on Korean cosmetics has on Myanmar consumers' attitude toward Korean cosmetics.

H2(b) : Korean wave will have a moderating effect on the effect that conditional value on Korean cosmetics has on Myanmar consumers' attitude toward Korean cosmetics.

H2(c) : Korean wave will have a moderating effect on the effect that emotional value on Korean cosmetics has on Myanmar consumers' attitude toward Korean cosmetics.

H2(d) : Korean wave will have a moderating effect on the effect that epistemic value on Korean cosmetics has on Myanmar consumers' attitude toward Korean cosmetics.

H2(e) : Korean wave will have a moderating effect on the effect that social value on Korean cosmetics has on Myanmar consumers' attitude toward Korean cosmetics.

Meanwhile, Bae Jeong-min, Kim Mie-jung, and Lee Chun-su (2010) reported that international students who had experienced Korean wave thought of Korean wave positively and Korean wave had a positive influence on both product image and corporate image as the result of their study. In addition, product image and corporate image also had a positive influence on consumers' purchase attitude. Based on previous studies that Korean wave had an influence on attitude toward products, the following hypothesis was established in this study.

**H3:** Korean wave will have a positive influence on Myanmar consumers' attitude toward Korean products.

### **2.3. Attitude toward Products and Purchasing Intention**

According to the study of Fishbein and Ajzen(1975), attitude is a psychological tendency e of favor or disfavor toward a person, place, thing, or event. Ma jin(2014) study "Effect of country image and product image on consumer attitude, purchasing intention and suggestion intention" present that attitude of consumer have a positive influence on purchasing intention. And the following hypotheses were established

**H4 :** Attitude on Korean cosmetic will have positive influence toward purchasing

intention of Korean cosmetics.

### III. Operational definition and Measurement Index

#### 3.1. Korean Wave

Looking at the existing of previous studies, it has been variously defined the concept of the Korean for each researcher, but In this study, It is defined for operational definition of Korean Wave as "Phenomenon that causes the hot air from foreign countries which are Korean cultural products or South Korea movie media, Korean music, SNS, Internet games, cosmetic beauty, fashion, etc. with the daily life and the close relationship of the Korean people" Based on the research of Young-Dong Han(2015).

#### 3.2. Consumption Value

Sheth et. al.(1991) defined Consumption Value as "Reason for purchasing and use of particular products, and Factors that have the greatest effect on consumer choice behavior to explain the reason for selecting the type and brand or trademark of products". It was studied with extracting the consumption value in Functional value, Situational value, Cognitive value, Emotional value and Social value in verifying the consumption value of Korean cosmetics based on components of consumption value presented in the research of Sheth et. al.(1991) in this study. It arranged the conceptual definition and operational definition of components of consumption value presented by Sheth et. al.(1991) as following table and measured the consumption value with following survey questions.

<Table 1> conceptual definition and operational definition of consumption value

scohlar	Elements of consumption value	conceptual definition	operational definition
Sheth et. al., (1991)	Functional Value	The perceived utility acquired from an alternative's capacity for functional, utilitarian, or physical performance.	Reliability, durability, price, and service related to practical and physical consumption value.
	Social Value	The perceived utility acquired from an alternative's association with one or more specific social groups.	Consumption value with social position, social reputation, identity.
	Emotional Value	The perceived utility acquired from an alternative's capacity to arouse feelings or	Consumption value toward satisfaction,

		affective state.	comfortability, happiness, pleasure of consumption.
	Conditional Value	The perceived utility acquired by an alternatives as the result of the specific situation or set of circumstances facing the choice maker.	Consumption value associated with Specific situation, special event, recommend.
	Epistemic Value	The perceived utility acquired from an alternative's capacity to arouse curiosity, provide novelty, and satisfy a desire for knowledge.	Consumption value to arouse curiosity and about unique.

### **3.3. Attitude**

Fishbein and Ajzen(1975) defines attitude as "a favorable or unfavorable evaluative reaction toward something or someone" . Kolter(2000) further elaborates attitude as an individual personal evaluation, favorable or unfavorable, with emotional feeling attached and action tendency toward some objects or ideas. Also, Kim(2012) takes the view of attitude as a favorable emotion feeling toward marketing stimulation and information in the process of data processing and decision making during the process of purchasing decision. Based on existing research, we define attitude as a favorable reaction toward the attributes as function, design, packaging of a certain product, and measure consistent response with good impression, favorable evaluation and interest.

### **3.4. Purchasing intention**

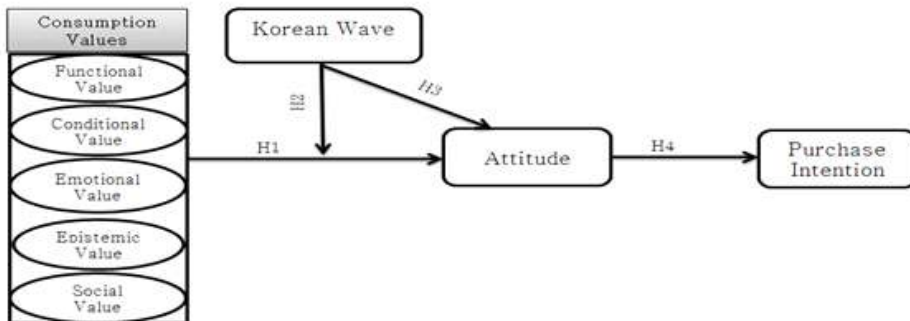
Engel and Blackwell(1995) defined purchasing intention as a planned future action which provides probability belief and attitude turn into action. Ha(2014) suggests the concept of purchasing intention as "individual's intentional plan to purchase certain product or service". Both purchasing intention and purchasing behavior are ones of sequential decision making process which are supposed to be measured as independent variables. Since it is inappropriate method measuring purchasing intention and purchasing behavior under the same condition, we considered purchasing intention as a dependent variable. Based on the definition Engel and Blackwell(1995) and Ha(2014) elaborate, we define purchasing intention as "a probability which consumer purchase certain product", measure with purchasing plan, continuous purchasing intention, intention of recommendation to others.

## **VI. Research Design and Analysis**

The research model has been developed, as follows, to conduct empirical study of the variables. The samples of this study ware collected from Myanmar consumers aged

20-30s, in Yangon and Taunggyi where showed relatively high tendency to buy and use Korean cosmetics. 270 samples out of 300 distributed, collected and 50 samples eliminated due to insufficient responses from Jan. 10. 2016 to Feb. 5. 2016. Finally 220 samples were used for the study.

<Table 2> Research Model



#### 4.1. Credibility and Validity Analysis

To gain the credibility of variables, the Cronbach alpha test were conducted, and showed all above 0.8~ 0.9 after eliminating a few items as shown <Table 3>. It found no problem in variables credibility to do further study. And to get structural validity, factor analysis eliminated 2 items of country image, 1 item of functional value, 2 items of emotional value, 2 items of epistemic value and 1 item of social value. 0.999 of KMO value and 0.000 of p-value in Bartlett test shows the structural validity to do further study with the surveyed data. And the factor load with all above 0.5 reveals no problems with items measured. However, the univariate between epistemic value and emotional value suggested in the factor analysis, this study deals two variables as one variable, named as 'epistemic emotional value.' The characteristics of 'cosmetics' might have no clear cut to differentiate the two values.

<Table 3> Credibility Test Results

Variables		Initial items	Items eliminated	Cronbach alpha
K-wave		5	0	0.908
Consumption Value	Fuctional Value	5	2	0.857
	Conditional Value	5	1	0.802
	Emotional Value	5	0	0.918
	Epistemic Value	4	0	0.831
	Social Value	5	0	0.872
Attitude		5	0	0.944
Purchase Intention		5	0	0.933

<Table 4> Factor Analysis Results

Items	Factor Load							Cronbach alpha
	1	2	3	4	5	6	78	
Intention 4	.816	.249	.087	.119	.129	.075	.192	0.933
Intention 2	.808	.140	.158	.256	.113	.029	.078	
Intention 5	.783	.271	.003	.146	.156	.031	.213	
Intention 1	.762	.208	.159	.289	.093	.009	.043	
Intention 3	.688	.382	-.003	.140	.172	.116	.102	
Attitude 5	.233	.744	.103	.211	.204	.013	.155	0.944
Attitude 3	.295	.735	.084	.239	.092	.104	.151	
Attitude 2	.341	.713	.087	.254	.115	.001	.122	
Attitude 1	.331	.713	.152	.277	.124	-.061	.062	
Attitude 4	.274	.692	.107	.217	.209	.058	.162	
K-wave 2	.030	.109	.823	.047	.065	.005	-.002	0.89
K-wave 1	-.032	.000	.815	.081	.003	.105	-.013	
K-wave 3	.151	.026	.804	.106	.036	.046	.090	
K-wave 5	.063	.226	.764	.056	.100	.082	.008	
K-wave 4	.173	.028	.738	.109	.166	.047	.072	
Epistemic 5	.198	.231	.129	.638	.248	-.008	.310	0.898
Epistemic 1	.271	.294	.085	.636	.203	.035	.027	
Epistemic 3	.155	.213	.154	.623	.116	.031	-.003	
Emotional 1	.331	.160	.072	.622	.057	.154	.382	
Emotional 2	.269	.357	.073	.605	.182	.175	.311	
Emotional 3	.261	.302	.120	.571	.143	.073	.445	
Social 4	.185	.044	.131	.098	.839	.013	.176	0.86
Social 5	.099	.213	.099	.222	.806	.095	-.006	
Social 2	.200	.366	.104	.174	.596	.187	.099	
Social 3	.307	.398	.083	.229	.527	.109	.100	
Conditional 2	.275	.052	.100	-.080	.080	.784	.068	0.802
Conditional 4	.019	.146	.048	.037	.050	.783	.053	
Conditional 3	-.054	-.033	.065	.007	.184	.777	.145	
Conditional 5	.000	-.045	.037	.215	-.069	.753	-.141	
Functional 3	.266	.186	.026	.252	.117	.062	.763	0.841
Functional 4	.243	.281	.089	.332	.171	.028	.704	

KMO=0.909; Bartlet's sig. =0.000

#### 4.2. The Results of Empirical Analysis

Sheth et. al.(1991) suggested 5 consumption values, but the factor analysis of this study revealed 4 factors, combining epistemic value and emotional value with unidimensionality. The characteristics of cosmetics might be difficult to distinguish

between the two values. The result of multiple regression are shown as <Table 5>. It suggested the fitness and validity of the model. All the variables of consumption values, without the conditional value, have statistical significance to explaining the attitude of the Korean cosmetics.

<Table 5> Consumption Value and Attitude

Independent	dependent	Non standardized		standardized	t	p	R <sup>2</sup>	p-value (F)
		B	s.d.	B				
Functional	Attitude	.119	.067	.111	1.762	.080	.574	(72.77)
Conditional		-.041	.048	-.039	-0.851	.395		
Epistemic Emotional		.570	.083	.477	6.832			
Social		.298	.060	.282	4.956			

\*\*\*p<0.001, \*\*p<0.01, \*p<0.05

To find the moderating effect of K-Wave (especially K-Pop) between consumption values and the attitude, the moderating regression analysis implemented and showed the results of it as on <Table 6>. It found there is no moderating effect of K-wave between them, except between conditional value and attitude. And the analysis showed the country images of Korea significantly influence on the attitude as <Table 7>. Also, the Attitude attributed significantly on the purchase intention of Korean cosmetics, shown as <Table 8>

<Table 6> Moderating Effect of K-Wave

Independent Variables	Dependent Variable	Moderating Variable	model	R	R <sup>2</sup>	Adjusted R <sup>2</sup>	Standard Error	R <sup>2</sup> Change	F Change	df1	df2	p-value of F change
Functional Value	Attitude	K-Wave	1	.575a	0.331	0.327	0.6642	0.331	107.64	1	218	.000
			2	.667b	0.445	0.44	0.60622	0.114	44.694	1	217	.000
			3	.668c	0.446	0.438	0.6072	0.001	0.299	1	216	.585
Conditional Value			1	.161 <sup>a</sup>	.026	.021	.80118	.026	5.811	1	218	.017
			2	.525 <sup>b</sup>	.276	.269	.69227	.250	74.990	1	217	.000
			3	.538 <sup>c</sup>	.289	.280	.68744	.013	4.057	1	216	.045
Epistemic Emotional V.			1	.718 <sup>a</sup>	.515	.513	.56527	.515	231.608	1	218	.000
			2	.741 <sup>b</sup>	.549	.545	.54619	.034	16.491	1	217	.000
			3	.745 <sup>c</sup>	.555	.549	.54402	.006	2.736	1	216	.100
Social Value	1	.615 <sup>a</sup>	.378	.375	.64015	.378	132.575	1	218	.000		
	2	.670 <sup>b</sup>	.449	.444	.60376	.071	28.069	1	217	.000		
	3	.674 <sup>c</sup>	.454	.447	.60239	.005	1.990	1	216	.160		

\*\*\*p<0.001, \*\*p<0.01, \*p<0.05

<Table 7> K-Wave and Attitude

Independent Variables	Dependent Variable	Non standardized		standardized	t	p	R <sup>2</sup>	p-value (F)
		B	Standard error	B				
K-Wave	Attitude	.620	.068	.525	9.108		0.276	(82.961)

\*\*\*p<0.001, \*\*p<0.01, \*p<0.05

<Table 8> Attitude and Purchase Intention

Independent Variables	Dependent Variable	Non standardized		standardized	t	p	R <sup>2</sup>	p-value (F)
		B	Standard error	B				
Attitude	Purchase Intention	.744	.054	.681	13.729		0.464	(188.478)

\*\*\*p<0.001, \*\*p<0.01, \*p<0.05

## V. Conclusion

This research is about the role of the K-wave (*especially K-Pop*) influencing on the Purchase Intention of Korean cosmetics in Myanmar's consumers. Especially, it try to find whether the K-wave plays a role as moderating variables or independent variables, when the consumption values attribute on the purchase attitude of Korean cosmetics. Based on the Sheth's model of the consumption values, and other previous papers related with the Attitude and the Purchase Intention, the research model was developed and analyzed by SPSS regression analysis with data surveyed 220 people in Myanmar Yangon and Taunggyi Residential consumers who experienced to use Korean cosmetics.

The results of this study, in the case of the Korean Wave was moderating effect appeared only when the conditional value of consumption is worth, there was no moderating effect other consumption values. For the implications of this study are K-pop recognized in the vicinity of Korean cosmetics for Myanmar consumers, when personal values, identity, impression, evaluation, etc. are important, affect may be formed in the way of a favorable attitude and purchase intention in Myanmar.

It implies K-wave, as improve the conditional value of Korean cosmetics to form positive attitude in Myanmar consumers, and, affect direct influence on the positive influence on the purchase attitude of Korean cosmetics in Myanmar consumer market, along with Korean national image.



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## **Casino Resorts as Micro-Para-Statal Areas in the GMSR: Connectivity and Economic Development**

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**ABSTRACT:** Several types of para-statal areas exist in different parts of the Greater Mekong subregion (GMSR). These are areas in which different versions of the rule of law apply than in normal parts of the country. Para-statal areas can be formal in nature, as in the case of the Special Economic Zones (SEZs) that are used to help propel nations along the trajectory of the Factory Asia paradigm. Other para-statal areas are informal in nature and represent territories where the rule of law is partially or wholly-imposed by non-state actors. These range from areas in Myanmar where insurgent ethnic minority groups have established autonomous zones, to areas in Laos where Chinese capital has been used to create areas of cowboy capitalism, where the rule of law is enforced by the owners of capital, usually in collusion with representatives of the state, who benefit personally as a result. There are no examples of the latter form of para-statal area offering better workplace safety conditions or labour relations more generally. On the contrary, workers are generally subject to exploitative conditions with little guarantee of receiving due reward for their labour and no rights to collective bargaining or freedom of association. This is generally true of the casino resort micro-para-statal areas of the GMSR that are mostly located on the borders of Thailand with Myanmar, Laos and Cambodia, as well as special resorts created for Chinese visitors to Vietnam. Casinos offer employment but few good jobs and a significant proportion of those jobs are associated with indecent work. Only croupier work is valued. Most jobs are low-paid, low-skilled service sector jobs with little security or career paths. They are also often associated with drug smuggling and usage, sex work of various categories and money laundering. This does not necessarily mean that the lives of workers in resorts are materially worse than all other workers in formal sector SEZs, as the recent protests by female Cambodian workers in the garment industry SEZs illustrates. However, these are conditions in which workers have historically sought to organize themselves in the name of security. This paper uses mostly secondary data sources to compare what is known of conditions in a range of different para-statal areas across the GMSR, with a particular focus on casino resorts. It is argued that connectivity with surrounding areas can be of considerable importance in determining the nature of conditions experienced by workers and that the different forms of connectivity exist in different combinations in the various para-statal area categories identified. This then has a direct impact on the willingness and ability of workers to provide remittances and to obtain competencies and experiences that can subsequently contribute to local economic and social development.

**Key words:** *Casino resorts, Greater Mekong Subregion, Para-statal areas, Informal economy, security.*

## **I. Introduction**

Casinos, like all parts of the gambling industry, are treated with suspicion by the governments of the Greater Mekong Subregion (GMS – it is composed of Cambodia, Laos, Myanmar, Thailand, Vietnam and, in China, Yunnan province and Guangxi Zhuang autonomous zone) because of the threat of addiction. Casino resorts are doubly suspect because of their association with money laundering and sex work (Levi & Reuter, 2006; Phongpaichit, 1999).

However, just like other forms of gambling, casinos are widely available to those who wish to use them. The complex at Poipet in Cambodia, just across the border with Thailand, offers a daily, air-conditioned bus service from the centre of Bangkok (Finch, 2012). Estimates of the value of cross-border casino businesses range to 300 million Thai baht per month or two billion per year (Swe & Chambers, 2011:39).

As a result, a wide range of casinos suiting different markets has opened across the region. The Vietnamese government has licensed four casino complexes in the north of the country for the cross-border trade and another complex at Danang in the central region flies in customers from Nanning, Kunming and Hong Kong on charter flights (Finch, 2012). A great deal of money is involved and the fact that so much of it is in cash makes this sector even more attractive.

There are some legal establishments, like Naga World in Phnom Penh, which opened a successful branch in Tonle Sap and recorded profits of US\$92 million in 2011. There are semi-legal complexes, such as at Poipet and on islands and riverbanks on the Thai-Myanmar border which are overlooked by the authorities in return, it is presumed, for a consideration. Then there are the illegal casinos, which are hidden (sometimes in plain sight) but must necessarily make their presence known so as to attract customers (e.g. Wongkiat, 2012).

Irrespective of legality, work at casinos is not highly regarded, both because the majority of jobs are low waged, low skilled service sector in nature and because of the often less than desirable management practices to be found within them (Wan, 2010; Zeng, Forrest & McHale, 2013). When casino work is combined with para-statal legality, then it is evident that there are dangers and risks for workers, since they are not protected by the rule of law and may be subject to the unaccountable whims of extra-legal bosses. This paper explores the para-statal areas of the GMSR and the role of casinos within them, with a view to understanding the implications for people working in the areas. The paper continues with an exposition of the different types of

para-statal areas in the region.

## **II. The Para-State**

A para-state is an area of territory which is not fully under the control of a recognized state agency. That may mean that the territory is not under control of anyone or any institution or it may be under the partial or full control of a non-state actor. A non-state actor in this case might be a shadow government group, a representative of capitalist endeavour or a representative of a criminal conspiracy. The concept of the para-state is closely related to the Maoist strategy of occupying and converting territory to a new use. Maoist strategy requires the acquisition of a piece of land, presumably land away from the major urban centres, which can be occupied and both used as a base for subsequent expansion of the territory held and the home for the creation of shadow or para-statal institutions that first approximate and later replicate the government originals which are then replaced (Marks, 2007:26).

The purpose of this strategy is, for revolutionary (i.e. deliberate) reasons, to replace an accepted legal regime with another that more closely reflects the purposes of the people enacting the strategy. The Mintzbergian (1985) typology of strategies (i.e. deliberate and emergent) is deployed here to distinguish between strategies that are enacted with a purpose and specific goal in mind and those which are brought about as a result of accident, of random actions or as part of a situation in which no specific goal is in the mind of the actors.

In the examples that follow, both deliberate and emergent strategies may be identified. In the case of emergent strategies, it might be argued that it is perhaps the unintended or at least unexpected outcome of large numbers of low level decisions that has led to the high level outcome that may be observed. It might also be argued that those actions, which are fundamentally the results of small scale decisions taken according to the logic of burgeoning capitalism that have given rise to a new form of uneven development that reflects the contradictions and imbalances within the nature of capitalism itself.

