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List of Editorial Peer Reviewers

It continues to be our goal to improve and enhance the quality of the articles published in the *Ritsumeikan Journal of Asia Pacific Studies*, and in doing so probably nothing plays such an important role as the reviews provided by peer reviewers in related fields of study who themselves are active researchers in those fields.

We would like to formally thank them and let them know how much we appreciate the help and assistance we have received through their constructive reviews and suggestions to the editor which were then transmitted to the corresponding author and/or directly followed by the editorial team. Each article was reviewed by at least one reviewer, and some articles were reviewed by two reviewers before they were finally approved for publication.

The following academicians, listed in alphabetical order, provided reviews for the manuscripts submitted to the *Ritsumeikan Journal of Asia Pacific Studies*, volume 32:

A. Mani, Professor Emeritus, Ritsumeikan Asia Pacific University

Behrooz Asgari, Associate Professor, Ritsumeikan Asia Pacific University

Hideki Fuchinoue, Associate Professor, Ritsumeikan Asia Pacific University

Kaori Yoshida, Associate Professor, Ritsumeikan Asia Pacific University

Ken Arii, Associate Professor, Ritsumeikan Asia Pacific University

Malcolm Cooper, Professor Emeritus, Ritsumeikan Asia Pacific University

Mariner Wang, Professor, Ritsumeikan Asia Pacific University

Nader Ghotbi, Professor, Ritsumeikan Asia Pacific University

Sangho Kim, Professor, Ritsumeikan Asia Pacific University

Steven B. Rothman, Associate Professor, Ritsumeikan Asia Pacific University

William B. Claster, Associate Professor, Ritsumeikan Asia Pacific University

Yasushi Suzuki, Professor, Ritsumeikan Asia Pacific University

Editor's Note

The 32nd volume of *Ritsumeikan Journal of Asia Pacific Studies* is being published with a couple of changes to improve both its academic quality and its appearance. There has been an attempt to redefine the mission of the journal as a platform to publish academic papers on issues related to the Asia Pacific region, including the peoples, societies and cultures, the environment, as well as business and trade, economic growth and development, regional cooperation and politics, international relations and peace studies, and other academic areas related to the Asia Pacific. We also recognize the in-house need for a peer-reviewed journal at Ritsumeikan Asia Pacific University (APU) to support the development of academic research skills among graduate students and other junior researchers.

Although we still do not follow the strict policy of double-blind peer review, each and every paper has been scrutinized by at least one academic with a reasonable record of research in the related field of study, and most articles are reviewed by more than one reviewer. The suggestions are transmitted to the authors and followed till implementation/resolution by the editorial desk and the chief editor. Our peer review policy is probably more stringent and vigorous for authors from outside APU, as a lot of reviews are still provided by APU faculty members who are possibly not 'blind' to the research work of those within APU. Nevertheless, we use this shortcoming to promote a stronger supervision over graduate research work by the related faculty members. A list of the faculty who have assisted us with the review of articles in this volume was presented on the previous page.

Another change in the journal policy starting with volume 31 and continuing in this volume has been the provision of a standard classification for the types of articles approved for publication. This is a well-recognized concept in research publishing that emphasizes the methodology and material used for research. The distinction between 'Original Research' through analysis of primary data collected by the researcher versus 'Review' of other researchers' works and through the use of secondary data is one example. In this issue we have marked seven articles as *'Original Research'*, six articles as *'Review'*, and one as a *'Commentary'*.

There are fourteen papers in the 32nd volume, and the order of appearance of the articles is based on the time and order of their final approval for publication after being submitted to the RCAPS office, being reviewed, revised by the author, and going under further editing and formatting by the journal editors. This time-linked order in the appearance of published papers follows from our policy that an online copy of each paper is uploaded on our journal website immediately after being accepted and approved for publication. Two copies of the journal are sent to each author after the completed volume is printed in limited numbers. Also we have enlarged the font size of the text since the previous issue to make it more easily readable.

The first article in volume 32, by Mr. Eiji Sakai and Kobe University's Emeritus Professor Yasuo Uchida, demonstrates the use of 'contingent valuation' for the estimation of an economic value for the natural environment. This can be of great interest to economic researchers as it helps overcome one of the inherent difficulties in the economic assessment of natural wealth. Therefore, I recommend reading this article to especially those interested in environmental economics.

The second article by Mr. Poowin Bunyavejchewin, an independent researcher and a former lecturer of Walailak University in Thailand deliberates on the border conflict between Cambodia and Thailand at the site of Preah Vihear temple. The author has tried to offer an unbiased look into the existing conflict and help understand the historical roots and causes of the existing issue. Perhaps no conflict can be resolved unless the two sides try to understand how it developed over time and how it was influenced by various factors. I recommend reading this article to especially those interested in peace studies and conflict resolution.

The third article is a review paper written by one of APU's graduate students, Mr. Sheka Bangura, about the association of poverty and illiteracy in Sub-Saharan Africa, and specifically in Sierra Leone. This research was presented on December 8, 2012, at the Asia Pacific Conference 2012 at APU campus, Beppu city, and a summary of it has been published in the *"Asia Pacific Conference 2012 Proceedings"* (pp. 35-37) which is also accessible through the APU/RCAPS website.

Mr. Muhammad Meraj, another graduate student at APU, has analyzed the role of globalization and trade openness policies on the wonder of rapid economic growth in Bangladesh as our 4th article in this volume. It is hoped that his meticulous use of econometrics research methodology will be of use to other researchers in the field.

The 5th article by Professor Behrooz Asgari and his graduate student, Mr. Md Aynol Hoque in the Graduate School of Management at APU demonstrates the use of system dynamics methodology for the analysis of supply chain performance in the case of the garment industry in Bangladesh. Researchers in the field of supply chain management may benefit from the depiction of the use of this methodology in their own research work.

Ms. Parvin Kida has provided us with an interesting insight into the legal work of translators in the criminal courts of Japan in our 6th article of volume 32. Her critical review of the historical background of the Japanese legal system, where almost 99% of all cases presented to court end in conviction, is an eye-opener. I have been amazed myself by the example of the infamous computer hacker who was arrested in February 2013 after 'confessions' had been obtained from four other innocent suspects. This does not mean that torture was used; rather, an insidious but more prevalent problem is at work; the police, though acknowledging 'the right to be silent', commonly convince a suspect to 'apologize' and ask for forgiveness, not so specifically, while technically this interrogation is built into a 'confession' to a 'specific crime' they have envisioned. It appears that Japan needs an overhaul of the way the police force, prosecutors and the courts process legal work. Japanese social policymakers need to consider the position of a developed country such as Japan, and pay more attention to academia and their research appraisals of the legal system.