### **2.1. Ethnic Insurgency in Myanmar**

The history of abuse and criminality perpetrated against the various ethnic minority groups in Burma over recent decades has become increasingly well-known and well-documented (e.g. Rogers, 2010; Lintner & Black, 2009; Thornton, 2006; Callahan, 2009). The struggle for autonomy has caused rebel leaders to become involved with the manufacture and distribution of illegal narcotics (methamphetamines have replaced

opium and heroin) and cash-based industries such as casinos and prostitution.

The management of such activities merges into the need for private security and the motivation for the para-state creation combines, therefore, both the political and the commercial. Quite which is dominant in any particular case is difficult to determine, not least because of the secrecy with which most such operations are managed at the executive level – although there is some openness, as for example in the case of the shadow Wa state which at one stage was encouraging international tourists to visit. These states are the closest in nature to the Maoist ideal in that they have a political component and are intended at some stage to replace the existing official state structure. Other para-statal forms are intended to hide behind official structures and to avoid scrutiny altogether.

It might also be noted that Burmese workers and refugees have also been involved, with greater or lesser degrees of volition, with the creation of their own para-statal institutions. Burmese workers in Thailand, for example, are generally concentrated in a comparatively small number of permitted occupations and, hence, live in a comparatively narrow range of locations. The numbers involved have permitted groups of Burmese workers to join together for solidarity and to create associations to facilitate remittances back home (the Burmese government maintains a ruinously high fee on such remittances), as well as various other self-help initiatives. This para-state might be seen as a form of resistance, as might also the inclusion of groups of elders and advisors in the refugee camps along the Thai-Burmese border. The powerlessness of the people staying in such camps is, perhaps, to a small degree, mitigated by the presence of ethnic minority voices in the management structure (Sciortino and Pungpuing, 2010).

## **2.2. Cowboy Capitalism in Cambodia**

Cambodia's entry into the factory age of the East Asian Economic Mechanism (EAEM) has been accompanied by the rise of large, well-connected and diverse capital investment networks, often connected closely with members of the ruling elites. This has contributed, in the case of capital city Phnom Penh, to the sense of impunity that has resulted in the forcible removal of urban residents from land that had previously been of marginal importance but which has become important in terms of new capitalist development opportunities.

As is commonly observed, the arrival of investment in the urban environment of a developing economy represents itself to the ruling elites as an opportunity in real estate development. As a consequence, investment patterns outside of Phnom Penh take on a different character – Phnom Penh is, as described by McGee (1965), a 'primate city' in which all the principal political, cultural, symbolic and now economic activities are concentrated within one location which then has no meaningful rival in

terms of influence and power. There are few other important Cambodian urban developments of any size and those that are emerging, such as Sihanoukville, appear to have been reserved as semi-official city-wide SEZs in which the laboratory of incentives and economic freedoms for investors can be given full rein.

Outside of the urban centres, then, capitalist investment has taken on a different form. The nature of this investment has been characterized as 'cowboy' or 'wild west' capitalism, in that individual investors and organizations appear to have been given free rein to operate as they will without regard to environmental concerns, health and safety standards, workplace relations and so forth. An early example of this was the casino development at Poipet, on the border with Thailand.

Poipet offers opportunities for Thai (and other) gamblers to indulge their interests in a semi-legal environment (gambling is officially illegal in Thailand) and also enjoy the ancillary activities often associated with a casino resort. In a cash-rich environment, officials in the police and related services can be readily persuaded to look elsewhere when it comes to attending to their regular duties and justice, such as it is, becomes provided by the big beasts of the capitalist environment. This situation, then, has spread across much of Cambodia and it is hardly a surprise, therefore, that stories of kangaroo courts dispensing rough justice to supposed miscreants, summary dismissals of workers deemed to have failed to provide services required of them, abandonment of any principles of environmental conservation and so forth have become rife, insofar as information emerges from such regions at all.

The para-state in the case of cowboy capitalism is perhaps best characterized here as a type of criminal conspiracy, as if syndicalism had arisen not from trade unionism but from mafia gangsterism.

### **2.3. Dense Investments in the Northern Mekong Region**

Northern Laos and northern Burma, in the areas around the former capital of Mandalay, are comparatively remote from the central authorities of their states which, in turn, have historically lacked the resources to police and supervise their remote provinces, which are influenced by more local elites. Historically, Mekong region states were governed on a provincial basis by whichever city-state (or mueang) which happened to be closest. Mueangs themselves were controlled by a series of bilateral kinship relationships between the ruling dynasty located at the capital and distant relatives in outlying cities. In between mueangs was territory mostly lightly populated or else empty of people, owing to the difficult terrain. Many areas were almost uninhabitable into the twentieth century because of the propensity for disease to strike and spread very rapidly (e.g. McCarthy, 1994). One of the implications of the clearing of forests and jungles by extensive logging in Thailand has been the elimination of mosquitoes and other disease-bearing creatures from areas in which

living conditions had previously been very difficult (White, 2009). In these cases, capitalist development quite literally opened new spaces for further exploitation.

In both northern Burma and northern Laos, a variety of mostly small-scale agricultural investments has been made, largely by Chinese interests, which have had the effect of helping to fill up the vacuum of power and influence that would normally be expected to be provided by state power. Woods (2011) writes of the logging operations in northern Burma that a combination of Chinese and Burmese *Tatmadaw* coordinated activities is leading to a new enclosure of the common land once occupied by ethnic Kachin people: "The Myitkyina/Waingmaw valley is being squared off into barbed wire plots, some with newly planted rubber seedlings, while others are just being emptied of paddy stalks, forests, firewood and farming hut platforms. Kachin no longer speak of the livelihood hardships and ecological concerns from their forests being ripped out. They now have a more immediate and far-more worrying concern: losing their land (*ibid.*)"

These operations are clearly clandestine in nature: it is not surprising to find Chinese commercial activities and Burmese military activities being conducted behind a veil of secrecy since such is at the heart of the *modus operandi* of these interests. However, the secrecy goes a little further in this case since the activities concerned appear to be illegal with respect to the treatment of the Kachin people. Markets are being created for labour when previously commons were available for all to make what type of livelihood they wished. The issues involved with capitalist development being linked with new enclosures of the commons are quite well-established (e.g. Hardt, 2010). However, in Laos, the situation seems to be the result of the actions of quite large numbers of individuals who are preparing their own particular projects within a wider environment of lack of overall control. It might be hoped that the nature of para-statal control in this case would be of a more beneficial nature than such territory controlled by large investors but there is not much evidence of this in any direction.

### **III. The Migrant Worker and the Para-State**

It is, as ever, seemingly, the role of the worker to be the victim of predation when it comes to any kind of environmental change in the Mekong Region. This was the case historically when it came to claims to enforce *corvée* labour and when military forces, criss-crossing the region in the course of the endemic warfare that has characterized the history of the area, sought slaves to embellish the courts of their masters with the labour of the captured. The same pattern seems to be being

repeated when it comes to migration in the contemporary Mekong Region, with its various para-statal areas, all with agents ready to take fees for ingress, congress, egress and progress. To some extent, this will affect anyone seeking to use the system: research shows that logistics and trucking agents seeking to pass through Myanmar, especially on the newly-opened routes, will be subject to a variety of semi-regular or wholly irregular fees and payments (Walsh & Anantarangsi, 2009). This is said to occur in particular in Burma, where both formal military and armed ethnic minority groups attempt to extort additional payments.

Travelling to the para-statal areas involves the potential for abuse, since the individual has to decide whether or not to try to travel legally, with appropriate paperwork, which can be lengthy to obtain and very expensive and which would mean being limited to a comparatively narrow range of locations and activities in any case. The alternative would be to travel illegally, without papers or at least without using papers, which then subjects the individual to potential predation by customs and border officials when crossing borders and, also, the routine patrols and activities of police and labour ministry inspectors. When within the para-statal area, workers are most obviously disadvantaged by the unilateral decision-making authority arrogated by the controllers of the area and the inability to appeal to any form of plurality of interested beyond that which might be claimed by personal or tribal connections.

The Kachin people in northern Burma were expropriated of their land and unable to compete with incoming workers because of lack of experience or personal connections. All migrant workers are obliged to operate in this environment, in which feudal relations have replaced market ones. Migrant workers in an open market find themselves disadvantaged, as previously mentioned, because of lack of power and additional disempowerment in the absence of the universal rule of law; workers in a pre-capitalist labour market are forced to rely on opaque, feudalistic relations to gain favours which might, consequently, be withdrawn at any stage. Insecurity is heightened. The situation is likely to be particularly parlous for workers in vulnerable groups or subject to overwhelming force: young women, for example, might be trafficked for use in the karaoke industry or else obliged to work inside it once they had entered the para-statal area because of the disempowering economic conditions that they find in operation there.

Moving from one state of being to another which is not just different but which completely dominates the consciousness is known to be a potential cause of alienation and related conditions of stress, angst and depression. The migrant worker is already subject to a variety of forms of abuse and alienation, whether that stems from entry into the factory world from the agricultural one or the immersion into domestic work and the isolation that this can also signal. In some senses, then, the migrant worker is always subject to the introduction to a state over which she has no



power, with rules and regulations that are kept unknown and may be offered or withdrawn for unpredictable and unknown reasons. This is always a shadow world in which appearance and reality are difficult to identify.

#### **IV. Typology of Exceptional Spaces**

All of the countries of the GMSR have embarked on their versions of the Factory Asia paradigm – i.e. import substituting, export oriented, intensive manufacturing based on low labour cost competitiveness derived at first from the excess of supply of agricultural sector workers over demand for workers in factories and, later, through repression. Indeed, Thailand has reached the end of its usefulness and is seeking a means of escape from the Middle Income Trap. Assisted by the creation of the Asian Highway Network which link all major places of production and consumption with each other within the region and beyond and which will, therefore, further reward industrial investment, the places where Factory Asia paradigm takes place are increasingly located in special economic zones (SEZs).

These are areas that are bounded in space and time and, inside their borders, different laws apply to the rest of the country, primarily aimed at attracting investment and privileging capital over labour. The SEZ, in its various configurations, is an example of an exceptional space, as are the para-statal areas discussed in previous sections of the paper. What is different about SEZs is that they are part of the formal economy and are supposed to be operated transparently and according to legal means (although, of course, there are many examples of SEZ management that does not live up to these ideals, e.g. Narim, 2015). By contrast, other forms of exceptional space have different characteristics (see Table 1).

Table 1: Characteristics of Exceptional Spaces in the GMSR; source: Authors

<b>Type of Exceptional Space</b>	<b>Characteristics</b>
Special Economic Zone	Formal; rule of law; transparent mostly
Ethnic minority controlled enclave	Semi-formal; rule of law but extra-state law; contested borders
Cowboy capitalism areas	Informal; little or no rule of law; opaque
Concession areas	Formal to informal; variable rule of law; variable transparency

Within SEZs, workers are supposed to be protected by the rule of law according to the state in which they reside. In the ethnic minority enclaves, they are protected to some extent by the legal framework in operation in that area, which may or may not be fully realized. In other areas, protection of workers is dependent on the

willingness of those in charge to be accountable to good governance, irrespective of whether that governance is congruent with state level regulations. In Golden Boten City, for example, a boom period saw thousands of visitors crossing from Yunnan province into northern Laos on visa-exempt trips to take advantage of the gambling opportunities, sex workers and exotic animal parts for traditional medicine available there. Disappearances and bodies found dumped in the river led to rapid abandonment by those visitors (Gluckman, 2011).

In this case, it appears that failures in management of some individual business operations led to the collapse of a larger structure since there was a lack of legitimacy that was apparent to those seeking to take advantage of that. It is evident, in other words, that the lack of a recognised legal framework to which all must adhere will lead to the failure of the project overall, just as much as becoming suddenly and involuntarily subject to an external regime would be. It is also noticeable that much of the capital accumulated at Poipet is absorbed in Aranyaprathet in Thailand, where a formal regulatory system is more fully in place. For example, the owner of Tropical Casino in Poipet has opened a multi-million baht condominium project in Aranyaprathet, where the market is booming and notable for its foreign participants (Katharangsiporn, 2014).

It has been argued, of course, that it is the practice of sovereignty in this way that is inextricably linked with the processes of capitalism and capital accumulation (cf. Hardt & Negri, 2000). Freedom from legal structures does not provide freedom to make money but actually leads to the destruction of that ability. Order is required within para-statal areas that must be respected by everyone. This, of course, is true of casino gambling as a type of a game, in which players must respect the rules in order for the game to be completed.

## **V. Conclusion**

Uneven development begins, fundamentally, with the inequitable distribution of resources under first nature – i.e. nature unaffected by the works of people. Second nature represents the physical environment brought under the processes of capitalism. As the world physically becomes subject to capital accumulation, which is what has been happening in the GMSR in recent years, people who previously who had lived lives in which various institutions were important to them at different times (e.g. family, religion, market, cultural relations) to one in which the market alone is omnipresent and they take the roles of consumers and producers (Polanyi, 2002). The relationship between people and the places where they live and work has, therefore,

changed. Space itself has become a commodity to be appraised, traded and negotiated. According to the principle of big capital driving out little capital, the control of the commodified space almost always passes to newcomers with more power and influence. This is evident in the creation of different types of para-statal areas, which are of different types and natures but united in the common fact that the rule of law otherwise applied in the territory was not applied therein. Casinos operate both within and without this paradigm – rules-playing space which exist outside the rule of law. This contradiction has not led to positive outcomes.

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## Vitamin E Stability in Oil Seeds

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**ABSTRACT:** Vitamin E is one of the important lipid soluble antioxidant. It functions as antioxidant in the glutathione peroxide pathway and protects cell membranes from oxidation by removing lipid oxidized radicals. The Food and Nutrition Board at the Institute of Medicine (IOM) of the US National Academy of Sciences reported that 15 mg of vitamin E per day is recommended for the dietary reference intakes for adults. Oil seeds such as rapeseed, almond, safflower, palm, olive, and peanut are good sources of vitamin E. In general, oil seeds should be roasted at high temperature prior to manufacturing oil seed related products. Roasting can inactivate lipoxygenase and imparts desirable flavor. However, the high heat treatment process like roasting can disrupt microstructure of oil seeds, resulting in exposure of oil droplets in seeds to oxygen causing lipid oxidation. Vitamin E stability in oil seeds are highly related with roasting and storage conditions. Raw oil seeds can be stored under air for up to 1 year without both remarkable loss of vitamin E and lipid oxidation. However, vacuum packaging is highly recommended for storage of roasted oil seeds to extend storage stability and keep the vitamin E level by preventing oxygen contact causing lipid oxidation.

**Key words:** *vitamin E, stability, oil seeds, roasting, storage*

### I. Introduction

The Food and Nutrition Board at the Institute of Medicine (IOM) of the US National Academy of Sciences reported that 15 mg of vitamin E per day is recommended for the dietary reference intakes for adults. One IU of vitamin E is defined as equivalent to either: 0.67 mg of the natural form, RRR- $\alpha$ -tocopherol, also known as d- $\alpha$ -tocopherol; or 0.45 mg of the synthetic form, all-rac- $\alpha$ -tocopherol, also known as dl- $\alpha$ -tocopherol (NIH). Since vitamin E must be consumed through vitamin E rich food, if not supplements, the levels of the food have been of high concern by both consumers and industry processors.

Oil seeds have been known as the richest source of vitamin E. There are conflicting results on vitamin E stability of oilseeds during roasting. The contents of vitamin E in rice bran, sesame, soybean and sunflower oils were reported to decrease by roasting (Shin et al., 1997; Yoshida et al., 2001, 2002). Usually, the vitamin E

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retentions were still high (> 80%) even after the tocopherol loss occurred as roasting temperature increased. In contrast, some researchers reported that vitamin E levels of rice bran, corn fiber, and rice germ oils increased after roasting (Lane et al., 1997; Moreau et al., 1999; Kim et al., 2002). On the other hand, Yen et al. (1990) observed both phenomena when sesame seeds were processed at 180, 200, 220, 240 and 260°C for 30 min. Storage studies showed different stability of vitamin E in raw and roasted peanuts possibly due to susceptibility to oxidation (St. Angelo et al., 1977; Yuki et al., 1978). These different stabilities of vitamin E in oil seeds may be due to both chemical - destruction of natural antioxidants, breakdown of fatty acids (Damame et al., 1990) and physical changes - disruptions of lipid bodies, membranes and cellular compartmentalization (Young and Schadel, 1993) - of peanuts during processing, mainly roasting, for oil seed related manufacturing. Young and Schadel (1990, 1993) showed the changes in microstructure of peanuts cell wall, cytoplasmic network, protein bodies, starch granules, parenchyma tissue, epidermal tissue, surface of cotyledons affected by roasting temperatures and methods (oven and oil roasting). In this study, vitamin E stability in oil seeds was reviewed focusing on the effects of processing and storage conditions.

## II. About Vitamin E

### 2.1 Structure

Vitamin E is the generic term for tocopherols and tocotrienols that exhibit vitamin E activity. There are eight naturally occurring homologs for the vitamin E family. These include four tocopherols ( $\alpha$ -,  $\beta$ -,  $\gamma$ - and  $\delta$ -tocopherol) and four tocotrienols ( $\alpha$ -,  $\beta$ -,  $\gamma$ - and  $\delta$ -tocotrienol). Structures of tocopherols and tocotrienols differ in the number and location of the methyl groups on the chroman ring (Kijima, 1993). Tocopherols exist in eight diastereomeric forms due to the presence of three asymmetric carbon atoms at position 2 of the chroman ring and at 4' and 8' of the side chain. Although tocotrienols with double bonds in the side chain can form both *cis* and *trans* isomers, only *trans* forms exist in nature.

Synthetic vitamin E is present in fortified foods and in vitamin supplements as esters of either the natural RRR or the synthetic mixture (*all rac*-) forms. The epimeric configuration at the 2 position is important in determining biological activity (Tappel, 1992; Stone and Papas, 1997). The Biological activity of tocopherols and tocotrienols was determined by the rat fetal resorption assay and was expressed in RRR- $\alpha$ -tocopherol equivalent ( $\alpha$ -TE) units where one  $\alpha$ -TE is the activity of 1 mg of RRR- $\alpha$ -T

(NRC, 1989). Based on the individual biological activities of vitamin E homologs, vitamin E content in foods has been reported as  $\alpha$ -TE units by using the following conversion factors:  $\alpha$ -T, 1;  $\beta$ -T, 0.5;  $\gamma$ -T, 0.1;  $\delta$ -T, 0.03;  $\alpha$ -T3, 0.3;  $\beta$ -T3, 0.05; all rac- $\alpha$ -T, 0.74; rac- $\alpha$ -tocopheryl acetate, 0.67 (NRC, 1989; Pryor, 1995). Recently, only 2R-stereoisomers (RRR-, RSR-, RRS-, and RSS-) of  $\alpha$ -T are recommended to estimate the vitamin E requirement for humans (Institute of Medicine, 2000).

This recommendation is based on current information that vitamin E forms are not inter-convertible in humans and that the levels of vitamin E forms in human plasma is dependent on the affinity of hepatic  $\alpha$ -tocopherol transfer protein ( $\alpha$ -TTP) which selectively transfers 2R-stereoisomers of  $\alpha$ -T from chylomicron remnants to very low density lipoprotein (VLDL) (Traber, 1999). Therefore, 2S-stereoisomers of  $\alpha$ -T, the other tocopherols ( $\beta$ -,  $\gamma$ -, and  $\delta$ -T), and tocotrienols are excluded to estimate the vitamin E requirement for humans because of their limitation in binding with the  $\alpha$ -TTP.  $\alpha$ -TE had been used for most nutrient databases as well as nutrition labels without distinguishing between the different tocopherols in foods.

The Dietary Reference Intake (DRI) report (Institute of Medicine, 2000) shows the conversion of  $\alpha$ -TE to RRR- $\alpha$ -T by using the equation (mg of  $\alpha$ -T in a meal = mg of  $\alpha$ -TE in a meal  $\times$  0.8) based on USDA food intake survey data and also recommends abandoning the use of  $\alpha$ -TE. Now, intake of only the 2R-stereoisomers of  $\alpha$ -T from foods and supplements is strongly recommended to establish the Dietary Reference Intakes (DRIs) for vitamin E, especially Estimated Average Requirements (EARs), Recommended Dietary Allowances (RDAs), and Adequate Intakes (AIs) (Institute of Medicine, 2000). However, all eight stereoisomers of supplemental  $\alpha$ -T are used as the basis for establishing the Tolerable Upper Intake Levels (ULs) for vitamin E.

## **2.2 Functions**

Vitamin E functions as an antioxidant to protect cellular membranes from destruction by preventing the oxidation of unsaturated fatty acids in the phospholipids. Its antioxidant function involves the reduction of free radicals, preventing the potentially deleterious reactions of highly reactive oxidizing species (Tappel, 1992). Vitamin E is a primary antioxidant which can break the chain reaction during the propagation of free radical reactions due to the reactivity of the phenolic hydrogen on its hydroxyl group in the chroman ring system (Burton and Ingold, 1989). Vitamin E donates the phenolic hydrogen to a fatty acyl free radicals to prevent the attack of the free radical on other PUFAs and, then, vitamin E itself is converted to a semi-stable radical intermediate, the tocopheroxyl radical.

The tocopheroxyl radical is stabilized by delocalization of the unpaired electron around a phenol ring to form stable resonance hybrids. Tocopheroxyl radicals can interact with other compounds or with each other to form a variety of products.

Under conditions of low oxidation rates in lipid membrane systems, tocopheroxyl radicals primarily form tocopheryl quinone. The ester forms of  $\alpha$ -tocopherol such as  $\alpha$ -tocopheryl acetate and succinate are widely used in food fortification due to their increased stability. They have no antioxidant activity but exhibit in vivo antioxidant activity as a result of enzymatic cleavage of the ester (Gregory, 1995). Lipid oxidation is particularly common in cell and organelle membranes, lipoproteins, the adipose tissue, brain, and other tissues where PUFA are abundant.

Due to the role of vitamin E as an antioxidant, it is believed that vitamin E reduces various human diseases especially caused by oxidative stress including cancer, cardiovascular and coronary heart diseases (Pruthi et al., 2001; Adams and Best, 2002). The other health benefits of vitamin E include increased resistance to infection (Mehta et al., 1998; Han and Meydani, 1999), enhanced immune response (Meydani et al., 1997), prevention of atherosclerosis (Neuzil et al., 2001), reduced progression of cataracts (Robertson et al., 1989; Leske et al., 1998), prevention of exercise-induced muscle damage (Gohil et al., 1987; Adams and best, 2002) and haemolytic and sickle cell diseases (Phillips and Tangney, 1992; Shukla et al., 2000), and decreased risk of neurological disorders such as Alzheimer disease (Engelhart et al., 2002) and prevention of progression of kidney disease (Mune et al., 2002) and delayed aging (Bonney et al., 2002). These benefits are highly related to the antioxidant activities of vitamin E.

### 2.3 Physico-chemical properties

Vitamin E in the oil form is relatively stable to oxidation if protected from oxidative conditions. It shows good heat stability in the absence of oxidative events. Light is a significant accelerator of lipid oxidation and vitamin E in an oxidation-prone environment decreases more rapidly when subjected to UV compared to visible light. Esters such as all rac- $\alpha$ -tocopheryl acetate can not donate the phenolic hydrogen atom required for antioxidant action, therefore, vitamin E esters are more stable under oxidative conditions. Ester forms, due to their oxidative stability, are used for food fortification and in supplements (Johnson, 1995). Requirement Vitamin E is essential for normal growth and development.

Vitamin E deficiency leads to clinical abnormalities. Based on recent powerful studies that other naturally occurring forms ( $\beta$ -,  $\gamma$ -, and  $\delta$ -T and tocotrienols) are poorly recognized by the  $\alpha$ -T transfer protein in plasma or tissue and then not converted to  $\alpha$ -T, resulting in no contribution to the human requirement, only in the 2R-stereoisomers of  $\alpha$ -T from foods and supplements is currently recommended to establish the vitamin E requirement for humans (Institute of Medicine, 2000). Traditionally, RDA is used to measure the adequacy of nutrient needs for all healthy persons, but is not a value to cover special needs due to chronic diseases, infections,



etc.

The requirement of vitamin E is elevated when the intake of polyunsaturated fatty acids is increased (NRC, 1989). However, the vitamin E requirement is more affected by several factors than PUFA mass including the degrees of unsaturation, the portion of PUFA deposition in the tissue, and PUFA metabolism (Johne and Kubow, 1999). Energy and nutrient status of the organism also influences the vitamin E requirement.

## **2.4 Toxicity**

Vitamin E is one of the least toxic vitamins. There is no evidence of side effects from the consumption of vitamin E naturally occurring in foods. Most studies on vitamin E toxicity are conducted by intake of  $\alpha$ -T as a supplement, food fortificant, or pharmacological agent. Animal studies on the toxicity of vitamin E show that  $\alpha$ -T is not mutagenic, carcinogenic, or teratogenic (Dysmsza and Park, 1975; Krasavage and Terhaar, 1977). Kappus and Diplock (1992) reviewed numerous studies on vitamin E toxicity and concluded that humans show few side effects following supplemental doses below 2,100 mg per day of tocopherol.

One study reported a significant 50% increase in mortality from hemorrhagic stroke in Finnish male smokers who consume 50 mg/day of all rac- $\alpha$ -T for 6 years (Alpha-Tocopherol, Beta Carotene (ATBC) Cancer Prevention Study Group, 1994). On the other hand, an increase in hemorrhagic stroke was not observed in patients with Alzheimer's disease consuming 2,000 IU (1340 mg)/day of all rac- $\alpha$ -T for 2 years (Sano et al., 1997). Most adults appear to tolerate relatively high oral doses without significant evidence of toxicity, but muscle weakness, fatigue, double vision, emotional disturbance, breast soreness, thrombophlebitis, and gastrointestinal distress symptoms including nausea, diarrhea and flatulence were occasionally reported as side effects (NRC, 1989; Groff et al., 1995; Institute of Medicine, 2000).

Based on animal studies, vitamin E toxicity in humans is difficult to project because of the unclear relevance of animal study evidences to human situations. Human studies of short duration provide little information on side effects due to lack of excess dosage and short periods (few weeks or months) of vitamin E supplementation (Institute of Medicine, 2000). Since side effects by vitamin E over-intake have been reported, establishment of the maximum level for vitamin E is needed for a safe intake. For the purpose, an UL was established for vitamin E. This is the highest level of daily nutrient intake that is likely to be at no risk of adverse effects in almost all individuals, while consumption of vitamin E above the UL may be at some risk. The UL for  $\alpha$ -T for adults is 1,000 mg/day of all eight stereoisomers of  $\alpha$ -T (Institute of Medicine, 2000). Council for Responsible Nutrition (CRN) provides two values for a safe oral intake, the No Observed Adverse Effect Level (NOAEL) and the Lowest Observed Adverse Effect Level (LOAEL).

The NOAEL for vitamin E is 1200 IU which was established based on human data; therefore, it requires no safety factor and is considered as safe for long-term use of vitamin E supplements (CRN, 1998). On the other hand, since the LOAEL is the lowest level of intake for which adverse health effects have been reliably reported in humans, a safety factor may be applied to this level for a safe intake. Now, a LOAEL for vitamin E has been not established due to lack of data indicating oral toxicity.

### III. The Effect of Roasting on Vitamin E Stability in Oil Seeds

Vitamin E stability of several oil seeds during roasting has been studied. There are conflicting results to conclude the effect of roasting on vitamin E in oilseeds. Some studies reported a decrease in levels of vitamin E in oils prepared from roasted oilseeds. Shin et al. (1997) noted a progressive decrease in the levels of tocopherols and tocotrienols in rice bran oil that was extruded at increasing temperatures. Yoshida and Takagi (1997) also reported that roasting (160-250 °C) of sesame seeds decreased the levels of tocopherols, sesamol and sesamin. The decrease was greater as roasting temperature increased. Yoshida et al. (2001 and 2002) also reported that roasting in a microwave or electric oven decreased the levels of tocopherols in sesame, soybean and sunflower seed oils.

The degree of decrease in tocopherols was greater as roasting temperature increased. Although roasting caused a gradual decrease of vitamin E, the levels of vitamin E were still remained high. Compared to the original levels, more than 80 and 90% of vitamin E was retained in soybeans and sunflower seeds after 20 min of microwave roasting, respectively (Yoshida et al., 2002). Sesame seeds roasted in an electric oven at 180-220 °C also showed a decrease in the levels of  $\gamma$ - and  $\delta$ -T.  $\gamma$ -T was still present at more than 80% of its original value after roasting for 25 min at 180, 200 and 220 °C (Yoshida et al., 2001). In contrast, Lane et al. (1997) reported that a heat pre-treatment (100-175 °C) of rice bran increased the levels of extracted tocopherols, tocotrienols and other components. A similar phenomenon was observed in heated corn fiber (Moreau et al., 1999).

They suggested that a significant amount of the tocopherols and tocotrienols are bound to proteins or linked to phosphate or phospholipids. Heat breaks these bonds, resulting in an increase of extractable tocopherols. Kim et al. (2002) also noted that  $\alpha$ - and  $\gamma$ -T in rice germ oil gradually increased as roasting temperature (160-180 °C) and time (0-15 m) increased. Yen et al. (1990) observed that the level of  $\gamma$ -T in oils increased by roasting temperatures up to 200 °C over 30 min but fell with higher roasting temperature, resulting in the highest level of  $\gamma$ -T in oils prepared by roasting

at 200-220 °C. Due to variation in roasting conditions (methods, temperature and time), type of samples, and oil extraction methods, it is difficult to compare these observations. Based on the results of the above 59 studies, high retention levels of tocopherols even after severe roasting indicates that tocopherols are highly stable to heating. Mild heating appears to increase the tocopherol levels, possibly due to improvement of oil extraction, especially tocopherols bound to other components in seeds, by heating. Longer roasting of peanut kernels increases oxidative stability of the oils (Cheng et al., 1987; Huang et al., 1988; Chiou et al., 1991).

Chiou (1992) reported that oil prepared after 90 min of roasting was more stable to oxidative changes than oil prepared from peanuts roasted for less time. Megahed (2001) reported that oil stability decreased by microwave roasting due to the formation of oxygenated compounds in oils extracted from roasted peanuts increased with microwave roasting time. Young (Moss and Otten, 1989) found that the optimum process requires approximately five separate heating zones to raise the temperature of the nuts slowly to the roasting temperature. He also found that peanuts roasted at low temperature for longer time have the best flavor and a longer shelf life due to more even roast. Eitenmiller et al (2011) reported the effect of roasting on vitamin E in peanuts. The study showed that microstructure of peanuts was destroyed during roasting, which allows to exposure oil droplets of peanuts to oxygen in the air. This microstructural changes would highly affect oxidative stability of vitamin E in peanuts during further processing and storage.

#### **IV. Storage Stability of Vitamin E in Oil Seeds**

Storage of raw and processed foods can produce significant decreases in vitamin E. Packaging methods and materials, length and temperature of storage, characteristics of the food and its susceptibility to lipid oxidation, availability of other natural or synthetic antioxidants in the food and many other factors affect the stability of vitamin E during storage. Ames (1972) in his early review stated that foods are normally exposed to deleterious factors during processing and storage that can lead to large losses in vitamin E. A relationship between tocopherol stability and lipid oxidation has not been clearly established. Normally, storage losses are related to lipid oxidation occurring in the food and the interaction of vitamin E as an antioxidant. Previous reviews (Ames, 1972; Bauernfeind, 1977; Bramley et al., 2000; Kivimäe and Carpena, 1973) have shown that vitamin E stability in various raw and processed foods is quite good if the food is adequately protected from conditions conducive to lipid oxidation.

Even under thermal abuse, if lipid oxidation is not proceeding, vitamin E can be expected to remain stable. If, however, oxidation is not controlled, rapid and extensive loss of vitamin E will occur. The rate of degradation of vitamin E is dependent on the availability of oxygen, storage temperature, and water activity, as well as on the fat content and composition of the food. Alkali, light, and cations such as  $\text{Fe}^{3+}$  and  $\text{Cu}^{2+}$  accelerate degradation (Bauernfeind, 1980; Widicus and Kirk, 1981).  $\gamma$ -T is a more effective antioxidant than  $\alpha$ -T (Ikeda and Fukuzumi, 1977). Adnan et al. (1981) stated that the effectiveness of tocopherols as antioxidants is not related to their disappearance from the sample and perhaps  $\gamma$ -T in particular, may be regenerated by other hydrogen donors in the system.  $\alpha$ -T is the most stable tocopherol (Lehmann and Slover, 1976).

The rate of tocopherol destruction in oxidizing lipids is dependent on the type of hydroperoxides (Lips, 1957) and increases with increasing unsaturation. Lipoxygenase-catalyzed oxidation of linoleic acid can be accompanied by considerable losses of fat-soluble vitamins. Tappel et al. (1953) showed that  $\alpha$ -T is destroyed during the lipoxygenase-catalysed oxidation of linoleic acid. Gordon and Barimalaa (1989) also reported that vitamin A, D and E are all susceptible to rapid cooxidation at neutral pH in the presence of soybean lipoxygenase. Roozen et al (1994) who studied lipid oxidation in low fat foods reported that the presence of  $\alpha$ -T has no influence on the rate of enzymatic oxidation but inhibits formation of hexanal, a decomposition product.

Chu and Lin (1993) investigated factors affecting the vitamin E content in soybean oils as related to the storage conditions of soybean flour, cracked beans, and flakes with three different thicknesses. Soybean flakes with a thickness of 0.16-0.33 mm showed higher extracted oil yield but a slightly lower tocopherol content of the oils than did cracked beans and thicker bean flakes. Oils from thin flakes were significantly low in tocopherol content compared to those from medium and thick flakes, indicating vitamin E destruction by enzyme action. Storage studies for edible oils (Chu and Lin, 1993; Jaimand and Rezaee, 1995; Shahidi et al., 1997; Goffman and Möllers, 2000; Cinquanta et al., 2001; Okogeri and Tasioula-Margari, 2002) indicated that vitamin E stability in oils is affected by absence of prooxidants, oxygen, metals, high intensity light and other types of irradiation, proper packaging that prevents oxygen transfer into the oil, and proper temperature. Under proper storage of high quality RBD oil, little loss of vitamin E occurs even after 61 prolonged storage.

Storage studies on several tree nuts show that vitamin E content decreases as storage time increases, possibly as a result of its antioxidant function during lipid oxidation (Yao et al., 1992; Erickson et al., 1994; Lavedrine et al., 1997; Lima et al., 1998). Rate of loss is highly affected by storage temperature, the packaging material and availability of oxygen. Proper packaging could improve vitamin E retention in nuts.

Sensi et al. (1991) showed that 94% loss of the initial  $\alpha$ -T (35.4 mg/100g of oil) occurred for almond packaged in metallized film under vacuum while 80% loss under nitrogen during 18 month storage at 20 °C. Tocopherols in unroasted pecans were stable in commercial cellophane packages in air at 0.6°C for 48 weeks. No vitamin E loss was noted in-shelled, roasted, and salted cashew nuts during storage in flexible packaging materials with a lower water vapor permeability rate at 30°C for 1 year (Lima et al., 1998). Lima et al. (1998) reported oscillating changes in tocopherol values of roasted cashew nut during storage time.

This was also observed in raw and roasted pecans (Erickson et al., 1994) and pecans (Yao et al., 1992). Fatty acid composition and geographic origin are also considered to affect tocopherol stability of nuts during storage. Lavedrine et al. (1997) stated that the very high level of polyunsaturated fatty acids (linoleic acid >60%; linolenic acid 10%) in walnuts explained the decrease of tocopherol amounts (about 30%) observed within three months. Such a decrease was not observed in pecans stored at 4°C (Yao et al., 1992), probably because of their low percentage of polyunsaturated fatty acid, linoleic acid (25%) and linolenic acid (1.5%) compared to the high percentage of monounsaturated fatty acids (oleic acid > 60%).

Fourie and Basson (1989) showed that changes in tocopherol content of tree nuts were related to storage stability. The high total tocopherol concentration in almonds accounted for their good storage stability at 33°C and 55% RH for 16 months. Macadamia nuts, with practically no tocopherols, were rancid after 2 months storage (Fourie and Basson, 1989). Chun et al (2005) showed that storage under air remarkable decrease vitamin E levels of roasted peanuts compared to raw peanuts. They reported that peroxide value (meq/kg), a lipid oxidation parameter, of roasted peanuts reached 47 by 12 week storage under air while that for raw peanut was below 2 after 38 week storage. It indicates that roasting processing can significantly decrease vitamin E and storage stabilities of oil seeds like peanuts.

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# Status and Problems of the Myanmar Tourism Industry

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**ABSTRACT:** In this study, we evaluated the following three. 1. The political and economic background of the tourism industry downturn. 2. Underdeveloped tourism infrastructure (Status of Roads, Insufficient transportation, The lack of accommodation) and 3. The lack of tourism policy and awareness. By better utilizing the economic benefits of Myanmar, the development of the tourism sector is expected. Therefore, it must be prepared to increase tourists. But still it shows the lowest percentage of paved roads surrounding the Southeast Asian country (about 13%). Urgent improvements are needed. Domestic aviation infrastructure is very poor circumstances. The improvement of aviation infrastructure is desperately needed. The government also will be expansion of low-cost accommodation, it will need to accommodate the surge of tourists. So that the lodging industry is active, the government should improve the institutional and policy support. In consideration of the cultural influences of the region. In consideration of the environmental impact of the area. Communication between locals and tourists.

**Key words:** Myanmar, Tourism industry, Status and Problems

## I. Introduction

After World War II, many countries have experienced a process of political intervention in the military to the political development (Nordlinger 1977). Myanmar is also one of the countries that were authoritarian military regime system is sustainable. Former army commander newin Ne Win was seized in 1962 by the coup regime. Burmese way of socialism was carried out, and establish a military regime. They were isolate Myanmar from the outside world. The economic policy has failed completely. It was devoted to the world's poorest countries (Wikipedia. 2014. "Newin").

In this study, we evaluated the following three. 1. The political and economic background of the tourism industry downturn. 2. Underdeveloped tourism infrastructure (Status of Roads, Insufficient transportation, The lack of accommodation) and 3. The lack of tourism policy and awareness.

## **II. Detours**

### **2.1 The political and economic background of the tourism industry downturn**

After World War II, many countries have experienced a process of political intervention in the military to the political development (Nordlinger 1977). Myanmar is also one of the countries that were authoritarian military regime system is sustainable. After independent from the United Kingdom, general Aung San's death, and UNu then became the ruler. But political base was vulnerable. So, Buddhism as a state religion was defined. The strategy to rally through religion. And, he directed the politics of Buddhist socialism. As a result, it caused a backlash of ethnic minorities. Former army commander Ne Win was seized in 1962 by the coup regime. Burmese way of socialism was carried out, and establish a military regime. They were isolate Myanmar from the outside world. Colonies at the time was in charge of finance and foreign vessels. They were attributed to the country. In 1963, the state had monopolized the supply and import and export of all products. 26 years dictatorship has been made by Newin. Diplomatic, it took a neutral policy. The economic policy has failed completely. It was devoted to the world's poorest countries (Wikipedia. 2014. "Newin").

The '60s was an economic power such as the Philippines. Producers were losing motivation. After all, product shortages, inflation, black market resulted in the formation (Kim, 2006). Civil War was also a factor worsening the economy. The people demanded democracy. As a result, it took the '88 Democratic Movement 'in 1988. But it was suppressed brutally. Nevertheless, in the 1990 general election, Aung San Suu Kyi of NLD(National League for Democracy) is reap the landslide victory of 80 percent. However, the military regime has refused to accept the results.

In 1993, the National Convention organization, began a constitutional revision. Eventually the new constitution was passed by referendum in 2008. But allowed considerable authority to the military commander-in-chief (Lee, 2011). Transition to a market economy in the late 1980s, sought economic development. However, due to lack of infrastructure and economic problems we did not get the outcomes (Lee, 2011). External assistance (including the economic sanctions of the United States in 1988) also did not receive.

Aung San Suu Kyi began a full-fledged democracy movement. Concern was received from the international community. April 2011, civilian government was established. As a result, Myanmar was expected to have a political and economic and social development. Previously, the most of the industry including the tourism was stagnant. Tourism was also nationalized. The introduction of socialism by the Burmese way lasted a severe economic downturn. In contrast, neighboring Thailand has made the development of the tourism industry brilliant.

Air regard, 1990s, Myanmar Airways had a monopoly (Jeong, 1996). In 2003, about 60,000 or so to visit Myanmar. In 2003 until 2011 was only natural increase. However, in 2012, it surged by more than 100 million people.

In 2011, the civilian government was launched by Tein sein. This was a milestone to shake the foundation of Myanmar. Nevertheless, there was no change in the economy and tourism infrastructure in Myanmar. Indicating that the demand for tourism will increase enormously in the future.

From 2013 to 2020, the expected influx of tourists is as follows(Asian Development Bank Estimates; Ministry of Hotels and Tourism, 2013). Depending on the degree of flowing of the tourists suggests a scenario of three cases. 1. Conservative, 2. Mid-range, 3. High.

For the first time, a steady growth of 13% compared to the previous year. For the second, from 2013 to 2015 growth of 20% per year, from 2016 eased to 15%. For the third time, from 2013 to 2015, annual growth of 40-45%, from 2016 to 2020, easing to 20%. Roughly, it estimated to be 13-45%. Hold the lowest, until the year 2020 is reported to raise the tourists more than doubled. In 2020, it is even possible growth of about 7.5 times. If equipped with the following conditions only, the tourism industry will be able to be sufficiently developed. Changes in perception in the political, economic and tourism policy, and improving infrastructure. In 2011, the launch of the new government is a step in the democratization. Economic level is not high, it has been delayed. Privatization, liberalization of imports, government bond issuance is it. However, it is committed to reform. Privatization, liberalization of imports, government bond issuance is it.