The seventh article by Prof. Kazem Vafadari at APU demonstrates the strategic bond between tourism and agricultural heritage in this exemplary pedagogical review. What makes this work especially relevant is Prof. Vafadari's success, as Oita Prefecture's principal advisor, in pioneering the efforts of Oita's Kunisaki Peninsula in getting officially nominated as a 'globally important agricultural heritage system' (GIAHS) in 2013. His successful integration of academic research with service to the community and the local agricultural livelihood is a living example of sustainable tourism.

Ms. Sheila Cliffe, an Associate Professor at Jumonji Gakuen Joshi Daigaku, Saitama, Japan, presents her research work on the revival of the *kimono* using the Internet media and services as our eighth article in

volume 32. She participated in the 'Asia Pacific Conference 2012' at APU, Beppu city, too, and the colorful presentation of this British lady from the University of Leeds in *kimono* has been covered in a summary paper in the *"Asia Pacific Conference 2012 Proceedings"* (pp. 141-143).

Our ninth article in this volume is written by Mr. Mohammad Imran Hossain, a graduate student at APU from Bangladesh, on the role of economic liberalization policies on the economic growth of his native country, using a series of statistical methods on data provided by their government as well as the World Bank.

The tenth article of this volume is jointly authored by Ms. Diah Tyahaya Iman from Andalas University in Indonesia and Emeritus Professor A. Mani from APU. This paper looks at the important role played by immigrant Minangkabau women in the economic livelihood of their society. Next, Mr. Ngoc Tien Tran, a graduate student at APU, has written an interesting paper based on his original research on the complex reasons behind educational under-achievement and hurdles faced at the secondary level of education by ethnic minorities in Vietnam. These two papers can be recommended to the Asia Pacific sociologists.

The twelfth paper in this volume is in the area of logistics management. Mr. Baixun Wang, a graduate student at APU, provides a descriptive as well as analytic discussion on the development of Dalian port in Northeast China, and its significance in sub-regional and regional trade and economy.

Our thirteenth paper of this volume is an original study on the use of text mining methods in language education. Professor Takako Unetani from APU demonstrates the advantages and disadvantages of a number of data mining tools in a pedagogical research of language education that was conducted among a large number of students at APU. The many tables and graphs which depict the research analysis of data mining findings would be useful to all interested in data mining research methodologies.

Finally, our 32nd volume ends with an interesting commentary by Prof. Daisuke Akimoto from Soka University Peace Research Institute. The commentary is, in fact, an academic review of the recent animated film by the legendary Japanese animator, Hayao Miyazaki. Prof. Akimoto explains how the film, *Kaze Tachinu* (The Wind Rises), is an attempt at promoting peace at a time when attempts to change the pacifist constitution of Japan (Article 9) have created worries among peaceful people, much like the hero of the movie who was essentially chasing his dream to fly, with a love to cherish, in difficult times.

I would like to invite more researchers, faculty members and graduate students at all schools in and outside Japan, who have an interest in the Asia Pacific to contribute to us. You can submit your original manuscripts via e-mail for a primary editorial review for possible publication, volunteer to assist us as a reviewer in any of the various subjects related to Asia Pacific studies, or simply provide us with your constructive opinions and suggestions on how to improve the quality of this journal. Our aim is to serve a larger and wider community of academic readers by disseminating quality research articles about the Asia Pacific region; as such, you can also promote and recommend this journal to your peers, colleagues and friends. Thank you!

Nader Ghotbi, MD, PhD
Chief Editor

REVIEW:
A study on the use of 'contingent valuation' as a method for economic evaluation of the environment

Eiji Sakai[1] and Yasuo Uchida[2]

Abstract

Contingent valuation (CV) is widely used as a method to evaluate passive values of the natural environment. It is based on economic theories that assume utility maximization, which provides a solid theoretical basis to contingent valuation methods including dichotomous choice valuation questions that are being used more frequently. This paper reviews the economic and statistical theories behind contingent valuation and presents methods of analyzing its response data in R language. Although contingent valuation is subject to some controversy over its methodology, we conclude that its weaknesses may be overcome by incorporating respondents' bound rationality into contingent valuation surveys.

Keywords: Contingent valuation (CV), Dichotomous evaluation, Environment, Environmental economics, Passive (non-use) values

Introduction

Contingent valuation (CV) is a method to evaluate the non-use or passive values of the natural environment by asking what amount respondents are willing to pay to improve the quality of the environment or to prevent it from deteriorating. In a CV survey, respondents are presented with a series of policy scenarios where the quality of the environment improves or deteriorates in response to protective measures or industrial developments. After ensuring the respondents have reached a sufficient understanding of the policy alternatives and their consequences, a CV survey asks the respondents how much they are willing to pay for the improvement of the environmental quality or how much they are willing to accept for the loss of some environmental values. The mean and median of the willingness to pay (willingness to accept) can be estimated by analyzing the CV responses statistically.

Other prominent environmental economic valuation methods include the hedonic approach and the travel cost method. The hedonic approach appraises the economic value of the natural environment with an assumption that the evaluation of the environmental features is reflected in real estate prices. The travel cost method estimates the economic value of a natural attraction such as a national park by considering the travel cost to it as the potential price for the natural attraction.

Both the hedonic approach and the travel cost method are effective where a market exists for goods and is believed to reflect the values of the natural environment. However, it is often the case that no market exists at all to reflect the environmental values. Contingent valuation on the other hand is supposed to reveal the environmental values by inquiring the respondents, and is applicable for the wide range of non-market item appraisals such as conservation of forests and coastal ecosystems, improvement of air quality, and so on.

This paper first reviews the economic and statistical theories of CV and presents methods of analyzing CV response data in R language. Secondly, it studies the criticisms against CV and responses that attempt to answer them. Finally, it shows that an explicit incorporation of bound rationality into utility maximization models may address these problems in CV.

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Methodology

One of the main issues regarding contingent valuation is how we should evaluate the observed responses and estimate a respondent's willingness to pay (WTP). In this section, we will introduce economic utility theories and describe how they arrive at stochastic models that allow us to estimate WTP. We will use the simplest linear logistic model to illustrate the basic logic behind these theories. Finally, we also look at some more complicated WTP distribution models which are widely used in the practice of CV surveys.