By better utilizing the economic benefits of Myanmar, the development of the tourism sector is expected. Therefore, it must be prepared to increase tourists.

## **2.2 Underdeveloped tourism infrastructure**

Road, automotive, aerospace, port facilities, etc. are included here. Prior to the birth of the new government there was little investment in economic infrastructure.

### **1) Status of Roads**

Most of the things that is built when the British colonial era. So much it has been underdeveloped. However, since the new government, the asphalt road is gradually increasing. Road conditions are also getting better (Central Statistical Organization 2012: 389). But still it shows the lowest percentage of paved roads surrounding the Southeast Asian country. For example, Thailand is known as a tourist country has shown a rate of about 97%. Vietnam 50%, Myanmar is only about 13% (World Bank, World Development Indicators 2013).

Also, narrowing the width of the sidewalk, pedestrians are at risk. There are risks fall

into a sinkhole on the sidewalk during the rainy season. There are many places with no traffic lights and pedestrian crossings. Urgent improvements are needed.

## 2) Insufficient transportation

In 1990, the import of cars was restricted to civilians. Most of the cars were from Japan for free. And very old. It announced the easing in 2011. Dispose of the old car, and was capable of importing a new car. In 2012, The salvage conditions also was abolished (Oh Yoon Ah others 2012: 17). Myanmar has seen a rapid growth in the automotive market. Imports were also increased. As part of the tourism policy, the vehicle license plate is also a trend change to Arabic numbers. However, Traffic is getting worse due to the increase in population and vehicle. In particular, it is severe in the rainy season and rush hour. Taxi denied boarding and unfair charges levied also takes place.

A new road is being built in Yangon. There bridge and the intersection is also increasing. Traffic congestion is expected to gradually improve. Yangon - Nay Pyi Daw - Mandalay highway has also been stretched. It was reduced to 16-8 hours. New road construction should be carried out more actively. There are many bus routes. However, foreigners are uncomfortable using. In addition, the bus is worn out much. In recent, about 384 buses consideration for more than 40 years was replaced by buses made in Korea. It has brought the advanced low-floor buses for long distance. And provide various services. Foreigners receive about 5,000 more. Air conditioning, bottled water, a towel, a toothbrush set are included. Rest areas were also maintenance. It is also Wi-Fi. Departure from Yangon area amounts to about 50. Nay Pyi Daw and Mandalay also often frequent. However, other regions are not good. The inefficient use of short-term visitors. The improvement of land transport is more necessary.

The railway has been operating in the Ministry of Transportation. There is a railway station 858 and Route 37. Yangon and Mandalay connection section is 620km. This is the largest passenger and freight section. Investment is negligible. The maximum speed of 24km, the average is only 12 ~ 14km. (Korea Maritime Institute 2012: 52). There is often the derailment during the rainy season. The passengers of Yangon is 4 million people a day. Bus 85% (about 300 million), 6% of cars (about 24 million), a cab 5%. The train is only 3%, approximately 130,000 people (KOTRA & globalwindow.org. 2011)

For now, long-distance bus is more convenient. According to Railway Ministry, it has set up a foreign investment plans. Require the international technical assistance for the construction of the railway transport system. Yangon's train system is being maintained. Some will be turned over to the private sector (Eleven Myanmar 2014/03/19).

It has the following ports. Yangon, Myeik, Dawei etc. Yangon Port is the only port

for international trade. Management ownership is held by the MPA (Myanmar Port Authority). The main terminal operators subject is MASC and the Asia World Port Management. Yangon Port is a multipurpose wharf for freight and passenger transport. It is composed of three terminals (Korea Maritime Institute 2012: 61).

MIT (Myanmar International Terminals), AWPT (Asia World Port Terminal), BAGW (Bo Aung Gyaw Wharf). The 700 or so passengers a day in Yangon harbor. Almost locals. The freight rather than passenger utilization is high. Attraction is not much, time is also not diverse. A trading port, is responsible for 90% of imports and exports. However, management is lacking. This improvement is needed.

A geographically strategic point of trade. In addition, further increases are expected. Therefore, the construction of an international port is required. The number of air travelers more than other means of transport (Central Statistical Organization 2012: 522). It will be greater importance in the future. Airlines coming to Myanmar follows. Air Asia, Bangkok Airways, India Air, Air China, Myanmar Airways International etc. In the case of Korea, in 2012, Korean Air began direct operations. This was followed by Asiana Airlines. Korean and international tourists increased. In 2002, Yangon international airport terminal expansion project began.

Available airport passengers per year has increased to 270 million (previous 500 thousand people). Mandalay airport facilities were expanded in 2009. 3 million people per year are available. Nay Pyi Daw airport is also planning to operate as an international airport(Korea Maritime Institute 2012: 56). Pursuing an Hantawadi new airport construction. The 80km north-east point of Yangon. The size of the annual passenger handling the 12 million people (AP 2014/03/25). Tourists use a lot of domestic air than the bus takes a long time. Domestic ones are as follows. Yangon Airways, Myanmar Airways UB, Air KBZ, Air Bagan, Asian Wings Airways, Air Mandalay, FMI UB Charter, Golden Myanmar etc. Many ATR 72 aircraft. There are about 72 seats. Yangon - Bagan flight Air is 10 degrees. In 2012, more than one million tourists. Forward more influx of tourists is expected. Domestic aviation infrastructure is very poor circumstances.

Recent coach was a very good infrastructure. Therefore, it is conceivable as an alternative means of transportation. But still there are many unpaved roads (Yangon and other major regions except). The improvement of aviation infrastructure is desperately needed.

### 3) The lack of accommodation

In 2012, a number of hotels across the country is 787, number of rooms was 28 291. In 2013, announced in Tourism parts is the number of 923 hotels, 34 834 rooms. While many hotels in Yangon occurs, a situation lacking an increase in tourists. It is also a lack of business building impact of the economic opening. Hotel currently

under construction are as follows.

Domestic investment: Taw Win Garden Hotel, Hotel My Way, ASAHI Hotel, etc.

Foreign Investment: Shangri-La Hotel (Complex), Traders Square Commercial Complex, Rose Garden Hotel, etc.

Points to be improved in a tourist infrastructure side is as follows. Domestic Airlines price is expensive and hotel accommodation is expensive compared to many other Southeast Asian countries.

Domestic aviation will not be a big problem there is affordable transportation alternative. Expensive hotel cost is a problem. Most new hotels are 4, 5-star. The expansion of low-cost accommodation is insufficient. The government also will be expansion of low-cost accommodation, it will need to accommodate the surge of tourists. It should further enlargement accommodation. There is also need to be invested in foreign countries. In addition, there is a need for proper adjustment of the expensive price.

In the normal hotel rates (2012-2013) of Myanmar,

Five Star Hotel 170 US\$ -250 US\$

Four Star Hotel 120 US\$ -175 US\$

Three Star Hotel 90 US\$ -115 US\$

Two Star Hotel 50 US\$ -75 US\$

One Star Hotel Star Hotel 15 US\$ -35 US\$

Certificated Hotels 10 US\$ -30 US\$ (Ministry of Hotels and Tourism Hotels Directory, Yangon)

5-star Westin Hotels in Bangkok (Deluxe Room) is about \$ 93. Myanmar has more than twice as expensive. Thailand is also high satisfaction with the accommodation. It can be a stumbling block in Myanmar tourism. The increased demand for real estate in the open-door policy. Eventually it led to rising real estate prices. Price adjustment is difficult because there is no competitive. So that the lodging industry is active, the government should improve the institutional and policy support. Build a public hotel, and price adjustments are necessary. Even foreign investment should be aggressively. Hotel services should pay even care. The proportion of hotels in the tourist industry is greater (Burkart and Medlik 1981: 48). Much research is underway for the hotel services. Hotel services include a big impact on tourist satisfaction. If competitiveness between hotels will be concerned to improve service. Price also will maintain a fair price. However, there is no hotel Competitiveness In Myanmar, the price rose more than 2 times the year. The season will have to pay more money, services may be falling. The basic infrastructure will have to be improved.



There is also much improved aging vehicles and services. There is also growing region that can go a long distance buses. However outskirts of Yangon is still a lot of unpaved roads. Bus passengers for a long time is uncomfortable. So it will be better to use a domestic airline. In order to do the following two things should be preceded. Airport facility expansion and new airport construction.

Hotel construction has been much progress. However, it is still lacking. In particular, Bagan is very lacking accommodation. Despite being a popular tourist destination. This lowers the rate at which tourists visit again. Tailored to the needs of tourists, domestic air supply expansion and improvement of accommodation is urgently needed. In addition, the active involvement and commitment of the government is required.

### **2.3 The lack of tourism policy and awareness**

Southeast Asia is a popular tourist area. However, Myanmar has been marginalized. Activation of the tourism industry is imperative. The ratio of incoming tourists in ASEAN countries is as follows. Malaysia top 29%, Thailand 25% 2nd, 16% 3rd Singapore. Myanmar is the lowest with 1.2% (ASEAN Secretariat). Since independent from the United Kingdom, the tourism sector declined by the military dictatorship. In the early 1990s, however, stood the new military government, It went on a tourism development to economic development. The Ministry of Tourism and Hotels occurred in 1992. It was the beginning of infrastructure construction. 1996 has been designated the year to visit Myanmar. It will officially open its doors to tourists. (CSIRD2011). The absence of tourism policy and infrastructure became the obstacle of the tourism industry. Lack of international safeguards and tourism promotion also leads to evasion of tourism. In the case of tourism promotion, low utilization of international networks. In addition, there is a limit to the publicity to sanctions of the West. In order to promote effective, content should be good. Folk village, Traditional Culture, Buddhism exploring historic sites etc. However, Myanmar did not organize tours (Lee Johnson et al. 2011: 162).

The review of immigration and visa was also tricky. There was no gantry compensation to the aircraft cancellations. In the case of foreigners, airline prices relatively high. Accommodation and utility rates are relatively high. Myanmar has a low crime rate, the security is good. However, the unstable political situation, the instability of power supply, Underdeveloped transport infrastructure etc, there were three problems. The hygiene, poor sanitation of drinking water and food, lack notions of hygiene. These problems were threatening the health and safety of tourists. The foreigners reluctant to visit because of these problems.

Awareness of tourism is also a problem. Myanmar people have been heavily

influenced by Buddhism. So it has a good national character. But as long dictatorship and isolation, communication with the outside is not good. Myanmar people seem generally favorable attitude to foreigners. However, the strict emigration takes place when bringing such data. It seems not tolerant to exposure to the outside. Myanmar people are aware that tourists bring help to the economy. The tourist infrastructure and creating jobs is the main concern. Development of tourism brings improvements in income and living standards of local residents. Opportunities for cultural life also increases. Therefore, the high expectations of local residents (Nwenwewin 2011: 18). To do so requires the following three.

1. In consideration of the cultural influences of the region
2. In consideration of the environmental impact of the area
3. communication between locals and tourists (Godongwan, 1988)

### **III. Conclusion**

#### **3.1 The political and economic background of the tourism industry downturn**

After World War II, many countries have experienced a process of political intervention in the military to the political development. Myanmar is also one of the countries that were authoritarian military regime system is sustainable. Former army commander newin Ne Win was seized in 1962 by the coup regime. Burmese way of socialism was carried out, and establish a military regime. They were isolate Myanmar from the outside world. The economic policy has failed completely.

It was devoted to the world's poorest countries.

In 2011, the civilian government was launched by Tein sein. Indicating that the demand for tourism will increase enormously in the future. Roughly, it estimated to be 13-45%. Hold the lowest, until the year 2020 is reported to raise the tourists more than doubled. In 2020, it is even possible growth of about 7.5 times. If equipped with the following conditions only, the tourism industry will be able to be sufficiently developed. Changes in perception in the political, economic and tourism policy, and improving infrastructure. In 2011, the launch of the new government is a step in the democratization. Economic level is not high, it has been delayed. Privatization, liberalization of imports, government bond issuance is it. However, it is committed to reform. Privatization, liberalization of imports, government bond issuance is it. By better utilizing the economic benefits of Myanmar, the development of the tourism sector is expected. Therefore, it must be prepared to increase tourists.

### **3.2 Underdeveloped tourism infrastructure**

#### 1) Status of Roads

Most of the things that is built when the British colonial era. So much it has been underdeveloped. However, since the new government, the asphalt road is gradually increasing. Road conditions are also getting better. But still it shows the lowest percentage of paved roads surrounding the Southeast Asian country (about 13%). Urgent improvements are needed.

#### 2) Insufficient transportation

It announced the easing in 2011. Dispose of the old car, and was capable of importing a new car. Myanmar has seen a rapid growth in the automotive market. Imports were also increased. However, Traffic is getting worse due to the increase in population and vehicle. A new road is being built in Yangon. There bridge and the intersection is also increasing. Traffic congestion is expected to gradually improve. New road construction should be carried out more actively. There are many bus routes. However, foreigners are uncomfortable using. Nay Pyi Daw and Mandalay also often frequent. However, other regions are not good. The inefficient use of short-term visitors. The improvement of land transport is more necessary. There is a railway station 858 and Route 37. Investment is negligible. The maximum speed of 24km, the average is only 12 ~ 14km. The passengers of Yangon is 4 million people a day. The train is only 3%. For now, long-distance bus is more convenient. According to Railway Ministry, it has set up a foreign investment plans. Require the international technical assistance for the construction of the railway transport system. Yangon Port is the only port for international trade. A trading port, is responsible for 90% of imports and exports. However, management is lacking. This improvement is needed. A geographically strategic point of trade. In addition, further increases are expected. Therefore, the construction of an international port is required. The number of air travelers more than other means of transport. It will be greater importance in the future. Nay Pyi Daw airport is also planning to operate as an international airport. Pursuing an Hantawadi new airport construction. The 80km north-east point of Yangon. The size of the annual passenger handling the 12 million people. Tourists use a lot of domestic air than the bus takes a long time. Forward more influx of tourists is expected. Domestic aviation infrastructure is very poor circumstances. The improvement of aviation infrastructure is desperately needed.

#### 3) The lack of accommodation

While many hotels in Yangon occurs, a situation lacking an increase in tourists. It is also a lack of business building impact of the economic opening. Most new hotels

are 4, 5-star. The government also will be expansion of low-cost accommodation, it will need to accommodate the surge of tourists. So that the lodging industry is active, the government should improve the institutional and policy support.

### **3.3 The lack of tourism policy and awareness**

Southeast Asia is a popular tourist area. However, Myanmar has been marginalized. Myanmar is the lowest with 1.2%. The Ministry of Tourism and Hotels occurred in 1992. It was the beginning of infrastructure construction. 1996 has been designated the year to visit Myanmar. It will officially open its doors to tourists. The absence of tourism policy and infrastructure became the obstacle of the tourism industry. Lack of international safeguards and tourism promotion also leads to evasion of tourism. In the case of tourism promotion, low utilization of international networks. In order to promote effective, content should be good. The review of immigration and visa was also tricky. Accommodation and utility rates are relatively high. Myanmar has a low crime rate, the security is good. However, the unstable political situation, the instability of power supply, Underdeveloped transport infrastructure etc, there were three problems. The hygiene, poor sanitation of drinking water and food, lack notions of hygiene. These problems were threatening the health and safety of tourists. Myanmar people have been heavily influenced by Buddhism. So it has a good national character. But as long dictatorship and isolation, communication with the outside is not good. It seems not tolerant to exposure to the outside. Development of tourism brings improvements in income and living standards of local residents. Therefore, the high expectations of local residents. To do so requires the following three

1. In consideration of the cultural influences of the region
2. In consideration of the environmental impact of the area
3. communication between locals and tourists (Godongwan, 1988)

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# **The Influence of Instrumental Activities of Daily Living to the Life Satisfaction of Disabled Elderly in Rural Areas**

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**ABSTRACT:** The purpose of this study was to examine factors affecting life satisfaction of rural elderly people with disabilities. This study has set socio-demographical factors independent variable, IADL as parameter, and life satisfaction index as dependent variable and analyzed their relationships. The research has analyzed the results of the surveys conducted on 310 elderly people with disabilities in G-gun. Statistical analysis were reliability, frequency, percentage, mean, standard deviation, ANOVA, and stepwise multiple regression analysis. The results of this study were as follows: First, the degree of IADL was 3.15(median value), while the degree of life satisfaction was 1.85(median value). Second, The degree of IADL was significantly according to level of disability, receipt of national basic livelihood, monthly living expenses, age, education and region. And life satisfaction was significantly according to education, monthly living expenses, living state, age, receipt of national basic livelihood, level of disability, cause of disability and sex. Third, the variables that affect the life satisfaction was education, IDAL, monthly living expenses, sex, cause of disability, region and religion, which explained about 29% of the total variance.

**Key words:** Instrumental activities of daily living, Life satisfaction, Rural disabled elderly

## **I. Introduction**

Korea entered an aged society in the year 2000. In 2030, people aged 65 and over will account for 24.3% of the total population, with the percentage predicted to reach 40.1% by 2060. Particularly, the super-aged population, where the people aged 85 and over belong to, is expected to rise by 10 times: from 0.7% in 2010 to 10.2% in 2060. (Statistics Korea, 2011)

According to the Ministry of Health and Welfare, the rate of disordered elders with the age of 65 and above had been increased by 2.7% in 2011 from the rate 36.1% in 2008. As such, the disabled population is quickly entering into the rapid aging stage.

Disabled elderly undergo difficult times since they have to carry the doubled burden: physical deformities and health problems due to aging. They require a great

deal of help from society. because, aside from being economically and physically poor and mentally isolated as belonging to the weakest social stratification, the function of family support is also weakened. However, the social welfare policies and services that can help them are lacking. Thus, their problems became political assignment requiring national intervention (Kweon, 2008).

The life satisfaction of disabled elderly can be one significant indication, which imply the degree of achievement of the disabled elderly's welfare. Particularly, understanding the life satisfaction and the factors affecting it can be the most important study topic in terms of making the solution for them.

Meanwhile, together with the hot-issue called 'successful aging', the interest towards the late-life satisfaction of Korean elders and its importance has been constantly increasing. The studies on the life satisfaction of elderly to date involved demographic variables such as gender, spouse, family form, educational background, economical background, and health and showed that self-esteem and support from the family and the society are related with the satisfaction. However, the study on how instrumental activities of daily living (IADL) affect the life satisfaction of elders, which is sought in this study, is lacking.

The studies with the life satisfaction as their topic (Choi, 2010; Choi, 2000; Hahn et al., 1990; Roh & Paik, 2012; Sohn, 2006) mainly studied severely disabled including elderly, multicultural women, and certain handicapped people. Study on the disabled elderly living in rural areas is hardly discussed.

In terms of the national policy, the government classifies 'disabled' and 'elderly' as two distinctive categories and practices different policies to each although the disabled elderly are far weaker than the non-handicapped elders. As a result, disabled elderly can be taken care of only by the single policy among the welfare for the handicapped and the welfare for elderly. Thus, the development of multi-service and policy for the disordered elders is very limited and lacking (Yoon et al., 2000).

Therefore, this study aims to go beyond the conventional study, which focuses on the desire and the life satisfaction of ordinary elders in the rural areas, where more old population can be found compared to the urban areas. It aims to study the disabled elderly who have double weakness –disorder and old age– and figure out how their IADL affects their life satisfaction.

Research questions are as follows:

[question 1] How is the instrumental activities of daily living and the life satisfaction of rural disabled elderly ?

[question 2] How is the instrumental activities of daily living and the life satisfaction of rural disabled elderly different depending on socio-demographic features?

[question 3] How is the relative influence of social-demographic and the instrumental activities of daily living on the life satisfaction of rural disabled elderly ?

## **II. Theological background**

### **2.1 Concept and problems of the disabled elderly**

#### 1) Definition of disorder and concept of the disabled elderly

Disorder is diversely defined based on the social, cultural, economic, and political situations of each country. Recently, there is widespread tendency to define disordered people not from the fragmentary view, which emphasizes the physical deformity, but as people who have constant problems in fulfilling their duties as the member of the society. Such change can be seen in the International Classification of Impairments, Disabilities, and Handicaps (ICIDH) suggested by the World Health Organization (1980). ICIDH defined the disordered as a person who is restricted in daily living and divided into three categories: impairment, disability, and handicap (Kim & Ko, 2004).

Later in ICIDH-2, the definition of disorder, which was a disease or a damage developing as an impairment or a social disadvantage, came to include a rather broader area within the interaction with the environment. In other words, one is not disordered if one can participate in various activities within the interaction with the social environment; thus, disorders can be solved by getting rid of factors that limit the participation and activities and improving the recognition towards disordered people and institutional factor, such as social unification.

Although the definition of disorder has been broadly identified as shown above, the strict meaning of disorder generally follows the legal definition of a respective country. According to Korea's Welfare of Disabled Persons Act, Article 2 (including definition of the handicapped), the disabled person is one who is quite limited in daily living or social life due to a physical or a mental disorder for a long time and applied to the kinds and standards determined by a presidential decree. Based on the same act Article 2 (kinds and standards of disorder), the range of disorder includes 15 disorders from July 2003 to today, 2015.

Meanwhile, the elderly can be defined as 'one with their own unique traits as their physical, mental and social function and ability are decreasing at the last stage of life' and disabled elderly can be defined as the person who experiences disorder and aging at the same time. Literally speaking, disabled elderly is defined as 'elderly with disorder' and the term can be interchanged with the other terms such as aged disabled or elder disabled.

The disabled elderly can be divided into two, based on the cause of disorder: a) 'life-long disabled elderly' who has an innate disorder or acquired disability and reached their last stage of life, and b) 'late-life disabled elderly' who got their disorder after they reached old age. Both exhibit aging problems and handicapped problems in complex form. The entry into the aged society of Korea implies the increase of aged



population. Naturally, the population of the disabled elderly is expected to increase as well and these elders will exhibit various forms of disorder, such as weakening of eyesight and hearing due to aging.

## 2) Problems of disabled elderly

The problems that disabled elderly possess can be classified into the problems of life-long disabled elderly and the problems of late-life disabled elderly. First, life-long disabled elderly carry many psychological problems as they have been suffering from a disorder for a long time even before they reached old age. Moreover, they encounter further difficulties due to lack of preparation for late-life since they face this while having various problems such as trouble among family members and loss of income due to disorder and old age. The problems of late-life disabled elderly who experience physical, hearing, and visual impairment which is likely to appear after the age of 60 shows further problems in terms of adaptation to the environment as it faces the aging problem, such as physical and mental degeneration and change due to aging and change in position within the family and unique physical deformity, the disorder, at the same time.

Eventually, when broadly understanding the disabled elderly as elderly lying in a sickbed, elderly requiring protection, or highly dependent elderly in terms of performance of daily tasks, the disabled elderly appears as a complex form having an aging problem and a handicapped problem at the same time. Aging problem, commonly expressed as "4 pains" of elderly, are a) decrease of income, b) lose social roles, c) sense of alienation, loneliness and absence of role, and d) health depreciation. Moreover, problems coming from disorder make the performance of daily tasks impossible or limited because of limitation of physical function and may disrupt daily living due to negative recognition of non-disordered people. Thus, the problems of disabled elderly can be said to be even more serious than the ones of non-disabled elderly or non-old disabled.

According to the study conducted by Yoon et al (2000), required contents of the service for disabled shall differ based on their age and cause of their disorder, meaning whether they are congenital or acquired. Park and Lee (2001) showed that disabled have their own desires which are mobility, accessibility and adaptation to the community, independent daily skills, normalization and social unification. Kim (1997) also discussed that the range of desire of the disabled is not different from that of non-disabled as they also have desire towards all areas, including clothes, food, shelter, medical service, transportation, education and income.

## **2.2 Current state and characteristics of disabled elderly in rural areas**

As of 2011, estimated population of the disabled is 2,638. Among them, an estimated number of disabled elderly above 65 is 1,014, which accounts for 38% of

the total disabled population (Ministry of Health & Welfare, 2011).

As shown in the statement by Ministry of Health and Welfare, more than 75% of disabled elderly are late-life disabled elderly who got their disorder after 50. Moreover, the occurrence of disorder rises as the age increases. Thus, it is implied that the late-life disorder has more cases than the life-long disorder. Considering that the number of highly aged people increases due to the extension of average life, disabled elderly should be prepared in terms of not only the welfare policy for the handicapped but also the welfare policy for elderly.

For the cause of the disorder, acquired disorder occupies the majority as it accounts for 90.5%, including preventable diseases (55.1%) and accidents (35.4%) (Korea Institute for Health and Social Affairs, 2012). The rate of disabled above 65 accounts for 38.9% in Seoul, 34.5% in metropolitan city, 36.9% in small and medium-sized city and 51.9% in rural areas [eup and myeon]; thus, more than half of the disabled in rural areas are disabled elderly. It can be said that majority of disabled people in rural areas are the disabled elderly and the rate will increase as the aging of population is going on.

### **2.3 IADL (Instrumental Activities of Daily Living)**

Since ADL (Activities of Daily Living) indicates the degree of activity in daily life, it has been used as a significant indication, which measures the health condition of elders or disabled. ADL is divided into ALD, which indicates whether one can independently maintain one's life by performing daily tasks such as taking a bath, wearing clothes, using toilets, moving, excreting and eating, and IADL, which indicates the degree of performance of more complicated functions needed in order to properly function within the society. Thus, IADL includes slightly more complicated activities such as calling, going out and traveling, buying daily necessity, preparing food, doing house chores and manual labor (sewing and nailing), washing clothes, taking medicines, and managing cash.

Regarding the measurement of IADL, Holms et al (2003) said that measuring how well the person performs the social daily tasks implies those maintaining an independent and meaningful life; thus, such performance belongs to the higher level than the physical self-reliance. Since having fluent IADL means that the individual can utilize physical functions and methods of life required to live independently (Cho et al., 2014; Ro & Kim, 1995) knowing the degree of IADL is very helpful in defining the life quality of elders.

### **2.4 Life satisfaction**

#### 1) Concept of life satisfaction

As the concept 'life satisfaction' is multidimensional and there is no certain

definition or regulation of the term, various criteria are used based on the view per field. Thus, the term life satisfaction is often interchanged or used in similar ways with the terms including quality of life, well-being, welfare, life satisfaction, and happiness.

Life satisfaction, rather than being an objective indication such as objective data or value regarding the social situation or condition, is a subjective indication like satisfaction or the sense of well-being that the individual experiences in the course of her life (Albrecht & Devlieger, 1999; Brown & Brown, 2003; Kim, 2003; Kim & Han, 2006; Lee, 2004; Simon, 1990) and is interpreted as a broader meaning than the satisfaction of daily life (Lee, 2010). Moreover, rather than being an absolute concept that is not intervened by the era or space, it is a relative concept that can be changed by the political, economic, and social level of certain society and the values and customs of the members of such society. Therefore, it is needed to evaluate how the individual and the society feel and judge about the environmental factors that surround them from the relative view in order to define the quality of life and such evaluation and definition will forever exhibit subjective and normative aspects (Choi, 2004).

In that sense, Ro and Kim (1995) said that the quality of life deals with the degree and value of life, which are the quality problems of human life, and means the subjective well-being recognized by each individual in physical, mental, social, and economic areas and that it is not easy to clarify, define and measure the its trait as it is abstract and complicated since it is the reaction of the individual towards physical, mental and social factors in daily life.

In this study, the life satisfaction of disabled elderly, based on the various definitions on life satisfaction, is defined as the subjective economic, social and psychological satisfaction, which is felt by the individual and earned through the social activities and participation, and physically and mentally healthy statues where they can conduct such performance under the objective conditions that each disabled elder possesses with the overall area of life.

## 2) Factors influencing the life satisfaction of disabled elderly

Responding to the aged society, studies on elders and service towards them are constantly increasing. However for the disabled elderly, no active study or clinical intervention exists from both sides-welfare for the handicapped and welfare for elderly.

Still, a few studies are dealing with the topic and Kim (1996) reanalyzed the disabled elderly part from the study on the disabled people and showed that more than half of disabled elderly are not satisfied with their current life.

The following are exhibited when studies on variables that affect the life satisfaction of elders, including the disabled elderly are explored. Each study shows different

results in terms of gender. Choi (2010) and Seo and Han (2006) who studied the life satisfaction of Hansen patients claimed that the gender is not meaningful variable that influences the life satisfaction. However, when looking at the study (Jang, 2004; Kwon & Kim, 2012; Lee, 2003) which showed higher life satisfaction of the male elders than the female elders and the other study by Park (2004) and Bae (2002), which demonstrated higher life satisfaction of the female elders than the male elders, life satisfaction of elders seems to be different based on their gender. Such result, which is different life satisfactions of male and female, is assumed to appear due to the factors like existence of spouse and economic ability rather than the gender itself.

When exploring the impacts of age on the life satisfaction, the study claiming that the life satisfaction generally decreases as age gets higher (Kim, 2010; Kim, 2010; Kim, 2007; Kwon & Kim, 2012) is majority while the study claiming that age and life satisfaction are not related (Jang, 2011; Kim, 2002) exists as well.

In terms of health condition and life satisfaction, there is close relationship between them; thus, healthy elders have higher life satisfaction than unhealthy elders (Fisher, 1995; Horgas et al., 1998; Hwang, 2014; Kim & Park, 2006; Korea Institute for Health and Social Affairs, 2012). Based on such result, elders with disorder, regardless of healthiness, shall naturally have lower quality of life since they are restrained in daily life and require other's help.

According to many scholars (Breeze et al., 2004; Kim, 2000; Kim & Kim, 2005; Kim & Park, 2006; Oh & Bak, 2003; Sohn, 2006; Ward, 1979), economic level, as the basic resource for the quality of human life, is significant factor. Furthermore, the poverty of disabled elderly incurs additional cost due to disorder and such incurrence causes economic difficulty.

For the relationship of spouse and life satisfaction, study claiming that elders with spouse have higher life satisfaction than those who without (Kim & Lee, 2009; Kwak, 2011; Lee, 2010) is conventional. Moreover, there is study claiming that elders who maintain normal marriage life with their spouses have higher life satisfaction than those who do not (Cho, 2011; Jang, 2011; Ru, 2009; Yoon & Yoo, 2007).

For the educational background, as it directly and indirectly affects the life satisfaction, especially regarding the social and economic position and income, the higher life satisfaction follows the higher educational background.

However, the study by Chung (2007) showed that the education level does not affect the life satisfaction and Lee (2006) claimed that the education level of physical disabled does not have an impact on the subjective quality of life. Thus, the study on the education level and the life satisfaction is not consistent.

Disability rating is so closely related with the life satisfaction that it is dealt as a major variable that affects the life satisfaction. It is demonstrated that when the rating is higher, the life satisfaction is lower (Kweon & Kim, 2012; Lee, 2006). The study

conducted by Lee (2010) also showed that the rating has a huge impact on the life satisfaction. However, Paik (2003) insisted that the rating does not greatly affect the subjective life satisfaction.

For the relationship between the disabled period and life satisfaction, Song (2014) demonstrated that the life-long disabled whose adaptation period for the disorder is longer showed lower depression level and higher life satisfaction than the late-life disabled.

When synthesizing such results, disabled elderly's personal factors such as gender, age, health condition, economic condition, spouse, education level, disabled rating and disabled period are significant factors that affect their life satisfaction.

## **2.5 Relationship between IADL and the life satisfaction**

IADL is an indication evaluating the health condition together with the chronic diseases. Decline of physical functions due to aging has high correlation with the life satisfaction (Esbensen et al., 2004; Jang, 2011). Palmore (1977) also claimed that the physical and psychological function of the elders have direct impact on the quality of life and that the independence, physical activity condition, self-nursing ability, health condition, stability, positive interaction, interpersonal relationships and meaning of life are significant fields for the quality of life. Furthermore, Padilla and Greant (1985) suggested that the sense of healthiness, independence and ability to maintain normal life in terms of physical aspect and enjoyment, spiritual support, stability and the sense of being able to adjust in terms of psychological aspect as the factors to increase the quality of life.

Min and Hwang (2007) who inspected the impacts of daily activities of elderly on the quality of life claimed that subjective aging, economic level, self-improvement activity, social and cultural activities have a meaningful effect to the quality of life. Sung (1999) and Jeon (2005) said that elders' health condition affects the ADL and health condition and ADL affect their life satisfaction. Lee (2006) also demonstrated that the elderly tend to have higher quality of life when they have higher ADL and IADL and, among them, ADL is related with the quality of life of elders.

Based on the preceded studies regarding ADL and life satisfaction of elderly, ADL and life satisfaction have meaningful correlation and ADL is a predictive factor that influences the life satisfaction.

## **III. Methods**

### **3.1 Subject**

The subject of this study is disabled elderly who are above 55, among the registered 2,940 disabled residing in Gurye-gun, Jeollaman-do. 350 participated in this study and the data of 310 elders were used as the study data, except for the 40 who did not give appropriate response. The study period was held from November 2 to November 30, 2014 and the study used the questionnaire that randomly chose samples. The writer and six investigators who were previously educated the data collection method visited the household with the disabled elderly and conducted the personal interview. The elderly mostly have physical deformity, brain lesions, visual or hearing disorder. Physical deformity, brain lesions, visual and hearing disorder are the forms of disorder that have higher occurrence after the age of 55 (Kreuter et al., 1998). <Table 1> presents a summary of the general characteristics subjects.

<Table 1> General Characteristics Subjects

Variable	Section	<i>n</i>	%
Sex	Male	103	33.2
	Female	207	66.8
Age	55-59	59	19.0
	60~69	72	23.2
	Over 70	179	57.7
Region	Eup	54	17.4
	Myeon	256	82.6
	Christian	77	24.8
Religion	Buddhist	78	25.2
	Catholic	21	6.8
	Others	6	1.9
Education	None	128	41.3
	Uneducated	104	33.5
	Elementary	80	25.8
	Middle school	77	24.8
	High school	32	10.3
Living state	College	17	5.5
	Alone	140	45.2
	With Spouse	107	34.5
	With Children	46	14.8
House	Others	17	5.5
	Own House	281	90.6
	Rent House	13	4.2
Need for cost of living service	Free House	16	5.2
	Unneeded	158	51.0
	Conditional service	23	7.4
Type of disability	Needed	129	41.6
	Physically	206	66.5
	Visual	26	8.4

	Hearing	25	8.1
	Verbal	27	8.7
	Heart	8	2.6
	Brain	15	4.8
	Etc.	3	1.0
Level of disability	Level 1	11	3.5
	Level 2	37	11.9
	Level 3	69	22.3
	Level 4	64	20.6
	Level 5	61	19.7
	Level 6	68	21.9
Cause of disability	Native	69	22.3
	Acquired	241	77.7
Monthly living expenses	< 300,000	57	18.4
	300,000~500,000	131	42.3
	500,000~1,000,000	87	28.1
	1,000,000~1,500,000	26	8.4
	> 1,500,000	9	2.9
Total		310	100.0

### 3.2 Measurement

This research aims to look into the instrumental activities of daily living influencing life satisfaction of rural disability elderly. It was conducted with a questionnaire that was composed of 3 parts. The specific questions of the questionnaires were composed of 10 questions to know the instrumental activities of daily living, 15 questions to look into the life satisfaction, and 12 questions on getting to know the socio-demographic characteristics

#### 1) The instrumental activities of daily living

The criteria for the instrumental activities of daily living is composed of a total of 10 questions, amended and revised according to the study of Baltes (1990). The criteria was the criteria measuring their subjective awareness on the degree of instrumental activities of daily living, including questions like 'always support', 'many support', etc. The reliability of the criteria of the instrumental activities of daily living used in the research showed to be high with Cronbach's  $\alpha=0.92$ .

#### 2) The life satisfaction

The criteria for the life satisfaction is composed of a total of 15 questions, amended and revised according to the Choi(1986). The criteria for life satisfaction was composed 5 item of social satisfaction, 5 item of hope and health, 5 item of loneliness. The degree of the life satisfaction was three-point, like 'yes', 'sometimes', 'no'. The reliability of the criteria of life satisfaction used in the research showed to be high with Cronbach's  $\alpha= 0.86$ .

3) The socio-demographic characteristics

The criteria for socio-demographic characteristics is a total 12 items. that is sex, age, region, religion, education, living state, house, monthly living expenses, receipt of national basic livelihood, type of disability, level of disability and cause of disability.

### **3.3 Data analyzing method**

The statistics process of the research was done using the SPSS Windows 18.0 package program and specific analyzing method is as follows.

1) The frequency and percentile were investigated on the socio-demographic characteristics of the subjects of the investigation.

2) The mean and standard deviation were acquired to investigate into the instrumental activities of daily living and the life satisfaction of the rural disabled elderly.

3) The one-way ANOVA was conducted to look into the instrumental activities of daily living and the life satisfaction according to the socio-demographic characteristics of the subjects.

4) The stepwise multiful regression analysis is performed for the relative influence of the instrumental activities of daily living and the socio-demographical characteristics of the subjects.

## **IV. Results**

### **4.1 The degree of instrumental activities of daily living and the life satisfaction of the rural disabled elderly.**

The degree of instrumental activities of daily living and the life satisfaction of the rural disabled elderly who are the subjects of the investigation are found in <Table 2>.

As shown in the table, the instrumental activities of daily living of the rural disabled elderly who are the subjects of the investigation showed a high score, the average of 3.15, compared to the median, which is 3 points. Specifically, the average score for the question, 'eating' was 3.47, measured as the highest whereas the question, 'running a house' showed the lowest score of 2.66. Such result can be interpreted that the activities that are closer to self-maintaining activities are less difficult while the activities, that require mobility or social adaptation, such as buying daily necessity are more difficult thus have relatively lower values since IADL is accomplished through experience and learning.



Nextly, the level of the life satisfaction of the rural disabled elderly who are the subjects of the investigation showed a low score, the average of 1.85, compared to the median, which is 2 points. Specifically, the average score for the question, 'loneliness & Isolation' was 2.05, measured as highest whereas the question, 'wish of life, sprit, health' showed the lowest score of 1.67. Similarly, disabled elderly residing in rural area have high sense of alienation and loneliness and have lower subjective satisfaction towards the quality of life, as they face problems with hope, liveliness and health, while have pretty high IADL. Thus, it demonstrates the lack of emotional and psychological support in rural areas and implies the desperate need of it.

<Table 2> The Level of IADL and Life Satisfaction in Rural Elderly

Section		Min.	Max.	M	SD
IADL	Bathing	1.00	5.00	3.17	1.01
	Clothing	1.00	4.00	3.28	.93
	Eating	1.00	4.00	3.47	.80
	Sitting & Running	1.00	5.00	3.24	1.01
	Excretioning	1.00	5.00	3.46	.82
	Using bathroom	1.00	5.00	3.44	.81
	Buying necessities	1.00	5.00	2.90	1.26
	Make a call Phone,	1.00	5.00	3.21	1.19
	Take a bus	1.00	5.00	2.72	1.38
	Running a house	1.00	5.00	2.66	1.30
	Total	1.00	5.00	3.15	.84
Life satisfaction	Satisfaction of social relation	1.00	3.00	1.95	.52
	Wish of life,sprit,health	1.00	3.00	1.67	.48
	Loneliness & Isolation	1.00	3.00	2.05	.48
	Total	1.00	2.93	1.85	.37

#### **4.2 The instrumental activities of daily living and life satisfaction according to the socio-demographic characteristics**

ANOVA was conducted to look into the instrumental activities of daily living and the life satisfaction according to the socio-demographic characteristics of the rural disabled elderly, and the results are as show in the <Table 3> below.

As shown in the table, the instrumental activities of daily living according to the socio-demographic characteristics of the rural disabled elderly, level of disability

( $F=15.78$ ), receipt of national basic livelihood( $t=9.34$ ), monthly living expenses( $t=4.96$ ) showed significant differences within the group at  $p<.001$ , while age( $F=2.59$ ), education( $F=2.45$ ), region( $t=-2.15$ ) at  $p<.05$ . In other words, the group with the level of disability showed a higher 5-6 level group than 1-2 level group, the group with receipt of national basic livelihood than the group without, the group with monthly average cost of living above 0.5 million won than the group with a lower cost of living, the group with age 60-69 group than the group 70, the group with education background over high school graduate than the group without, the group with region of eup than the group myeon.

Disability rating of disabled elderly, as a significant variable that affects IADL shows identical results with the preceded ones (Han, 2011; Kim, 2009). The result of this study, which claims that the IADL of disabled elderly residing in 'myeon' in terms of residence, is probably because 'eup' is more likely to have hospital, welfare facility, and entertaining facility while 'myeon' has lower probability to have such facilities and thus has more limitation on the life of disabled elderly residing in that area.

Nextly, life satisfaction according to the socio-demographic characteristics of the rural disability elderly, education ( $F=16.13$ ), monthly living expenses( $t=14.41$ ), Living state ( $F=8.03$ ), age ( $F=7.28$ ), Receipt of national basic livelihood ( $t=6.99$ ) showed significant differences within the group at  $p<.001$ , while level of disability ( $t=3.20$ ) at  $p<.01$ , and cause of disability ( $t=-2.87$ ), sex( $t=-2.15$ ) at  $p<.05$ . In other words, the group with education background over high school graduate than the group below middle school graduate, the group with monthly average cost of living above 0.5 million won than the group with a lower cost of living, the group with age below 59 group than the group over 60, the group without receipt of national basic livelihood than the group with, the group with the 5-6 level of disability than below 4 level group, the group with native of disability than the group without, the group with men than the group women showed higher life satisfaction.