Firstly, we formulate the following standard utility function $u(\mathbf{x})$, where $\mathbf{x}$ denotes a vector of goods $x_1, x_2, ..., x_n$. A consumer is expected to maximize her utility under a budget constraint $y = \mathbf{px}$ where y denotes her income and $\mathbf{p}$ denotes a vector of prices of the goods $p_1, p_2, ..., p_n$. When the utility function satisfies a set of attributes such as quasi-concaveness, this utility maximization problem can be solved. Given a set of prices and income, the quantities of goods can be determined as a result of utility maximization.

Here, an indirect utility function $v(\mathbf{p}, y)$ can be introduced. We reformulate the indirect utility function so that we can take into account the environmental concerns. We assume the prices $\mathbf{p}$ are constant and omit the notation of the indirect utility function. A new form of the indirect utility function is represented as $v(\mathbf{q}, y)$ where $\mathbf{q}$ denotes a vector of non-market items to be valued, $q_1, q_2, ..., q_m$.

Now let's assume that the government plans to implement a new environmental policy which will change the status of non-market items from $\mathbf{q}_0$ to $\mathbf{q}_1$. We also assume that this change is favorable to all the consumers (e.g. improvement of air quality) but consumers need to bear a part of the cost for the implementation of the policy. A rational consumer will approve the policy only if:

$$v(\mathbf{q}_1, y - c) \geq v(\mathbf{q}_0, y), \tag{1}$$

where c denotes the cost which the consumer must bear for the policy implementation. The maximum amount of the consumer's bearable cost (*willingness to pay,* WTP) is C such that:

$$v(\mathbf{q}_1, y - C) \geq v(\mathbf{q}_0, y). \tag{2}$$

The utility functions discussed so far are all deterministic. Now we introduce a stochastic component to the indirect utility function $v(\mathbf{q}, y, \epsilon)$ where ϵ denotes a random variable that corresponds to some probability distribution. This type of utility function is called a *random utility function*.

Hanemann and Kanninen (1996) explain the nature of this random component in the indirect utility function:

> "The other key component of the indirect utility function is a stochastic component representing the notion of random utility maximization (RUM). It is the RUM concept which provides the link between a statistical model of observed data and an economic model of utility maximization. In a RUM model it is assumed that, while the individual knows her preferences with certainty and does not consider them stochastic, they contain some components which are unobservable to the econometric investigator and are treated by the investigator as random (Hanemann, 1984b). These unobservables could be characteristics of the individual and/or attributes of the item; they can stand for both variation in preferences among members of a population and measurement error."

If all the elements that determine the utility of a consumer can be observed and the structure of the utility function is known, the consumer's utility will be perfectly predicable. This implies we do not even need bother to inquire consumers for WTP because the WTP can be calculated by an econometric investigator. In reality, however, this is impossible; because we never know all the elements that determine

the utility of a consumer, her behavior will remain unpredictable to some extent. RUM attempts to capture this inherent limitation regarding the prediction of consumer behavior.

With the random component ϵ, equation (2) becomes:

$$v\left(\mathbf{q}_1, y - C, \epsilon\right) = v\left(\mathbf{q}_0, y, \epsilon\right). \tag{3}$$

C can be retrieved by solving the equation above. Now we specify an indirect utility function in order for readers to follow the underlying logic more clearly. In the existing literature, the Cox-Box indirect utility function is frequently used (Hanemann and Kanninen, p6):

$$v = \alpha_q + \beta_q \left[\frac{y^\lambda - 1}{\lambda} \right] + \epsilon_q, \tag{4}$$

where $q = 0, 1$.

In the special case where $\lambda = 1$, the Cox-Box indirect utility function becomes a linear function:

$$v = \alpha_q + \beta_q y + \epsilon_q. \tag{5}$$

This is the simplest form of indirect utility function. In this paper, we use this linear function to describe the fundamental logic of RUM-based CV analysis.

By specifying the linear indirect utility function (5) in (3), we obtain:

$$\alpha_1 + \beta_1 \left(y - C\right) + \epsilon_1 = \alpha_0 + \beta_0 y + \epsilon_0. \tag{6}$$

Therefore,

$$C = \frac{\alpha_1 - \alpha_0}{\beta_1} + \frac{\beta_1 - \beta_0}{\beta_1} y + \frac{\epsilon_1 - \epsilon_0}{\beta_1}. \tag{7}$$

McFadden and Leonard (1993) suggest a restricted version of this model with $\beta_1 = \beta_0 \equiv \beta > 0$. This simplifies the equation above as:

$$C = \frac{\alpha + \eta}{\beta}, \tag{8}$$

where $\alpha \equiv \alpha_1 - \alpha_0$ and $\eta \equiv \epsilon_1 - \epsilon_0$.

In contingent valuation dichotomous choice questions, respondents are asked questions such as "Are you willing to pay A dollars for this project to improve the air quality?" and expected to answer yes or no. A rational respondent should answer yes only if her WTP is larger or equal than the offered amount A. As we saw above, the WTP can be treated as a probable variable because we can never predict a consumer's utility completely. The probability that a respondent answers yes is:

$$Pr\{response = \text{"yes"}\} = Pr\{C \geq A\}, \tag{9}$$

where C denotes the WTP of the respondent.

With (8) in place,

$$Pr\{response = \text{"yes"}\} = Pr\{C \geq A\}$$

$$= Pr\left\{\frac{\alpha + \eta}{\beta} \geq A\right\}$$

$$= Pr\{\eta \geq -\alpha + \beta A\}. \tag{10}$$

Let G_η denote the cumulative distribution function of η, and g_η be the corresponding density function. By the definition of the cumulative distribution function:

$$Pr\{response = \text{``yes''}\} = 1 - G_\eta(-\alpha + \beta A) \tag{11}$$

η is a random variable, which corresponds to some probability distributions. A logistic distribution is frequently assumed for η due to its mathematical simplicity. If η corresponds to a standard logistic distribution:

$$Pr\{response = \text{``yes''}\} = 1 - \frac{1}{1 + \exp(\alpha - \beta A)}$$

$$= \frac{1}{1 + \exp(\alpha + \beta A)}. \tag{12}$$

Now n CV respondents answer dichotomous choice valuation questions. Let y denote the response "yes" when $y = 1$ and "no" when $y = 0$. If the observed responses for the questions are $y_1, y_2, ..., y_n$ for given bids $A_1, A_2, ..., A_n$, the likelihood function $L(\alpha, \beta)$ for this observation is:

$$L(\alpha, \beta) = \prod_{i=1}^{n}\left(\frac{1}{1 + \exp(-\alpha + \beta A_i)}\right)^{y_i}\left(1 - \frac{1}{1 + \exp(-\alpha + \beta A_i)}\right)^{1 - y_i}. \tag{13}$$

Therefore, the log-likelihood function becomes:

$$\log(L(\alpha, \beta)) = \sum_{i=1}^{n}[y_i \log\left(\frac{1}{1 + \exp(-\alpha + \beta A_i)}\right)$$

$$+ (1 - y_i)\log\left(1 - \frac{1}{1 + \exp(-\alpha + \beta A_i)}\right)] \tag{14}$$

The best parameters which fit the observation will be estimated by maximizing this log-likelihood function.