Likewise, female disabled living in rural area showed lower quality of life and higher sense of alienation and loneliness than male disabled. As the correlation of the disability rating and the quality of life is proved and the health condition is noticed as the most effective factor to the life satisfaction in the studies whose subject is non-disabled elderly, the elderly with higher rating can be interpreted to have better health condition, thus, have better quality of life. Moreover, the result of this study, that says higher economic level brings higher quality of life, is identical with the study results of Kim(2000), Kim(1996), Sohn(2006) and Yang and Hong(2002).

<Table 3> IADL and Life Satisfaction by Variables

Variable	Category	IADL			Life Satisfaction			
		N	M(SD)	t/F	Dun.	M(SD)	t/F	Dun.
Sex	Male	103	3.22(.77)	-.95		1.92(.42)	-2.15*	A
	Female	207	3.12(.87)			1.82(.33)		B
Age (Yr)	55-59	59	3.22(.99)	2.59*	AB	2.01(.51)	7.28***	A
	60-69	72	3.32(.68)		A	1.84(.38)		B
	Over 70	179	3.07(.83)		B	1.85(.37)		B
Region	Eup	54	3.38(.75)	-2.15*	A	1.87(.38)	-1.25	
	Myeon	256	3.11(.85)		B	1.80(.38)		
Religion	Yes	182	3.14(.91)	1.45		1.91(.23)	-1.62	
	No	128	3.11(.94)			1.84(.37)		
Education	Uneducated	104	3.05(.86)	2.45*	B	1.70(.30)	16.13***	B
	Elementary	80	3.20(.72)		AB	1.82(.25)		B
	Middle School	77	3.15(.89)		B	1.94(.35)		AB
	Over High School	49	3.38(.83)		A	2.16(.49)		A
Living state	Alone	140	3.16(.74)	.23		1.78(.30)	8.03***	B
	With Spouse	107	3.12(.92)			1.87(.39)		B
	With Children	63	3.23(.91)			1.92(.35)		A
House	Own	281	3.20(.86)	-.15		1.86(.37)	-1.40	
	Rent	29	3.15(.53)			1.76(.29)		
Monthly living expenses	< 500,000	131	3.24(.70)	4.96***	B	1.78(.30)	14.41***	
	≥ 500,000	122	3.41(.66)		A	2.12(.41)		
Need for cost of living service	Yes	152	2.94(.52)	9.34***	B	1.79(.31)	6.99***	B
	No	158	3.16(.40)		A	1.93(.35)		A
Type of disability	Physically	206	3.11(.88)	2.92		1.86(.37)	-.50	
	The Others	104	3.28(.39)			1.80(.30)		
Level of disability	Level 1-2	48	2.34(.99)	15.78**	C	1.72(.35)	3.20**	B
	Level 3-4	133	3.06(.78)		B	1.83(.34)		B
	Level 5-6	129	3.46(.06)		*	A		1.92(.37)
Cause of disability	Native	69	3.17(.76)	-.17		1.96(.37)	-2.87*	A
	Acquired	241	3.15(.51)			1.84(.36)		B

\* p<.05, \*\*\* P<.001

### 4.3 The influences of the life satisfaction according to the factors.

A stepwise multiple regression analysis was conducted to look into the relative influence of the life satisfaction of the rural disability elderly who are the subjects of the investigation.

Prior to conducting the stepwise multiple regression analysis, the Durbin-Watson coefficient was calculated through the residual analysis, and the process of regression analysis result showed that all Durbin-Watson coefficients were near 2, saying that there is no autocorrelation found among residuals. Furthermore, the correlation

between the independent variables is  $0.012 < r < -0.573$ , confirming that there were no linear relationship, and when VIF is over 10 within the range of  $1.39 < VIF < 1.97$ , the problem of multicollinearity was found. Hence, the regression analysis was conducted. Aside from the variables that underwent the correlation analysis, some nominal variables were converted to dummy variables and were used as the variables for the regression analysis.

As shown in the <Table 4> the influences of the variables on the life satisfaction of the subjects of investigation showed to have the explanation power of 26%(Step I). Among these, the education ( $\beta=0.369$ ), level of disability ( $\beta=0.178$ ), cause of disability ( $\beta=0.138$ ), monthly living expenses ( $\beta=0.128$ ), sex ( $\beta=0.127$ ), religion ( $\beta=0.109$ ). In other words, high level of education and level of disability, acquired of disability, better monthly living expenses, men and having religion result to higher level of life satisfaction

Step II (obtained by adding the instrumental activities of daily living control to Step I) showed that the education ( $\beta=0.360$ ), IADL( $\beta=.190$ ), monthly living expenses ( $\beta =0.162$ ), sex ( $\beta=0.134$ ), cause of disability ( $\beta=0.127$ ), region ( $\beta=0.113$ ), religion ( $\beta =0.104$ ) to have the explanation power of 29%. In other words, high level of education, better of the instrumental activities of daily living, better monthly living expenses, men, native of disability, region of Eup and having religion result to higher level of life satisfaction. The socio-demographic variable was first inputted to determine the explanatory power of 26%. Next the instrumental activities of daily living added and showed the explanatory power of 29%. This indicated that the instrumental activities of daily living was affected by life satisfaction of the rural disability elderly.

According to the result of this study, the education level and the level of monthly living expense are variables directly linked with economical aspect and are deeply related with the life satisfaction of elders. Moreover, the increase of life satisfaction of inborn disorder can be interpreted as an adaptation to the environment and physical changes as they have spent more time as the handicapped although they may have more disorders and negative health condition due to their age. This interpretation has same with the preceded studies (Kim & Ko, 2004; Lee, 2003; Kweon & Kim, 2012; Song, 2014) which claimed that late-life disabled with disorder that are acquired later further suffer due to new problems such as weakening of ego-function as they encounter serious damage or diseases, excessive dependence and degeneration. Moreover, the result that says ADL of disabled elderly is deeply related with their quality of life is identical with the preceded studies (Hahn, 2011; Lee, 2006; Moon, 2008). Consistent results like this demonstrate the generalized theory that indicates that ADL, as a significant indication of health condition of elders, is deeply related with the quality of life.

<Table 4> Variables Influencing on Life Satisfaction

(N=310)

Variables	Step I		Step II	
	B	$\beta$	B	$\beta$
Sex dummy(male=1)	.099	.127*	.104	.134*
Age	-.003	-.007	-.011	-.023
Region dummy(town=1)	.099	.103	.109	.113*
Religion dummy(yes=1)	.081	.109*	.077	.104*
Education	.113	.369***	.111	.360***
Living state dummy(alone=1)	-.025	-.034	-.019	-.026
House dummy(own=1)	.077	.061	.087	.070
Monthly living expenses	.048	.128*	.061	.162*
Need for cost of living service	-.048	-.066	-.035	-.048
dummy(yes=1)				
Type of disability dummy(physically=1)	-.074	-.056	-.078	-.060
Level of disability	.040	.178 **	.018	.072
Cause of disability dummy(native=1)	.121	.138*	.111	.127*
IADL			.083	.190**
$\Delta R^2$				.03
$R^2$		.26		.29
F		8.72***		9.23***

\* p<.05, \*\* p<.01, \*\*\* p<.001

## V. Summary and Conclusion

### 5.1 summary

The rural area in Korea entered an aged society. Disabled elderly undergo difficult times since they have to carry the doubled burden that is physical deformities and

health problems. Therefore, this study aims to go beyond the conventional study, which focuses on the desire and the life satisfaction of ordinary elders in the rural areas, where more old population can be found compared to the urban areas. It aims to study the disabled elderly who have double weakness- disorder and old age -and figure out how their IADL affects their life satisfaction, this research aimed to provide basic information to increase the quality of life along with the understanding of the rural disabled elderly.

For this, the data was collected against 301 rural disabled elderly at the age of at least 55, residing in G Cities situated at the Eastern part of Jeollanam-do. The gathered data were statistically analyzed through reliability, frequency, percentile, average, standard deviation, t-test, ANOVA, correlation analysis and stepwise multiple regression analysis.

The research results found through the research are summarized as below:

First, the score for instrumental activities of daily living was found to be relative high with the average of 3.15, which is higher than the median at 3. And the score for life satisfaction was found to be relative low with the average of 1.85, which is lower than the median at 2.

Second, the instrumental activities of daily living according to the socio-demographic characteristics of rural disabled elderly, level of disability, receipt of national basic livelihood, monthly living expenses showed significant differences within the group at  $p < .001$ , while age, education, region at  $p < .05$ . In other words, the group with the level of disability showed a higher 5-6 level group than 1-2 level group, the group with receipt of national basic livelihood than the group without, the group with monthly average cost of living above 0.5 million won than the group with a lower cost of living, the group with age 60-69 group than the group 70, the group with education background over high school graduate than the group without, the group with region of eup than the group myeon.

Meanwhile, life satisfaction according to the socio-demographic characteristics of the rural disability elderly, education, monthly living expenses, living state, age, receipt of national basic livelihood showed significant differences within the group at  $p < .001$ , while level of disability at  $p < .01$ , and cause of disability, sex at  $p < .05$ . In other words, the group with education background over high school graduate than the group below middle school graduate, the group with monthly average cost of living above 0.5 million won than the group with a lower cost of living, the group with age below 59 group than the group over 60, the group without receipt of national basic livelihood than the group with, the group with the 5-6 level of disability than below 4 level group, the group with native of disability than the group without, the group with men than the group women showed higher life satisfaction.

Third, the relative influences of the factors of the life satisfaction of rural disabled

elderly (socio-demographic factors, level of the instrumental activities of daily living) showed 29% explanation power. The socio-demographic variable was first inputted to determine the explanatory power of 26%. Next the instrumental activities of daily living added and showed the explanatory power of 29%. This indicated that the instrumental activities of daily living was affected by life satisfaction to increase the explanatory power of 3%.

## **5.2 Conclusion and suggestion**

As shown in the result of this study, the degree of IADL of rural disabled elderly is deeply related with their life satisfaction.

The following are suggestions to increase their life satisfaction and IADL:

First of all, disabled elderly in rural areas are a very inadequate group, which has general aging problems and handicapped problems and geological problem as residing in rural areas; thus, needing attention and protection of the society. As the occurrence of disabled elderly due to aging is recognized as unavoidable social problem, the policy reducing such occurrence in terms of prevention should be executed rather than focusing on the treatment. Moreover, government should prepare mid or long-term policy in order to form the social condition and environment friendly to the disabled elderly and improve their quality of life. As one example of it, local community, including the local government, should develop the customized problem which can be activated based on the condition of the area by understanding the desire of disabled elderly.

Second, the personal service program that minimizes the problem and desire of disabled elderly by clearly defining them should be prepared. In other words, differentiated policy and service is required since life-long disabled elderly, who have inborn disorder, and late-life disabled elderly who gained their disorder from aging must have different characteristics, desire and problems. 둘

Third, when looking at the result that says the acquired disorder, rather than inborn disorder, lowers the life satisfaction of elders, the hardship of undergoing two burdens, aging and disorder, at the same time is deeply related with adaptation. Thus, service or application program, which shall ease the adaptation to the environment, can be executed to the late-life disabled elderly.

Fourth, the way to practice the welfare for the rural disabled elderly is the connection between the facilities and institutions within the local community. In short, since they possess complicated problems, it will be effective when providing the unified program by connecting the various institutions and facilities such as medical institution, disabled welfare institution, elderly welfare institution, counseling facility and health family support center.

Fifth, when looking at the influence of the variables such as education level and

monthly living expenses, it can be known that the disabled elderly have higher life satisfaction when they have higher social and economic position. Thus, in order to help them escape from poverty, which lowers their life satisfaction, access to the social security system should be eased; especially, old-age social security system should be done considering that they are disabled elderly.

Sixth, as this study claims that IADL has deep correlation with the life satisfaction of the disabled elderly, the degree of performance due to disorder has more impact than the cause and degree of disorder. Hence, a rehabilitation program that enables the consistence diagnosis and treatment by activating the medical and health service that helps their daily living should be executed. Therefore, it can be insisted that the installation of medical institutions within the community is desperate for the rural areas with the huge number of elderly. Moreover, improving the structure within the household so that they can perform the minimum daily tasks and have fluent ADL by strengthening the care service and adjusting the height of kitchen furniture should minimize the limitation due to disorder.

The limitation of this study is as follows:

Since this study limited its subject as the disabled elderly residing in Gurye-gun located in Jeollanam-do, it is hard to generalize the result of this study. Moreover, although the subject was randomly selected, intellectual disabled, or elders with mental illness who do not have good recognition state were excluded from the survey; so it is not appropriate to apply this result to the entire disabled elderly. Furthermore, this study does not divide its subject into two categories- life-long disabled elderly and late-life disabled elderly. However, it is significant since its subject, the disabled elderly living in rural area, has few studies and explores their ADL and how such ability contributes to their life satisfaction.

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# Implementation and Status of Trade Facilitation in ASEAN

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**ABSTRACT:** Trade facilitation is regarded as an important enabler in the growth of international trade and an important driver of economic integration. The implementation of trade facilitation is based on four fundamental principles: transparency, simplification, harmonization, and standardization. To achieve these principles, full cooperation between government authorities and with the business community is essential. Since 1967, ASEAN has taken measures for regional economic integration. In 2007, sixteen member countries of ASEAN adopted the AEC Blueprint for the establishment of the ASEAN Economic Community (AEC) by 2015, and as scheduled, the ACE was created as a legal entity on December 31, 2015. This paper studies the concepts, benefits and costs, implementation of trade facilitation and its status in ASEAN.

**Key words.** Trade Facilitation, ASEAN, AEC, Economic Integration

## I. Introduction

Under current border procedures, the average transaction involves 60 or more distinct trade procedures, which target goods, the vehicles that move them or their operators.<sup>1)</sup> control objects include revenue collection, safety and security, environment and health, consumer protection, and trade policy. According to World Bank, in 2014, export transactions involved 2-11 documents and 6-86 days, whereas import transactions involved 2-17 documents and 4-130 days.<sup>2)</sup>

Trade facilitation (TF) seeks to remedy trade transaction costs that are wasteful and undesirable for both business and government. Proponents of trade facilitation argue that its can increase business competitiveness as well as improve efficiency and control.

Trade facilitation has emerged as a key factor for international trade efficiency and the economic development of countries. The issues related to trade facilitation have

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1) Andrew Grainger, "Customs and Trade Facilitation: From Concepts to Implementa- tion", *World Customs Journal*, Volume 2, Number 1, 2009, pp.18-20.

2) WTO, "Trade Facilitation Agreement : Easing the flow of goods across borders", 2014.

always raised critical discussions and negotiations about trade policies in both international and regional context.

World Trade Organization (WTO) has initiated the global framework for trade facilitation. In December 2013, WTO members concluded negotiations on a Trade Facilitation Agreement at the Bali Ministerial Conference, and adopted on 27 November 2014 a Protocol of Amendment to insert the new Agreement into Annex 1A of the WTO Agreement.

The Trade Facilitation Agreement contains provisions for expediting the movement, release and clearance of goods, including goods in transit. It also sets out measures for effective cooperation between customs and other appropriate authorities on trade facilitation and customs compliance issues. It further contains provisions for technical assistance and capacity building in this area.<sup>3)</sup>

The Agreement is the first multilateral trade agreement to be concluded since the WTO was established 20 years ago. It will enter into force once two-thirds of members have completed their domestic ratification process. The Agreement is expected to reduce total trade costs by more than 14 per cent for low-income countries and more than 13 per cent for upper middle-income countries by streamlining the flow of trade across borders.<sup>4)</sup>

The Association of Southeast Asian Nations (ASEAN) was established in 1967, and ASEAN members declared in 2003 that the ASEAN Economic Community (AEC) shall be the goal of regional economic integration by 2015. As scheduled, the ACE became a legal entity on December 31, 2015. It is expected to be a unified economic community in a region more populous and diverse than the European Union or North America, and with hopes of competing with China and India.

The AEC, is already a reality and many of its fundamentals have been applied in the region such as removal of tariff barriers and visa restrictions among others. It has also led to greater political and cultural cooperation. The AEC is arguably the most ambitious economic integration program in the developing world.

But there is a long way to go before the AEC becomes fully functional. The implementation of the AEC is increasingly uphill. Much remains to be done and the region faces many challenges in finishing. Intraregional trade has remained at around 24 percent of ASEAN's total global trade for the last decade, far lower than 60 percent in the European Union.. The AEC is a process.<sup>5)</sup>

Therefore, this paper takes a closer look at the concepts, benefits and implementation and its status in ASEAN.

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3) [https://www.wto.org/english/tratop\\_e/tradfa\\_e/tradfa\\_e.htm](https://www.wto.org/english/tratop_e/tradfa_e/tradfa_e.htm)

4) WTO, "Trade Facilitation Agreement : Easing the flow of goods across borders", 2014.

5) The Korea Herald, "ASEAN creates economic community", December 22, 2015.

## II. Concepts of Trade Facilitation

With various definitions by international organizations like WTO, UN/EDIFACT, ICC, WCO, OECD and APEC, trade facilitation can be defined as “the simplification, standardization, harmonization, and modernization of international trade procedures covering the activities, practices and formalities involved in collecting, presenting, communicating and processing data, and other information required for the movement of goods and payment in international trade.”

Shortly, trade facilitation can be understood as the ‘plumbing of international trade’, because it emphasizes on the transparent and efficient implementation of trade rules and regulations.<sup>6)</sup> It seeks to improve the trade environment and reduce trade transaction costs at the interface between business and government.

Meanwhile, trade facilitation frequently refers to all measures that can be taken to facilitate and ease trade flows. It covers all types of non-tariff measures to trade such as technical standard, sanitary and phytosanitary (SPS) and environmental-related regulation, as well as other domestic business climate related regulations and all types of infrastructure issues.

To a large degree, trade facilitation can be viewed as an extension of the efforts to liberalize international trade. As history shows, trade facilitation is not a new phenomenon. For instance, many medieval European market towns would publicly display the units and measures.

Trade facilitation plays an important role in promoting international trade. Both governments and traders are capable of acquiring significant benefits from trade facilitation, as shown in Table 1.

Table 1. Benefits of Trade Facilitation to Governments and Traders

Government	Trader
<ul style="list-style-type: none"> <li>- Increased effectiveness of control methods</li> <li>- More efficient deployment of resources</li> <li>- Correct revenue yields</li> <li>- Improved trader compliance</li> <li>- Encouragement of foreign investment</li> <li>- Accelerated economic development</li> </ul>	<ul style="list-style-type: none"> <li>- Lower costs and reduced delays</li> <li>- Faster customs clearance and release through predictable official intervention</li> <li>- Simpler commercial framework for doing both domestic and international trade</li> <li>- Enhanced competitiveness</li> </ul>

Source: UN/ECE (2002)

6) ADB and ESCAP, *Designing and implementing trade facilitation in Asia and the Pacific*, Mandaluyong City, Philippines: Asian Development Bank, 2013.



### III. Implementation of Trade Facilitation

The implementation of trade facilitation is based on four fundamental principles: transparency, simplification, harmonization, and standardization. To achieve these principles, full cooperation between government authorities and with the business community is essential (See Table 2).<sup>7)</sup>

Table 2. Four Principles of Trade Facilitation

principles	details
<b>Transparency</b>	<ul style="list-style-type: none"> <li>- promote the openness and accountability of a government's and administration's actions.</li> <li>- entail the disclosure of information in a way that the public can readily access and use it.</li> <li>- include laws, regulations and administrative decisions of general application, budgets, procurement decisions, etc.</li> </ul>
<b>Simplification</b>	<ul style="list-style-type: none"> <li>- the process of eliminating all unnecessary elements and duplications in trade formalities, processes and procedures.</li> <li>- should be based on an analysis of the current, "As-Is", situation.</li> </ul>
<b>Harmonization</b>	<ul style="list-style-type: none"> <li>- the alignment of national procedures, operations and documents with international conventions, standards and practices.</li> <li>- adopting and implementing the same standards as partner countries, either as part of a regional integration process or as a result of business decisions.</li> </ul>
<b>Standardization</b>	<ul style="list-style-type: none"> <li>- the process of developing formats for practices and procedures, documents and information internationally agreed by various parties.</li> <li>- Standards are then used to align and, eventually, harmonize practices and methods.</li> </ul>

Source : UN/ECE (2012)

Trade facilitation is to take place at three levels: the national, regional and international level. While standards and agreements are developed and agreed at the regional and international level, the operational implementation of trade facilitation measures including these standards and agreements takes place at the national level.

Many trade facilitation measures require a reform and modernization process. It involves both government and private sector, and depends on an enabling environment that is built upon strong political support, professional program management and change management capabilities (See Table 3).

7) UN/ECE, "The Trade Facilitation Implementation Guide: A tool for simplifying cross-border trade." <http://tfig.unece.org/tool-simplifying-crossborder-trade.htm>

Table 3. Five Dimensions of Trade Facilitation

<b>dimensions</b>	<b>details</b>
<b>Legal</b>	- regulatory reforms aiming at a clear, concise, transparent legal framework
<b>Organization</b>	- institutional development, private sector consultation, and inter-agency cooperation
<b>Technology</b>	- introduction and modernization of infrastructure for electronic processing of trade documents and related data exchange, including IT systems
<b>Processes</b>	- changes in business processes and procedures
<b>People</b>	- capacity building of implementing managers and officers

Source : UN/ECE (2012)

Each of developing countries at different development stages has individual national priorities and operates in different legal and administrative environments. For these reasons, each country needs to determine the trade facilitation measures they want to implement, the scope of each measure, and in which order they should be implemented.

Various trade facilitation indicators and modeling approaches are suggested by World Bank, OECD, UNESCAP, WCO, etc., which help managing the reform process. They offer policy makers more information about what type of trade facilitation efforts might provide the largest gains in terms of increasing trade flows for them.<sup>8)</sup>

The most commonly used indicators tend to focus on the following aspects: (1) required time for key procedures or processes, such as release of goods at border stations, (2) costs, usually reflected as transport or freight costs, (3) number of documents, such as the documents required for clearing goods, (4) availability and quality of transport infrastructure and services, (5) prevalence of rule and law or level of corruption.

## **IV. Status of Trade Facilitation in ACE**

### **4.1 History of ASEAN to AEC**

The Association of Southeast Asian Nations (ASEAN) is a political and economic

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8) John S. Wilson, Catherine L. Mann, and Tsunehiro Otsuki, "Trade Facilitation and Economic Development: Measuring the Impact", Policy Research Working Paper 2988, World Bank Trade & Development Research Group, March 2003.

organization of ten Southeast Asian countries. It was established on 8 August 1967 in Bangkok, Thailand by 6 founding fathers: Indonesia, Malaysia, the Philippines, Singapore, and Thailand. Its membership has expanded to include Brunei on 7 January 1984, Vietnam on 28 July 1995, Laos and Myanmar on 23 July 1997, and Cambodia on 30 April 1999, respectively.

The ASEAN Free Trade Area (AFTA) is a trade bloc agreement signed in Singapore on 28 January 1992, in order to increase ASEAN's competitive edge as a production base in the world market through the elimination of tariffs and non-tariff barriers within ASEAN, and to attract more foreign direct investment to ASEAN.<sup>9)</sup>

Initially, the AFTA focused on a reduction of tariffs by implementing a Common Effective Preferential Tariff (CEPT) scheme that can be subsumed under a broad definition of trade facilitation. Unlike the EU, each ASEAN member may impose tariffs on goods entering from outside ASEAN based on its national schedules. However, for goods originating within ASEAN, ASEAN members are to apply a tariff rate of 0-5%.

At the 9th ASEAN Summit on 7 October 2003 in Bali, ASEAN members declared that the ASEAN Economic Community (AEC) shall be the goal of regional economic integration by 2015. AEC is expected to "establish ASEAN as a single market and production base with the goal of making ASEAN more dynamic and competitive."

Regional integration and connectivity are to be accelerated through facilitating the movement of skilled persons, capital and goods, lowering barriers to trade and strengthening the institutional mechanisms of ASEAN. There are four pillars to the AEC: (i) market and production base, (ii) competitive economic region, (iii) equitable economic development, and (iv) integration into the global economy. Shortly, it will transform ASEAN into a region with free movement of goods, services, investment, skilled labour, and capital.<sup>10)</sup>

At the 13th ASEAN Summit on 20 November 2007 in Singapore, the AEC Blueprint was further adopted for the establishment of the AEC from 2008 to 2015. It was expected as a comprehensive master plan of the AEC with clear timelines and targets.

In 2009, ASEAN adopted the ASEAN Trade in Goods Agreement (ATIGA), which entered into force on 17 May 2010. The ATIGA consolidates and streamlines all the provisions of the CEPT-AFTA and economic cooperation agreements into a single legal instrument. It also comprises elements such as the removal of non-tariff barriers (NTBs), rules of origin, standards and conformance, sanitary and phytosanitary measures, customs and trade facilitation.

The ATIGA is a significant milestone with regard to trade liberalization and trade facilitation to improve the free flow of goods within ASEAN. The provisions on NTBs

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9) [https://en.wikipedia.org/wiki/ASEAN\\_Free\\_Trade\\_Area](https://en.wikipedia.org/wiki/ASEAN_Free_Trade_Area)

10) ASEAN Secretariat, "Thinking Globally, Prospering Regionally: ASEAN Economic Community 2015", April 2014. <http://www.asean.org/communities/asean-economic-community>.

have been enhanced further by through the codification of measures and the establishment of mechanism to monitor the elimination of NTBs.<sup>11)</sup>

Besides, the ATIGA contains broad provisions relevant to trade facilitation. It includes provisions on (i) fees and charges connected with import and export, (ii) publication and administration of trade regulations, and (iii) the ASEAN Trade Repository (ATR).<sup>12)</sup> It also contains specific chapters on trade facilitation and customs.

The chapter on trade facilitation calls upon ASEAN members to develop and implement a comprehensive Trade Facilitation Work Programme for "clear targets and timelines of implementation necessary for creating a consistent, transparent, and predictable environment for international trade transactions..."

It sets out actions and measures to be implemented at both ASEAN and national levels, in the various areas of customs procedures, trade regulations and procedures, standards and conformance, sanitary and phytosanitary measures, and ASEAN Single Window (ASW).<sup>13)</sup>

To track the progress towards the AEC 2015, a scorecard mechanism was established to monitor and assess the implementation of provisions set out in the AEC Blueprint. The first AEC Scorecard was published by the ASEAN Secretariat in April 2010, and the second AEC Scorecard was released in March 2012.

Some outstanding measures relevant to trade facilitation were included: country assessment on trade facilitation, modernization of tariff classification, customs valuation and techniques, and mutual recognition agreements (MRAs)<sup>14)</sup> in the agro-based products food and automotive sectors.

In December 2015, the AEC was formally created as a unified economic community in a region. The AEC is expected to bolster income and employment, and provide the region with stronger economic muscle in facing the other giants. But it is also expected to overcome many obstacles to become fully functional after becoming a legal entity.

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11) Marie Isabelle Pellan and Marn-Heong Wong, "Trade Facilitation in ASEAN and ASEAN+1 FTAs: An Analysis of Provisions and Progress", *Journal of World Trade* 47(2), 2013, 248-249.

12) **ASEAN Trade Repository (ATR)** is an electronic entity to serve as a gateway of trade-related regulatory information at regional and national levels. With a view to improving transparency, ASEAN members are working towards the establishment of ATR by 2015.

13) **ASEAN Single Window (ASW)** is an electronic facility that allows all parties involved in trade and transport to lodge standardized information and documents with a single entry point to fulfill all import, export, and transit-related regulatory requirements, preventing the re-entry of same data. The concept of single window is recognised and promoted by several world organizations that are concerned with trade facilitation, such as UNECE, UN/CEFACT, WCO, SITPRO of UK, ASEAN, etc..

14) **Mutual recognition agreements (MRAs)** are international agreements by which two or more countries agree to recognize one another's conformity assessments. Since the formation of WTO in 1995, they have been increasingly common and forged within and among various trade blocs, including APEC and the EU.

#### **4.2 Status of Trade Facilitation in ASEAN<sup>15)</sup>**

On free flow of goods, as of 2010, duties were eliminated on 99.2% of tariff lines for the ASEAN-6 Member States (Brunei Darussalam, Indonesia, Malaysia, Philippines, Singapore and Thailand); in the remaining Member States (Cambodia, Lao PDR, Myanmar and Viet Nam), 97.52% of tariff lines have been reduced to 0-5 percent. The pilot program for the ASEAN Self-Certification System has also been launched, which is aimed at allowing certified exporters to self-certify whether their exports meet the origin requirements in export documents. This will reduce trade costs and expedite movement of goods across borders.

Trade facilitation is ongoing with evident progress as seven Member States have already tested the preliminary exchange of trade data and information through the ASEAN Single Window Gateway (ASW). With the ASW, respective National Single Windows (NSWs) will be connected. This will expedite customs clearance, reducing transaction time and cost. The technical and legal foundations of the ASW, arguably the world's first regional single window, are being set up for live implementation by 2015.

Measures to reduce technical barriers to trade are also in place, including mutual recognition arrangements (MRAs), and the harmonisation of standards and a regulatory regime. About 170 technical standards are now harmonised in ASEAN. Mutual recognition of testing and certification for electrical and electronic equipment are being enjoyed by ASEAN Member States, with 21 testing laboratories and 5 certification bodies listed under the ASEAN Sectoral MRA for these types of equipment.

In addition to trade in goods, the ASEAN member states have also worked towards achieving free flow of services under the ASEAN Framework Agreement on Services (AFAS). Through packages of liberalisation commitments, ASEAN Member States have eased restrictions to cross-border trade in at least 80 subsectors, with a majority of these subsectors allowing for majority foreign ownership.

ASEAN is also committed to building an investment climate that is conducive for business. Aside from individual country initiatives, the region agreed on an investment framework aimed at enticing investors and helping those who are doing business in the region. ASEAN created the ASEAN Comprehensive Investment Agreement (ACIA), which contains commitments to liberalise and protect cross-border investment activities. Furthermore, the ACIA embraces international best practices in the treatment of foreign investors and investments.

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15) ASEAN Secretariat, "Thinking Globally, Prospering Regionally: ASEAN Economic Community 2015", April 2014, pp. 4~8. <http://www.asean.org/communities/asean-economic-community>.

## **V. Conclusion**

Trade facilitation is regarded as an important enabler in the growth of international trade and an important driver of economic integration. While the overall performance of ASEAN may have improved in recent years, great disparities remain across countries, and there is much room for improvement of trade processes in each country.

The AEC Blueprint 2015 offers a useful framework for channelling efforts to further reduce trade transaction costs among ASEAN countries. And as scheduled, after thirteen years of its idea, the ACE was formally created as a legal entity on December 31, 2015. Trade in the region will be facilitated through simple, harmonised and streamlined trade and customs documentation as well as rules and procedures.

In the context of the reflection on further deepening economic integration in the East Asia region and the possible harmonization of existing provisions on trade facilitation in a regional comprehensive economic partnership agreement, a sensible approach would be to align as much as possible RTA provisions to existing WTO obligations, bearing in mind the content of the draft negotiating text currently on the table.

Also, attention could be given to defining a consistent set of trade facilitation principles, adopting specific measures, monitoring performance, implementing capacity-building measures and keeping abreast of developments in multilateral negotiations on trade facilitation.

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# **A Theoretical Research on Horticultural Therapy Effect for Adolescents\***

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**ABSTRACT:** This paper reviewed the literature and articles on the horticultural therapy for adolescents to know the trend of research and the effect of it. The adolescents are characterized to have lots of developmental problems due to unstable emotion and to prepare career for future. The horticulture as a juvenile activity can promote the skills or knowledge for career and provide emotional stability. But the social workers have little attention on this therapy. The researches on horticultural therapy have been concentrated on the subjects of the disabled or the elderly. The researchers have showed little interest in adolescents, although it has lots of usefulness to enhance the mental health such as social adaptability or interpersonal relationship. So this study explored the effect of horticultural therapy for adolescents through reviewing the researches on it. This study will motivate researchers and social workers to develop the diverse programs of horticultural therapy for adolescents in school or after school.

**Key words.** Adolescent, Horticultural therapy,

## **I. Introduction**

Horticultural therapy treats individual clients using horticulture as a means of treatment. Lots of researches on the horticultural therapy conducted to determine the relationship between horticultural activities and well-being, and most of them indicated that horticultural therapy have profound positive effects in terms of psychological well-being. But these results are concentrated on the elderly while other groups like as adolescents have received relatively little attention. Social workers also have paid relatively little attention on this field. They usually had implemented therapy programs like as cognitive behavioral therapies for clients.

The period of adolescence is regarded as a tempestuous or stormy stage and a critical period in preparing career. Due to the rapid change in physical, physiological,

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psychological, and social aspect, adolescents experience lots of problems. Especially the problems of adolescents' mental disorders derived from the environment lacking of adequate love and care have been social issue. According to the increase of divorce rate and economic activities of married women, the youth from broken families or dual-career families tend to have lots of difficulties such as school maladjustment or addiction to internet. The diverse programs have been developed to cure the problems and to prevent them. Although horticultural therapy can be applied to the counseling programs to encourage the youth with problems, schools or facilities for the youth are scarcely adopting the horticultural programs involving gardening activities.

So this article was carried out to clarify the effect of horticultural therapy for adolescents by reviewing the researches. The results will give an overview of the outcomes on the contexts in which horticultural therapy programs improve mental health and give the additional information about career achievement. Furthermore it is expected that it will contribute to develop the horticultural programs for adolescents in school or after school.

## **II. Research method and resources**

To explore the trend of research on horticulture therapy and the effect of on adolescents, literature investigation is carried out by using articles, dissertations and books written in USA and Korea. The trend of research is illustrated by using the meta-analysis research which overviews papers or researches on horticulture in the treatment. The frequencies of the papers collected by KISS were summarized by the subject and content categories from 2004 to 2014 to know the recent trend in Korea. In addition to this work, the effects of horticulture for adolescents are reviewed by the articles collected by Korean research portal site KISS, National assembly library and SAGE.

## **III. Background theories of horticulture and adolescence**

There are several theories to explain how and why plants can be beneficial (Ulrich & Parsons, 1992). The simplest arousal theory maintains that we are easily overwhelmed our senses in this modern world with so much noise, so the environments dominated by plants reduce the arousal stress.

Another learning theory maintains that people's responses to plants are a result of

their early learning experience or the cultures in which they were raised. Those individuals, who grow up in rural areas will have a more positive attitude toward lands, vegetation and cultivated crops. According to this theory modern people tend to like nature or plants and to have negative feelings about cities.

The evolution theory maintains that our responses to plants are a result of evolution. Since we evolved in environments comprised primarily of plants, we have a psychological and physiological response to them. According to this theory, it can be explained why people in an unlearned tendency to pay attention and respond positively to certain combinations of plants and other natural elements. Nature has positive, physiological impacts on individuals whether or not they are consciously aware of them.

The theories on developmental characteristic and issues of adolescents were described by Conger & Petersen (1984) as follows; Peers play a crucial role in the psychological and social development of most adolescents. Adolescents are more dependent on peer relationships than are younger children simply because ties to parents become progressively loose as the adolescent gains greater independence. Because of the heightened importance of the peer group during adolescence, motivation for conformity to the values, customs and peer culture increases during this period. Some activities provided in after school programs have many benefits and may be linked to career choice and employment.

The problem of deciding on and preparing for a vocation represents one of the major developmental tasks of adolescence. Young people must know harsh realities of adult life and resolve the inevitable conflicts between their ideals, values, and goals. Opportunities for adolescents to have constructive and appropriate work experiences can provide them a source of the broader society and reduce the communication barrier between adults and young people.

Adolescence is characterized by accelerated physical, physiological, and cognitive development. While young people confront new and changing social demands, they establish self-concept organized with values, goals, and competencies acquired throughout childhood. Adolescents face conflicts over what they see and what they visualize as the ideal (Esposito, 2000). As a consequence of these changes, many normal adolescents may express alterations of mood and have distressing, turbulent, and unpredictable thoughts frequently. They also manifest anxiety and exaggerated defenses against anxiety and they easily commit impulsive, inappropriate or inconsistent behaviors. These characteristics are often be considered symptomatic of psychological disorders of varying degrees of severity.

In order to handle these developmental problems or disorders, they need to properly be led to a skilled and experienced therapist because young people are typically undergoing independence-dependence conflict with their parents and they do

not usually believe teachers. So numerous technical considerations related to the handling of specific adolescent disturbances have been developed. The horticultural therapy has been used one of therapies to help adolescence make up for their deficit and develop their capacity effectively and successfully.

## **IV. Researches on horticultural therapy**

### **4.1 Researches on horticultural therapy effect**

Dr. Benjamin Rush, a professor at the Institute of Medicine and Clinical Practice in Philadelphia, Pennsylvania is considered the first psychiatrist, who used the horticulture in the treatment of mental illness (Tereshkovich, 1975). In 1798, he suggested that he had found field labor in a farm setting to have curative effects on people who had mental problem. Another important step in the evolution of horticultural therapy was initiated in 1817, when the first private psychiatric institution in the United States opened in Philadelphia.

During the First World War and the Second World War, horticulture was programmed as an important treatment for persons with psychological or mental disabilities. In 1950s and 1960s, there was growth in programming by trained psychiatric social worker. Since that time horticultural therapy has matured significantly, because it is unique, non-threatening, flexible, cost effective, and effective in use (Simon & Straus, 1998).

Kaplan(1992) explains the value of participation of horticultural programs such as follows: that is providing a treatment setting so different from the stressful setting which draws attention on what they are doing. In addition to providing this benefit, the participation of planting is extremely important in having a community spirit. By working together in tree plantings and community gardens people get to know each other and create a true community with inhabitants who have a sense of responsibility for their surroundings. Plants play a role in making the healthy communities by providing a surrounding that is more comfortable physically in which to live and work and by providing opportunities for the sharing of values and interests (Simon & Straus, 1998).

In the advantage of this usefulness, horticultural programs were implemented with the elderly, children, women or immigrants. According to the broad overview of researches from 1979 to 1998 implemented by Johnson (1999), more researches seem to have been written addressing the use of horticultural therapy with the elderly than any other group. Most studies were implemented with the elderly and the handicapped. On the other hand, children and prisoners had been largely ignored by

horticultural therapists.

In Korea, the first research on horticultural therapy was published in 1985 and the number of related publication has been greatly increased since the early 2000s (Yu-Jin, 2010). As the study on the trend, Yu-Jin(2010) examined the researches of both domestic works on horticultural therapy. The assessment revealed that the participants of researches were mostly adults (40.1%).

Also Dae-Min and his colleges (2006) examined the research outcomes of horticultural therapy through the papers published in academic journals for 6 years. It demonstrated that the most frequent forms of horticultural activity were in most cases art and craft and outdoor plant growing. The number of times horticultural activities were done ranged from 11 to 15, the frequency was once a week, the number of participants was less than ten, and the most frequent form of horticultural therapy was transplanting. This study founded that the kind of horticultural activity, the number of times and frequency of them and the number of participants tend to be similar regardless of the characteristics of participants. So they suggested that more individualized and diversified programs of horticultural activity need to be designed and implemented.

Kyung-hee and his colleges (2009) classified the researches by the effects. They found that most research was carried out to find the effects of horticultural therapy on the human growth or mental health. The percent of developmental stages was 34% adults, 30% old adults, 21% children, and 15% adolescent. The percent of category divided as therapeutic problem was 72% cure and rehabilitation and 28% prevention. The percent of types of problems of patients with malfunction were 81% mental function, 5% bodily function, and 14% multiple functions.

Eu Jean and her colleges(2010) analyzed the effectiveness of horticultural therapy reported in Korean and overseas research papers on horticultural therapy from 1985 to 2009 (196 Korean dissertations, 113 Korean journal articles, 5 overseas dissertations, and 63 overseas journal articles). The results revealed that the participants of researches were adult 42.7%, elderly 28.3%, teenager 13.5%, child 15.5%. The subject of teenager was the least among population. The most effective horticultural therapy programs involved floral decorations. The main effects of horticultural therapy were cognitive, social, physical and emotional, and the greatest effect was observed in the physical domain.

The analysis on the subject of horticultural therapy researches from 2004 to 2014 shows that the adolescents 2%, children 8.2%, patients 11.4%, the elderly 19.7%, the handicapped 18.0%, women 4.9%. The adolescents occupied the least percent among participants of researches<Tables 1>. The main interest of researches during the same period was theoretical or meta-analysis to motivate to participate to the therapy. Next theme attracting researcher's attention was to enhance the mental health like as

depression, self-respect, sociality and relationship<Table 2>.

#### **4.2 The effect of horticultural therapy for adolescents**

Adolescents receive the education for socialization and adaptation during middle and high school period. Especially early adolescents experience rapid changes in physical and cognitive conditions. So they are unstable in emotion, they are apt to addict to internet or game and to be depressed. They tend to do inappropriate responses because of lack of ability to think rationally. They need the programs to reduce stress and stimulate physical growth.

Positive youth development programs help young people strengthen relationship and skills, place them on positive networks of supportive adults, and develop hope for their future by providing academic, economic and volunteer opportunities (Duncan & Goddard, 2011). Horticultural therapy programs for adolescence can be used to reduce psychological or physical problems effectively.

Most research or reports have indicated that programs of horticultural therapy may be an effective strategy for promoting adolescent health. Hoffman, Thompson and Cruz(2004) explored the relationship between a gardening program for college students and self-esteem and self-efficacy related to academic performance. The results indicated those students who remained active in the gardening program for the full 16 weeks reported higher levels of self-esteem and self-efficacy, as well as improvements in academic work.