This is achieved by solving the following equations:

$$\frac{\partial \log(L(\alpha, \beta))}{\partial \alpha} = 0 \tag{15}$$

$$\frac{\partial \log(L(\alpha, \beta))}{\partial \beta} = 0. \tag{16}$$

They yield, respectively:

$$\sum_{i=1}^{n}\left[y_i(1 - z_i) - (1 - y_i)z_i\right] = 0 \tag{17}$$

$$\sum_{i=1}^{n}(-A_i)\left[y_i(1 - z_i) - (1 - y_i)z_i\right] = 0 \tag{18}$$

where $z_i = 1 / \left(1 + \exp\left(-\alpha + \beta A_i \right) \right)$. These equations can be solved with a numeric calculation method such as Newton-Raphson.

The Hessian matrix of the log-likelihood function $\log\left(L(\alpha, \beta) \right)$ is defined as:

$$H = \begin{pmatrix} \partial^2 \log L / \partial \alpha^2 & \partial^2 \log L / \partial \alpha \partial \beta \\ \partial^2 \log L / \partial \beta \partial \alpha & \partial^2 \log L / \partial \beta^2 \end{pmatrix}. \tag{19}$$

The variance-covariance matrix V is obtained from the Hessian matrix:

$$V = \left(-H \right)^{-1}. \tag{20}$$

In the variance-covariance matrix V, the (1, 1) element represents the variance of α and the (2, 2) element represents the variance of β. The square roots of the variances represent the standard errors of these parameters. The confidence intervals can be calculated from the standard errors since the maximum likelihood estimated parameters of α and β asymptotically correspond to normal distributions (Hanemann, and Kanninen, p27).

Now that we have retrieved the parameters α and β, we can obtain the probability distribution to which WTP corresponds.

Since η corresponds to a standard logistic distribution, the mean of η, $E(\eta) = 0$. With (8),

$$
\begin{aligned}
E(C) &= E(\frac{\alpha + \eta}{\beta}) \\
&= \frac{\alpha + E(\eta)}{\beta} \\
&= \frac{\alpha}{\beta}
\end{aligned}
\tag{21}
$$

The mean of WTP, $E(C)$, is α / β under the assumptions that the indirect utility function is expressed in (5) and the random variable η corresponds to a standard logistic distribution.

So far, we have assumed a specific indirect utility function. In the literature, other distributions such as normal, log-normal, log-logistic, and Weibull are also studied as WTP distributions (Hanemann and Kanninen, 1996). In this section, we take an example of a log-logistic model, and then discuss the double-bound dichotomous choice question format.

Log-logistic Model:

Assume that an environmental policy changes the status of non-market items from $\mathbf{q}_0$ to $\mathbf{q}_1$. Let v_0 and v_1 represent indirect utility states that correspond to $\mathbf{q}_0$ and $\mathbf{q}_1$, respectively. Here we adopt another utility model where v_0 and v_1 are formulated as follows (Hanemann and Kanninen, p10):

$$v_0 = y + \delta \tag{22}$$

$$v_1 = y + \delta + \exp\left(\frac{\alpha + \eta}{\beta} \right) \tag{23}$$

They yield:

$$Pr\{response = \text{"yes"}\} = 1 - G_\eta\left(-\alpha + \beta \log(A)\right) \tag{24}$$

If η corresponds to a standard logistic distribution, the above formula becomes:

$$Pr\{response = \text{"yes"}\} = \frac{1}{1 + \exp\left(-\alpha + \beta \log(A)\right)} \tag{25}$$

This is equivalent to (12) except that it takes the logarithm of A instead of the raw A. This formulation is also frequently used in actual CV surveys due to better data fitting. If C^* and C^+ denote the median and the mean of WTP, respectively (Hanemann and Kanninen, p21):

$$C^* = \exp\left(\frac{\alpha}{\beta}\right) \tag{26}$$

$$C^+ = \begin{cases} \exp(\alpha / \beta)\Gamma[1 + (1/\beta)]\Gamma[1 - (1/\beta)] & \text{if } \beta > 1 \\ \infty & \text{if } \beta \leq 1 \end{cases} \tag{27}$$

where Γ denotes a gamma function.

A graphical representation of the WTP distribution can be used to represent the mean of WTP. When WTP is non-negative:

$$\tilde{C}^+ = \int_0^{A_{max}} Pr\{\text{"yes"}\}dA \tag{28}$$

where $\tilde{C}^+$ stands for an approximation of the mean of WTP, and A_{max} the greatest amount among the bids (Hanemann and Kanninen, p21). This formula allows us to obtain a finite mean of WTP by choosing an upper limit A_{max}.

Double-Bound Dichotomous Choice Questions:
The double-bound dichotomous choice question format is known as a method to improve the efficiency of parameter estimation by querying CV respondents with two-stage questions. For example, in the first question, a respondent is asked "Are you willing to pay 10 dollars for this project?" If the answer is yes, the next question is asked with a higher bid amount, such as "Then are you willing to pay 20 dollars?" Contrarily, if the answer for the first question is no, the next question is asked with a lower bid amount such as "Then are you willing to pay 5 dollars?" Nowadays, the double-bound dichotomous choice question format is widely used in the practice of CV surveys.

The probabilities of responses for A_1 as a bid in the first question and A_U as a bid in the second question when the answer for the first question is yes, and A_L as a bid in the second question when the answer for the first question is no:

$$Pr\{response = \text{"yes and yes"}\} = 1 - G(A_U) \tag{29}$$

$$Pr\{response = \text{"yes and no"}\} = G(A_U) - G(A_1) \tag{30}$$

$$Pr\{response = \text{"no and yes"}\} = G(A_1) - G(A_L) \tag{31}$$

$$Pr\{response = \text{"no and no"}\} = G(A_L) \tag{32}$$

where G is a cumulative distribution function of WTP.

The log-likelihood function $\log\big(L(\alpha,\beta)\big)$ becomes:

$$\log\big(L(\alpha,\beta)\big) = \sum_{i=1}^{n}[yy_i \log(1-G(A_U)) + yn_i \log(G(A_U)-G(A_1))$$

$$+ny_i \log(G(A_1)-G(A_L)) + nn_i \log(G(A_L))] \tag{33}$$

where $yy_i = 1$ if the response is "yes and yes" and $yy_i = 0$ otherwise. yn_i, ny_i and nn_i are also defined similarly.

The parameters can be estimated by maximizing the log-likelihood function as we presented in the case of single-bound dichotomous questions.

Now let's analyze CV response data. The following programs are written based on an algorithm by Kuriyama (2011). First, we introduce an R language program for a single-bound logit model. Then, we extend it to a double-bound logit model.

Single-Bound Logit Model:

Firstly, we estimate the parameters of a WTP distribution based on the single-bound logit model. We assume that the probability that a respondent answers yes for a bid A is formulated as follows:

$$Pr\{response = \text{"yes"}\} = 1 - G_c(A)$$

$$= \frac{1}{1+\exp(-\alpha + \beta A)}. \tag{34}$$

where G_c denotes a cumulative distribution function of WTP.

$$G_c(A) = \frac{1}{1+\exp(\alpha - \beta A)} \tag{35}$$

The parameters α and β can be estimated with maximization of the log-likelihood function. Now we analyze the data using samples from Kuriyama (2011). Let's assume that the single-bound dichotomous choice questions resulted in the following responses (the currency unit for bids is Japanese yen):

Bids	Yes	No
500	38	8
1000	31	12
2000	25	15
5000	17	23
10000	17	28
20000	8	36

The parameter estimation is done with the following program code written in the statistical analysis language R.

```
# data setting
rts <- c(500,1000,2000,5000,10000,20000)
ys <- c(38,31,25,17,17,8)
ns <- c(8,12,15,23,28,36)

# program code
max bid <- max(rts)
ts <- log(rts)
z <- function (a, b, t) 1/(1 + exp(-a + b * t))
ll0 <- function(a, b, t, y, n) y * log(z(a, b, t)) + n * log(1-z(a, b, t))
ll.creator <- function(ts, ys, ns) {function(par) {sum(ll0(par[1], par[2], ts,
ys, ns))}}
ll <- ll.creator(ts, ys, ns)
res = optim(par = c(0,0), fn=ll, control = list(fnscale = -1), hessian = TRUE)
a <- res$par[1]
b <- res$par[2]
var.cov <- -solve(res$hessian)
step <- 100
delta <- max bid/step
bids <- seq(delta, max bid, by=delta)
bids <- append(bids, 0.001, after=0)
estimates <-  z(a, b, log(bids))
cs <- (estimates[1:step] + estimates[2:(step+1)]) * delta / 2

# results
mean.of.wtp <- sum(cs)
median.of.wtp <- exp(a / b)
```

The interpretation of the results is as follows:

Variables	Results	Notes
a	6.298638	estimate of α ($\hat{\alpha}$)
b	0.76526	estimate of β ($\hat{\beta}$)
var.cov	$\begin{pmatrix} 0.8856746 & 0.10664933 \\ 0.1066493 & 0.01312902 \end{pmatrix}$	variance-covariance matrix of $\hat{\alpha}$ and $\hat{\beta}$
mean.of.wtp	7552.338	estimated mean of WTP
median.of.wtp	3754.523	estimated median of WTP

Double-Bound Logit Model:

Similarly, using sample data from Kuriyama, let's assume that double-bound dichotomous choice questions gave the following responses (the currency unit for bids is Japanese yen):

First Bid	Second Upper	Second Lower	Yes Yes	Yes No	No Yes	No No
1000	3000	500	18	25	3	23
3000	6000	1000	10	19	13	34
6000	15000	3000	6	14	8	49
15000	40000	6000	2	18	5	49

The parameter estimation is done with the following program code written in the statistical analysis language R.

```
#data setting
rt1s <- c(1000,3000,6000,15000)
rtus <- c(3000,6000,15000,40000)
rtls <- c(500,1000,3000,6000)
yys <- c(18, 10, 6, 2)
yns <- c(25, 19, 14, 18)
nys <- c(3, 13, 8, 5)
nns <- c(23, 34, 49, 49)
# program area
max_bid <- max(max(rt1s), max(rtus), max(rtls))
t1s <- log(rt1s)
tus <- log(rtus)
tls <- log(rtls)
gc <- function(t, a, b) 1/(1 + exp(a - b * t))
pyy <- function(t1, tu, tl, a, b) 1 - gc(tu, a, b)
pyn <- function(t1, tu, tl, a, b) { gc(tu, a, b) - gc(t1, a, b);}
pny <- function(t1, tu, tl, a, b) gc(t1, a, b) - gc(tl, a, b)
pnn <- function(t1, tu, tl, a, b) gc(tl, a, b)
ll0 <- function(a, b, t1, tu, tl, yy, yn, ny, nn)   {
   yy * log(pyy(t1, tu, tl, a, b)) + yn * log(pyn(t1, tu, tl, a, b)) +
   ny * log(pny(t1, tu, tl, a, b)) + nn * log(pnn(t1, tu, tl, a, b)) }
ll.creator <- function(t1s, tus, tls, yys, yns, nys, nns) {
   function(par) { sum(ll0(par[1], par[2], t1s, tus, tls, yys, yns, nys,
nns)) }}
ll <- ll.creator(t1s, tus, tls, yys, yns, nys, nns)
res = optim(par = c(5,2), fn=ll, control = list(fnscale = -1), hessian = TRUE)
var.cov <- -solve(res$hessian)
a <- res$par[1]
b <- res$par[2]
step <- 100
delta <- max_bid/step
bids <- seq(delta, max_bid, by=delta)
bids <- append(bids, 0.001, after=0)
estimates <-  1 - gc(log(bids), a, b)
cs <- (estimates[1:step] + estimates[2:(step+1)]) * delta / 2
# results
mean.of.wtp <- sum(cs)
median.of.wtp <- exp(a / b)
```

The interpretation of the results is as follows:

Variables	Results	Notes
a	6.686459	estimate of α ($\hat{\alpha}$)
b	0.9090847	estimate of β ($\hat{\beta}$)
var.cov	$\begin{pmatrix} 0.35530243 & 0.043215536 \\ 0.04321554 & 0.005455678 \end{pmatrix}$	variance-covariance matrix of $\hat{\alpha}$ and $\hat{\beta}$
mean.of.wtp	5753.115	estimated mean of WTP
median.of.wtp	1564.24	estimated median of WTP

The estimate of the variance-covariance matrix is slightly different from that of Kuriyama (2011). It is conjectured that the balance stems from the difference of optimization algorithms used in Microsoft Excel and R language.