In addition to this research, several studies have shown that horticultural youth programs can have positive and protective effects on the competence, confidence especially on some adolescents with problems. Ru-Bee(2007) researched the effect of holistic horticultural therapy on the stress and attention concentration of juvenile delinquents in facilities. It was founded that the holistic horticultural therapy was effective for reducing depressions and stresses and improving attention concentration. Yang Sug(2010) compared the treatment group consisted of thirteen students, who participated the program held once a week for a total of 18 sessions and lasted for 1 hour 30 minutes per session, with the control group composed of seventeen students. The results revealed that the teenagers from broken families showed more interest in horticulture, improved their relationship with other people, and expressed their inner self through horticulture. Heung Shik(2010) examined two groups with the experimental group composed 15 maladjusted students of middle school and control group to identify the horticultural effect on the adjustment to school life, self-esteem and learning achievements. It was deemed that horticultural therapy based on REBT(rational emotive behavior therapy) gave positive impact on them.

## **V. Conclusion**

Horticultural therapy has operated within the context of a health care consisting of many other elements such as physical, mental and social health as a useful treatment since 18 century. It has been applied to any population of client, and a number of studies have represented benefits such as increased self-esteem, self-efficacy, and interpersonal communication and so forth.

It was found that especially adolescents gain benefits markedly according to the results of literature review, although the researches for adolescents were less than the researches for any other population. Some research showed that the horticultural therapy improved academic performance, relationship with other people, expression of their inner self, reduction of depressions and attention concentration except self-esteem or self-efficacy.

These results show there are adolescents who need programs applied with horticultural therapy including all sorts of diverse horticultural activities like as decoration, cultivation and appreciation. These programs might decrease everyday stress and enhance emotional intelligence, sociality, self-esteem or adaptation of adolescents. By using horticultural therapy program, adolescents may prevent and control their problems effectively. So this study emphasizes to increase efforts to develop the diverse horticultural programs and to explore the effects in all activities related to horticultural behavior continuously.

Most of the articles and papers revealed that the horticultural therapy programs for adolescents were effective in psychological, cognitive or physical development. But they had little interest in the effect of occupational achievement. Also they confined to the subjects who had problems, not to the ordinary students.

Adolescents prepare knowledge and skills for future jobs and need information and experience for jobs they want to get. Horticulture skills and knowledge as experience of job can be provided in school or after school programs for middle and high school students, but the programs for career are not activated. Prevocational work skills can be practiced even by the youngest of children as well as adolescents. Following directions, staying on task, and processing feedback are skills that everyone needs for work (Simontor & Straus, 1998). These abilities can be developed in a horticultural therapy program.

Programs for adolescents can take place in community gardens, recreation centers, and hospitals as well as in school. Gardening allows adolescents to learn skills to work and develop functions for psychological or physical growth. The more adolescents can involve in horticulture, the better they will do it. The results of this study will contribute for teachers or social workers of facilities to know the benefits and to develop diverse programs of horticulture for adolescents.

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## Middle-high school special educational teachers' perception effect of sexual harassment at work place

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**ABSTRACT:** The purpose of this is one group pretest-posttest design regarding sexual harassment victims to examine the experience and coping perception for special education teachers and to examine the effects of sexual harassment of the program. 259 subjects participated in this study. Pretest was conducted in July, sexual harassment education was intervened 4 times for two weeks, dividing into 7 classes. Post-test was conducted in August. Data were processed to examine the frequency, percentage, average and standard deviation. Chi-square was used to examine the experience of sexual harassment, the differences between the experience of witnessing the victims of sexual harassment according to the sex, using SPSS WIN 21.0. Paired t-test was used to analyse the effect of the prevention education program for sexual harassment on the perception of sexual harassment of the subjects. The result was that 3.9%~74.5% of the subjects wrongly perceived about sexual harassment according to the question of awareness of sexual harassment. Prior awareness of sexual harassment was  $7.89 \pm 1.19$  and sexual harassment awareness after intervening an education for the prevention of sexual harassment was  $9.86 \pm 45$ . There was statistically significant ( $t = -25.316$ ,  $p = .000$ ). The result showed the effect of intervention of the education program for the prevention of sexual harassment suitable for special education teachers to increase the awareness of sexual harassment to the special education teachers. It is also thought that it is very important to intervene the systematic education program for the prevention of sexual harassment.

**Key words:** Sexual harassment prevention education, Sexual harassment perception, Special teachers

### I. Introduction

Sexual harassment in office of Korea became a critical social issue, motivated by the sexual harassment scandal of Prof. Shin in Seoul National University. The provision of woman development basics enacted in 1993 prescribed that a national local

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autonomous body or an entrepreneur must take an action essential for equal working environment such as the prevention of sexual harassment.

There has been many cases of sexual harassment in office even though 20 years has passed. Most of victims are female, occupying 92.9%, according to the survey of sexual harassment in public institutes. Offenders are those who have the superior position at work place. 11.2% of respondents are reported to experience or witness the sexual harassment (Ministry of Women and Family, 2012).

Sexual harassment, sexual molestation, or sexual violence in office happen through the strict power relationship. The victims of sexual harassment feel the symptom of the body such as a headache, insomnia, and gastroenteritis. They also go through the loss of business desire, demoralization, lowering of efficiency, a drop of productivity, absence, and resignation, caused by shame, damaged pride, outrage, concern, and anxiety (Lee Jae Soon, Doo, Kyung Ja, 2002; Lee Ok-Ran, 2009).

The educational sector is required a high standard of moral concerning sexual harassment compared to the common work place. Nevertheless incidents of sexual harassment by male teachers or principals of public high school (Gyonghyang Daily Newspaper, 2015, 8, 3) and sexual violence at schools for the handicapped (Hankook Daily Newspaper, 2011, 9, 29) occur in succession. One of reasons why sexual harassment happen at school is that the basic characteristic of power structure is closed and patricentric.

Thus it is difficult to raise a problem about the sexual harassment happened between the teachers because of the power structure caused by age, years of service, and position. It is also difficult to pose a problem to the teacher who instructs academically and leads the future direction of the student. Therefore, the teachers should abstain the expression and metaphor which can arouse the feeling of sexual insult under the pretext of improving understanding. Especially, special education teachers, compared to the ordinary teachers, make the physical contact a lot during a course of study. Special education teachers teach the knowledge and skill to overcome the handicap effectively and to help them to live as a member of society. Special education teachers instruct the students using proper textbooks and teaching methods, depending on the level of handicap and conditions of development.

They lead a routine daily life and human nature guidance, including midday meal, school crossing guard, how to wear the clothes, washing (Korea Research Institute for Vocational Education & Training). Actually, special education teachers are concerning about being mistaken for sexual harassment, so preventive disciplines of sexual harassment is necessary for special education teachers.

This research investigated the experiences of sexual harassment and treatment perception of special education teachers and found there was some dental assistant (Kim, Mi Eun, 2015), college students (Moon Hee Kyung, 2009), medical care

assistant(Kim Inae, 2012), nurses(Ko Jin-Hee, 2013) research on , but little research on the special education teachers.

Therefore we need the research to examine the effect of the prevention education program for sexual harassment to the perception of sexual harassment and investigate the experience of sexual harassment and treatment perception by special education teachers,

The purpose of this study is to try to provide the scientific basis of intervene for the prevention of sexual harassment in special school by analysing the effect of implementing the education of perception of sexual harassment and examining the present condition of the experience of sexual harassment and treatment perception. Also this paper is to provide the baseline data useful for developing the educational program for the prevention of sexual harassment in school through the analysis of the experience and treatment perception by special education teachers regarding sexual harassment.

The followings are specific objects of this study.

- 1) We investigate the practical experience of sexual harassment by special education teachers.
- 2) We investigate the treatment perception of sexual harassment by special education teachers.
- 3) We investigate the effect of the education of perception of sexual harassment for special education teachers.

## II. Method

### 2.1 Research design

This study is one group pretest-posttest design as pre-experimental design to examine the effect of the education of perception of sexual harassment for special education teachers.

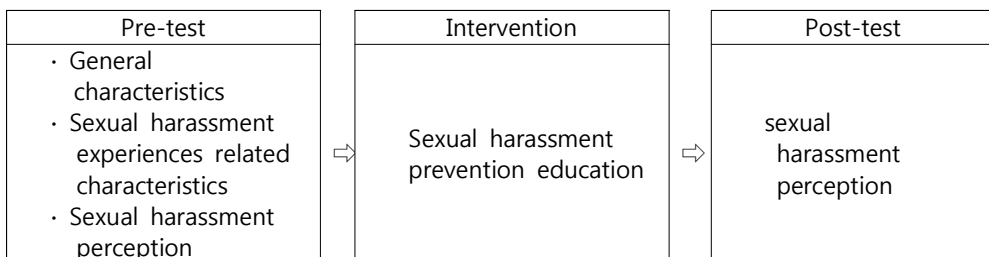


Figure 1. Research Procedure

## **2.2 Participants and Data Sampling**

Special education teachers participated in this study, who are the study and training of a college of education in K university. Directly after receiving the consent of the participants data were collected from July 2015 to August, The questionnaires were given to the subjects agreeing the research, it took 10 minutes, there were 268 and then we analysed 259 except the data which are answered insincerely. Pre data were collected in July 2015 and post data in August.

## **2.3 Instrument**

### 1) sexual harassment perception

SNU Human Rights Center(2014) contains 10 items: 1 for yes, 0 for no, the higher score, the higher perception

### 2) Sexual harassment prevention education

The researcher conducted the education of the perception of sexual harassment using a sexual harassment prevention education materials provided by the Ministry of Gender Equality & Family Republic of Korea(2015) and the understanding of sex about the mentally handicapped and sex education(Erik Bosch, 2010) for 4 hours. The program is conducted for two week 7 classes.

## **2.4 Data Analysis**

The statistics process of the research was done using the SPSS / WIN 21.0 statistics program and specific analyzing method is as follows.

First, frequency, percentile, mean and standard deviation were investigated to find the social demographic characteristics and sexual harassment related characteristics of the subject of the investigation.

Second, the  $\chi^2$ -test was used to determine the difference between experiences of victimization in sexual harassment, witnessing harming and harming sexual harassment according to the subject's gender attribute

Third, paired t-test was used to analyze the impact of subjects' sexual harassment perception by the sexual harassment prevention education

## **III. Results**

### **3.1 General characteristics of the subjects**

The subjects participated in the study were 189 female(73%), aged 25~48, the most is aged 30~34(47.5%), working experience 36~48 months(50.2%)<Table 1>.

Table 1. General characteristics

(N=259)

Variable	Categories	N(%)
Sex	male	70(27)
	female	189(73)
Age	25~29	83(32)
	30~34	123(47.5)
	35~39	41(15.8)
	40~48	12(4.6)
Teaching month	36~48	130(50.2)
	49~60	60(23.2)
	61~84	39(15.1)
	85~	30(11.6)

### 3.2 Sexual harassment related characteristics

#### 1) Sexual harassment experienced characteristics

When the victimization of sexual harassment happened, the method of react is as in the following In being sexual harassment, ask to stop sexual harassment is the highest 159(61.4%) In witnessing the victimization of sexual harassment, find how to treat the sexual harassment is the highest 247(95.4%)

in witnessing the assaulter of sexual harassment, let them stop sexual harassment is the highest 227(87.6%)<Table 2>.

Table 2. Sexual harassment experienced characteristics

(N=259)

Characteristics		Categories	M±SD, N(%)
Sexual Harassment Perception			7.895(±1.184)
Sexual Experience	Harassment	Yes	85(33.2)
		No	173(66.8)
Damage Experience	Witnessing	Teacher to Teacher.	66(25.5)
		Teacher to Student	14(5.4)
		None	179(69.1)
Assault Experience,	Witnessing	Teacher to Teacher	126(48.6)
		Teacher to Student	9(3.5)
		Etc.	10(3.9)
		None	114(44)
Counsel Experience,		Yes	29(11.2)
		No	230(88.8)
Coping Perception		Just stand it	19(7.3)
		Ask to stop sexual harassment	159(61.4)
		Report it on the basis of sexual harassment law	61(31.3)
Coping perception (Witnessing Victims)		Suggest to bear	4(1.5)
		Let them deal with it by themselves	8(3.1)
		Find how to treat the sexual harassment	247(95.4)
Coping perception (Witnessing Assaulter)		Just ignore	18(6.9)
		It is not my business	14(5.4)
		Let them stop sexual harassment	227(87.6)

Characteristics	Categories	M±SD, n(%)
Sexual Harassment Perception		7.895(± 1.184)
Sexual Harassment Experience	Yes	85(33.2)
	No	173(66.8)
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	Let them deal with it by themselves	8(3.1)
	Find how to treat the sexual harassment	247(95.4)
Coping perception (Witnessing Assaulter)	Just ignore	18(6.9)
	It is not my business	14(5.4)
	Let them stop sexual harassment	227(87.6)



## 2) Sexual harassment perception

Questions about the subjects of 'Watching inappropriate videos in the office is considered as sexual harassment.' is a 'yes' (88.4%) answers were 'Sexual harassment is judged based on whether the offender had the intention.' for questions it was answered "no" (93.8%). 'If the victims of sexual harassment did not express clear refusal, one cannot question it against sexual harassment.' questions have had answered "no" (81.1%) of 'Sexual harassment is a criminal case ' not' with respect to (66%) that was the response. In addition, it was found that a false sense of subjects are sexual 3.9% to 74.5% in response to the "sexual harassment is often started from excessive body exposure" is answered "no" (93.1%) according to the item <Table 3>.

Table 3. Sexual harassment perception

(N=259)

Characteristics	Categories	N(%)
Watching inappropriate videos in the office is considered as sexual harassment.	Yes	229(88.4)
	No	30(11.6)
The identity of people who are getting consultation in regards with sexual harassment has to remain anonymous.	Yes	175(67.6)
	No	84(32.4)
A teacher telling a sexual joke to a student is not considered as sexual harassment.	Yes	10(3.9)
	No	249(96.1)
Men who have sexually harassed are not protected under the law.	Yes	28(10.8)
	No	231(89.2)
Government is responsible for educating their employee to prevent sexual harassment; however, it is not their legal obligation.	Yes	235(90.7)
	No	24(9.3)
If the victims of sexual harassment did not express clear refusal, one cannot question it against sexual harassment.	Yes	49(18.9)
	No	210(81.1)
Sexual harassment is a criminal case	Yes	193(74.5)
	No	66(25.5)
Sexual harassment is private matter and it needs to be resolved between two parties.	Yes	2(8)
	No	257(99.2)
Sexual harassment is judged based on whether the offender had the intention.	Yes	16(6.2)
	No	243(93.8)
sexual harassment is often started from excessive body exposure	Yes	18(6.9)
	No	241(93.1)

### 3.3 Experience of sexual harassment according to the gender

There was a statistical difference according to the sex between the experience of witnessing the victimization of sexual harassment ( $\chi^2=8.490$ ,  $p=.004$ ) and the assaulter of sexual harassment ( $\chi^2=4.631$ ,  $p=.037$ ). but there was no statistical difference to the experience of witnessing the assaulter of sexual harassment according to the gender ( $\chi^2=3.043$ ,  $p=.092$ ) <Table 4>.

Table 4. Experience of sexual harassment according to the gender (N=259)

Characteristics	Categories	Sex		$\chi^2$	<i>p</i>
		Male(%)	Female(%)		
Sexual Harassment Experience	Yes	16(6.2)	70(27)	4.631	.037
	No	54(20.8)	119(45.9)		
Damage Witnessing Experience	Yes	12(4.6)	68(26.3)	8.490	.004
	No	58(22.4)	121(46.7)		
Assault Witnessing Experience,	Yes	33(12.7)	112(43.2)	3.043	.092
	No	37(14.3)	77(29.7)		

$p < .05$

### 3.4 The effect of the prevention education program for sexual harassment

The effect of the prevention education program for sexual harassment on the perception of sexual harassment of the subjects was average  $7.89 \pm 1.19$  points, after educating the program, There was a statistically significant increase up to  $9.86 \pm .45$  ( $t = -25.316$ ,  $p = .000$ ) <table 5>.

Table 5. The effect of the prevention education program for sexual harassment (N=259)

Variable	Before	After	t	<i>p</i>
	M±SD	M±SD		
Sexual harassment perception	7.89±1.19	9.86±.45	-25.316	.000

#### **IV. Conclusion and suggested**

This study is one group pretest-posttest to examine the experience and coping perception for special education teachers and to analyze the effects of the program. The result was that 86 persons (33.2%) of the 259 special education teachers answered they experienced the sexual harassment in school, 173 persons (66.8%) no answer. Victim witness experience was 66 persons (25.5%) concerning teacher to teacher, 14 persons (5.4%) was teacher to students, assaulter witness experience was 126 persons (48.6%) concerning teacher to teacher, 9 persons (3.5%) was teacher to students, There were 29 persons (11.2%) experiencing the consultation concerning the sexual harassment. It is difficult for the special education teachers to compare them, as there are no studies to analyse the direct and there are linguistic damage experience (33.3%) physical visual sexual harassment(9.7%) indirect experiences of the sexual harassment(19%) for the teachers of elementary, middle and highschool (Kim, Young A, 2013). There has been a sexual harassment in the office according to the precedent survey to examine the direct sexual harassment of the nurse of university hospital(42.6%) and direct sexual harassment of dental hygienist(Kim, Mi Eun, 2015; Ko Jin-Hee, 2013). Since 2000, there has been conducted the education program for the prevention of sexual harassment politically. and the sensitiveness concerning the concepts and types of occurrences of sexual harassment increased, recognizing sexual shame or humiliation they experience as sexual harassment.

As a treatment about sexual harassment, 'ask to stop sexual harassment (61.4%) 'Report it on the basis of sexual harassment(31.3%) ' just stand it'(7,3%) when witnessing assaulter, 'let them stop sexual harassment'(87.6%) 'let them deal with it by themselves'(5,4%) 'just ignore' (5,4%)

In other words, as a treatment about sexual harassment, 'ask to stop sexual harassment 'is the most, in witnessing the victims, 'find how to treat the sexual harassment' is the most, in witnessing the assaulter, 'let them stop sexual harassment' is the most. According to Maypole(1986), victims use four kinds of responses of avoidance, defusion, negotiation, confrontation in a continuum. As a treatment about sexual harassment of special education teacher's group, they used 'just stand it'(7,3%) and 'ask to stop sexual harassment (61.4%). As school is patriarchal and authoritarian groups, it is difficult for the victims to pose the problems about the sexual harassment aggressively(Lee. Na Young, 1999).

According to the sex, as a result of sexual harassment experiences, there were 70 women teachers(27%) experiencing sexual harassment, 16 men teachers(6.2%), and there were 68 women teachers(26.3%) witnessing the victims, 12 men teachers(4.6%). There were 112 women teachers(43.2%) experiencing the assault witness, 33 men

teachers(12.7%). and there was a statistically significant difference about sexual harassment occurred in school according to the sex.

As we investigated above, there is a statistically significant difference about sexual harassment occurred in school according to the sex, which is investigated by the subjects who graduated from a college, full-time job. 3~8 year working experiences. As a misconceptions about sexual harassment, 'Sexual harassment is a criminal case(74.5%)' is the highest. The identity of people who are getting consultation in regards with sexual harassment has to remain anonymous(67.65%). If the victims of sexual harassment did not express clear refusal, one cannot question it against sexual harassment(18.9%). Men who have sexually harassed are not protected under the law(10.8%). Watching inappropriate videos in the office is not considered as sexual harassment(11.6%). Though it is difficult to find the precedent survey using the same materials, we still have a misconceptions about sexual harassment, when examining the result about it; 'sexual harassment is an expression of sexual interest'(37.7%) is the highest(Oh, Hee Jin, Koh, Hyo Jung, 2003). Though there has been a regulatory to conduct the prevention education of sexual harassment targeting public institutions, there are some elements affecting the perception such as school calendar, the atmosphere between staff, participation and principal's will about the prevention.

In recognition scores after intervening the prevention education conducted 4 times, there was a significant increasing( $t=-25.316$ ,  $p=.000$ ): the perception of sexual harassment before education( $7.89\pm 1.19$ ), after education( $9.86\pm .45$ ), and the education was conducted during a certain training period away from school work, which means the subjects participated in the education actively.

The findings can be summarized as follow, the sexual harassment happened in school, according to the survey conducted by middle and high school special education teachers who have the same educational standards and employment pattern, and there was a difference according to the sex about the injury experience of sexual harassment and sexual harassment. therefore, we need to develop the suitable sexual harassment preventive education program considering the sex and business characteristics.

The significance of this study was that sexual harassment prevention education for special education teachers was effective as a way of raising sexual harassment awareness. It means that the intervention of sexual harassment prevention education which is suitable for special education teachers and the subjects' characteristics is very important.

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