Discussion

The Exxon Valdez oil spill in 1989 was the first case in which contingent valuation was used to assess damages in a lawsuit. While this case brought CV into global prominence, the spreading use of CV also led to a great number of criticisms. In response to these criticisms, the National Oceanic and Atmospheric Administration (NOAA) of the United States in 1993 convened an advisory panel consisting of renowned economists including Nobel Award winners Kenneth Arrow and Robert Solow. The goal of the panel was to discuss whether CV is reliable enough to estimate the passive-use values of the environment, and, if so, to recommend desirable survey designs to survey planners.

The report of the NOAA panel (Arrow et al. 1993) identified the following biases in CV:
- Willingness to accept is typically much larger than willingness to pay. That is, respondents may ask for a much larger compensation for deterioration of an environmental feature than what they are willing to pay for the same level of improvement.
- Respondents may not be as rational as the models postulate. Typically, respondents in a CV survey are presented with a hypothetical policy scenario which is likely to improve the values of the environment but they might not fully understand what they are asked, and even if they do, they might not answer seriously because the survey scenarios are not real and not binding.
- Self-reported willingness tends to be overstated compared with "actual" willingness to pay. A respondent who claims to pay a certain amount for an environmental improvement usually does not pay as much when an actual opportunity of contribution is given.
- Embedding effect; WTP does not necessarily increase as the quantity of goodness grows. For example, the average amounts of WTP to prevent 2,000, 20,000 and 200,000 wild birds from dying may be almost the same.
- A CV survey asks respondents about only one problem, while many problems may exist in reality. The estimate of WTP can be overstated if respondents take only the asked problem into account, but not all the potential problems.

- CV respondents may fail to seriously consider their budget constraints. They may fail to take into account the fact that they must abandon some private consumption in order to pay for environmental protection measures.
- It is difficult to determine the relevant population from which respondents are sampled. While an environmental issue may affect people in an extensive area, those who are less affected by the specific issue should be under-sampled.
- "Warm Glow" effects; what respondents express in CV surveys may only reflect their goodwill to worthy causes. Their motivations may be similar to those who pledge charitable donations.

To address these issues, the NOAA panel recommended the following items be taken into account in the CV survey design:
- Avoid open-ended questions because they are sensitive to a scenario's trivial details and lead to respondents' strategic behavior. Use of dichotomous questions is suggested since they are less likely to be subject to those biases.
- CV survey results should be interpreted conservatively since responses tend to be overstated. Dichotomous questions are better in this regard because they usually give more conservative results than open-ended questions.
- An appropriate sample type and size should be chosen for a CV survey. Non-responses must be minimized.
- Face-to-face interviews are preferable for eliciting reliable responses.
- Pretests are important since they help detect biases before the main surveys are implemented and lead to an improvement of the survey reliability.
- A willingness to pay (WTP) format should be used instead of the willing to accept (WTA) because WTP is the conservative choice.
- Adequate information must be provided to and understood by respondents about the environmental program scenarios presented in surveys.
- Respondents must be reminded of alternatives. They should be informed that they are able to choose a substitutive market and non-market items under budget constraints.
- A "no-answer" option should be explicitly allowed on the top of the "yes" and "no" options on dichotomous valuation questions.
- The survey should ask why a respondent answers yes or no.
- In the final report, WTP summaries should be presented by respondents' attributes such as income, prior knowledge of the site, and attitudes toward the environment.

The NOAA panel concluded that CV surveys were reliable enough provided that the surveys followed the panel's guideline as closely as possible (Arrow et al, p44).

"The Panel concludes that under those conditions (and others specified above), CV studies convey useful information. We think it is fair to describe such information as reliable by the standards that seem to be implicit in similar contexts, like market analysis for new and innovative products and the assessment of other damages normally allowed in court proceedings. As in all such cases, the more closely the guidelines are followed, the more reliable the result will be. It is not necessary, however, that every single injunction be completely obeyed; inferences accepted in other contexts are not perfect either."

However, the CV antagonists severely criticized the NOAA panel report. Among the most notable was Diamond and Hausman (1994). They insisted that contingent valuation was deeply flawed and concluded that "contingent valuation surveys do not measure the preferences they attempt to measure" (Diamond and Hausman, p46). According to them, the fundamental problems of CV relate to the political decision making process on environmental issues (Diamond and Hausman, p58):

> "We concluded that such (contingent valuation) welfare analysis would not be a guide to good policy. Our conclusion is often challenged by the common Washington fallacy that even if stated willingness-to-pay is inaccurate, it should be used because no alternative estimate exists for public policy purposes. Put more crudely, one hears the argument that 'some number is better than no number'."

While some of Diamond's arguments are convincing, one cannot dismiss the fact that only contingent valuation can offer concrete evaluation on the passive use values of the natural environment. Our conclusion is that a gradual progress on environmental economic valuation may be satisfactory and we can expect that someday we will have better measures for environmental evaluation.

Conclusion

So far we have looked at economic and statistical theories behind contingent valuation as well as criticisms and responses. While, at least to date, CV is the only comprehensive method that can produce concrete estimates on the welfare of environmental programs, some of the antagonists' criticisms are also worth considering. The most potentially damaging defect of contingent valuation would be its assumption of perfect rationality. In the majority of literature, CV theories postulate that respondents have perfect knowledge on the questions asked and respond in a completely rational way.

Naturally, this is not the case in reality. Oliver Frör (2008) insists that CV survey planners need to incorporate respondents' bounded rationality into their survey designs. According to Frör, bounded rationality is defined as follows:

> "Bounded rationality assumes that decision makers in the real world have to cope with a number of constraints like limited information availability (limited time to acquire information) and limited computational capacities and capabilities which makes it necessary for them to employ heuristics, simplified decision rules often based on past experience, to achieve satisfactory albeit not optimal outcomes."

After reviewing some empirical studies of cognitive psychology on contingent valuation, Frör concluded that the concept of bounded rationality was helpful in understanding how respondents in a CV interview would process the information. Bounded rationality is based on the assumption that individuals face some limitations in making decisions under real world circumstances because there are various information constraints and limits to their computational capacities and etc. Therefore the respondents to CV interviews may find themselves in a situation that requires them to economize on the scarce cognitive resources they have access to so that they can make a decision and respond to the CV questions. In doing so, they may use various low-effort strategies based on heuristic cues, etc.

Therefore, it can be expected that CV respondents take into account not only their utility functions but also the scarcity of their cognitive resources when making decisions. If we can successfully incorporate this

economy of cognitive resources explicitly into quantitative models in utility maximization, we may be able to elicit more reliable responses from CV respondents. The authors strongly believe that further studies will be required in this direction for a sound development of contingent valuation theories.

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REVIEW:
A regional security complex analysis of the Preah Vihear temple conflict, 1953–1962

Poowin Bunyavejchewin[1]

Abstract

The "regional security complex" (RSC) framework is used to examine the first phase of the Preah Vihear temple conflict between Thailand and Cambodia in the time period from 1953 to 1962. Analysis by this framework suggests that the said boundary conflict was shaped by constellations of enmity associated with nationalist myths of nationhood, the preferences of the leaders of the two sides dealing with the conflict, and the potential of the spilling over of negative externalities to other states. By taking Indochina as the security complex region and integrating multi-layer RSCs, we suggest that the RSCs produced structural effects, stemming largely from the involvement of the great powers in the 'Cold War' environment, which influenced the strategic calculations on the both sides of the conflict and prevented the dyad from choosing war to deal with the temple conflict.

Keywords: Boundary conflicts, Cambodia, Indochina, Preah Vihear temple, Regional security complex (RSC), Thailand

Introduction

The 1950s was a pivotal period in modern international relations with the Soviet acquisition of nuclear power, the 'loss of China' in late 1940s, and the outbreak of the Korean War in 1950 which divided the world into a bipolar system, i.e. the 'Free World' versus the 'Communist Camp'. In Asia, the outcome of the Korean War polarized the Asian states into alliance systems conditioned by the Anglo-American 'Free World' and the Sino-Soviet communist blocs (Best, Hanhimaki, Maiolo and Schulze 2008: 265–266).

Concurrently, the wave of decolonization deriving from the fall of the European powers led to the emergence of new states, particularly in Asia and Africa. A number of new independent states emerged, especially in the 'Southern Asia' region, India and Indonesia included. With the appearance of new sovereign states, the pressure exerted by the 'great powers' over alignment decisions became a significant burden on the leaders of the newborn states because aligning with either the US or the Sino-Soviet side or proclaiming neutrality entailed enormous security predicaments; this was a serious issue for the emerging states encircled by aligned neighbors because of the higher risk associated with their geographical position.

In addition, the increased number of existing states created a bigger potential for conflict leading to war due to the augmentation of the boundaries' proportions (Geller & Singer, 1998: 60-61; Vasquez, 1993: 127). The boundary conflict over the Preah Vihear temple between Thailand and Cambodia, a newly independent state in Indochina, manifested not only a hostility between members of a dyad but also the influence of the great powers in the Cold War environment.

We examine the nature of the boundary conflict over the temple through a regional security complex (RSC) analysis. First, the RSC theory is laid out after which we explore the securitization of the temple at the dyadic level, investigate the international system, and narrow it down to Southeast Asia as a regional security complex. We also examine the interconnections among multi-layer levels to understand the

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structural effects on the strategic calculus of the dyad, and finally, we evaluate the consequences of the decisions of the two sides of the conflict swayed by the structural effects.

Methodology

The methodology used for this research is constructivist-qualitative. In particular, discourse analysis was broadly applied for analyzing data, though it is a contested concept. This is because in the socio-political world, nothing is either objectively existent or a brute fact; everything follows a social construct, inter-subjective and subject to change. From this perspective, Robert Cox (1981) suggested that no concept should be taken for granted, as it is "always for someone and some purpose" (p. 128) and, as Ken Booth (2007: 150) added, "from somewhere".

In their research on non-Western states, Cox (1981) and Booth (2007) warn that it is imperative to keep spatial differences in mind, particularly in systems of meaning. Thus, in this study, discourse analysis is not narrowly circumscribed by post-structuralist techniques such as deconstruction. Hence, notions of essentialism, exceptionalism, and universalism are rejected. According to Roger Pierce (2008: 280), the common ground for discourse analysis is the analysis of systems of meaning and the operations that shape and naturalize the pattern actors or agents conceive in their roles and positions within existing power structures; even more important is to scrutinize those who claim to hold the truth and how those actors or agents perceive the socio-political realities constructed by such truth.

By employing various techniques of inquiry, discourse analysis provides more insightful ways for gaining a practical understanding of existing power structures and their functions in the socio-political phenomena of the 'Third World'. In the terrain of foreign policy, as Lene Hansen (2006) indicates, discourse analysis argues that:

> "Foreign policy decision-makers are situated within a larger political and public sphere, and their representations as a consequence draw upon and are formed by the representations articulated by a larger number of individuals, institutions, and media outlets" (pp. 6-7).

This statement explains why the method of discourse analysis would be appropriate for our study. However, discourse analysis has not been free from criticism, particularly regarding its reliability and applicability. As a subset of qualitative methodology, it has inherited the critiques directed at qualitative research, including those alleging a lack of objectivity because of the immersion of the observer, an inability to generalize due to an insufficient sample, and the absence of numerical and statistical data, and empirical evidence (Grix, 2004: 121-122). As such, we were cautious in its usage and its drawbacks were taken into account.

Regional Security Complex Theory:

In *People, States & Fear*, Barry Buzan (2007) defines a security complex as "a group of states whose primary security concerns link together sufficiently closely that their national securities cannot realistically be considered apart from one another" (p. 160); the term includes both the character of the attribute (security), and the concept of interdependence of neighbors whether in the form of rivalry or that of shared interests. This framework helps with the construction "of a multi-level, holistic approach to the analysis of security problems… designated to insert a middle level of analysis between the global system level… and

the individual country level" (Buzan, 1988: 2). He further explains that each level retains its own distinctive character and dynamic for a separate analysis while it is also possible to examine interactions with others for a more comprehensive understanding.

The distinctive character, in this context, refers to the pattern of amity and enmity; however, a security complex is inclined to depend more upon enmity (Buzan, 1998: 2) and relationships arranged by suspicion and fear (Buzan, 2007: 160) rather than amity. This view reflects Louis Cantori and Steven Spiegel's approach to international regions. Cantori and Spiegel (1969) explain that the structure of relations is based on three elements: those associated with cooperation or conflict; those associated with amity or antagonism, plus the means and instruments of war and conflict or cooperation (Cantori & Spiegel, 1969: 362–363). They cite as an example the case of Southeast Asia during the 1960s when there were direct conflicts and antagonistic relationships among states, including that between Thailand and Cambodia (Cantori & Spiegel, 1969: 370). Udo Steinbach (1982) notes that in conflicts between the Third World states nationalism has been the characteristic source of conflicts at both the interstate and domestic levels; this can be seen in the persistent conflicts between Thailand, Cambodia and Vietnam (Steinbach, 1982: 23).

The RSC analysis takes the distribution of power into account (Buzan, Wæver & de Wilde, 1998: 13); in normal circumstances, the distribution of power, military and economic capabilities, is the measure that defines the polarity of the RSC, since ordinary complexes are structurally anarchic (Buzan & Wæver, 2003: 55). Therefore, the analysis comprises security predicaments, particularly among regional powers inside the RSC. From this perspective, I argue that the distribution of power within the RSC is no different from that asserted by the neo-realist perspective on the distribution of capabilities across states on the international system level (Waltz, 1979: 98) in that it is a component of the RSC rather than an attribute of states. Furthermore, Cantori and Spiegel (1969) indicate that by considering power as a variable in subordinate systems, all aspects of power (material, military and motivational) must be accounted for in a relative way (Cantori & Spiegel, 1969: 367).

The distribution of power in the RSC is shaped by the perceptions of states; for example, fear leads to conflict-prone foreign policies and military behavior (Buzan, 2007: 161), causing security dilemmas. In addition, this predicament is exacerbated by the pattern of amity and enmity, though primarily by antagonism. For example, Thailand, according to Buzan, "is much more concerned by threats from Vietnam than from any of its other neighbors" (Buzan, 2007: 161).

The last and most problematic component is the member units within the RSC. Buzan, Wæver and de Wilde (1998) define this simply as "the arrangement of the units and the differentiation among them" (p. 13); groups of units "can be distinguished from the entire system by the particular nature or intensity of their interactions with or interdependence on each other" (p. 6). Buzan (2007) observes that "the task of identifying a security complex involves making judgments about the relative strengths of security interdependencies among different countries" (p. 162), adding that security interdependencies are stronger between members of a set than between the members and outside states. Nevertheless, I argue that these descriptions are too vague and must be elaborated.

So what are the objects of security that push states towards security interdependence? In a study of regional security and conflict, Patrick Morgan (1997) argues that the explanation provided by Buzan, Kelstrup, Lemaitre, Tromer and Wæver (1990) for the member units of RSC has miscalculated the role of external great powers within the RSC after the end of the Cold War. Morgan contends that the security interests of those powers were firmly interconnected with those of the members of the security complexes

and concludes that "provision must be made for possible *members of a regional security complex not located in that neighborhood*" (Morgan, 1997: 28–29). Morgan does not suggest that geographical proximity is irrelevant in delimiting the member units of security complexes since "their most feared opponents are usually in the neighborhood" (2007: 29).

Many studies in international conflict have supported the role of geographical proximity, specifically territorial contiguity, as an increased source of conflict and war. Geller and Singer (1998) found that at the dyadic level, proximate states were more inclined to engage in conflict and war than remote states and that, furthermore, conflict and war were more probable between states whose territories were contiguous (Geller & Singer, 1998: 78). Likewise, John Vasquez (1993) found that "states that are contiguous and/or involved in disputes over territorial contiguity tend to go to war with each other more frequently than other states" (pp. 132–133). Although territorial contiguity did not necessarily lead to a militarized conflict, it was more likely than other issues to lead to sequential events that eventually resulted in war (pp. 124–127). The influence of great powers, Morgan states, must not be trivialized either; their roles and security relations can be seen explicitly through their military presence, as well as in their military alliances, especially in geo-strategic regions (Morgan, 1997: 29–30). In this sense, conflict and war caused by proximity and contiguity may be either escalated or mitigated according to the interests of the great powers.

Morgan suggests that an active and durable military presence as well as intense security engagements complement geographical criteria. In such a case, "identified complexes will overlap, or vary somewhat, with issues, events, and related perceptions of what actors and analysts deem to be relevant externalities… Hence identification will always be problematic; the perceptions are not guaranteed to match up and may fluctuate" (Morgan, 1997: 30). Morgan's revision, allows for a consideration of external actors whose security relationships are tied profoundly to the members of the RSC; moreover, it permits grey zones where complexes are inseparably overlapping. These interdependences are more apparent in the RSC for which conflict and war are in the middle. This is reaffirmed by David Lake (1997) who applies a systems approach to RSC analysis.

By considering the RSC as a regional system, Lake refers to 'externalities' as salient factors: "costs (negative externalities) and benefits (positive externalities) that do not accrue only to the actors that create them. They are also known as spillover or neighborhood effects…the actions of each party impose costs upon the others, creating a negative externality that binds the relevant states together as a set of interacting units" (Lake, 1997: 49). The security predicament can also be considered as an externality. In Southeast Asia's pre-ASEAN years, negative externalities that tied new states together as a security complex were trans-border issues which included boundary disputes and communist insurgencies (Khong, 1997: 322–325). In this study, overlaps, relationships and externalities are regarded generally as structural repercussions.

The structural repercussions or effects, as Kenneth Waltz (1971) contends, do not entirely determine state behaviors; rather, "structural constraints are barriers, but men can try to jump over them. Structure shapes and limits choices; it establishes behavioral tendencies without determining behavior" (Waltz, 1971: 471). Hence, this study argues that the policy options of involved states in the RSC towards specific externalities were narrowed by the structural effects descending from a higher level.

A question to answer is what leads states to engage each other on security matters, i.e. to form security complexes. For Lake, this is the 'negative externality', but I argue that it is not necessarily an external factor; a conflict may be invoked intentionally by the involved parties for different purposes. We propose using the Buzan et al. (1998) term 'referent objects' for those factors that lead states to establish security

complexes. The referent objects, according to Buzan et al., are "seen to be existentially threatened and … have a legitimate claim to survival" (Buzan et al., 1998: 36). Objects of security are formed only through the successful process of securitization, which is inter-subjective; they are the product of the power politics of securitization among securitizing actors (Buzan et al., 1998: 31–32).

Nevertheless, as Hans Günter Brauch (2008) indicates, some referent objects are more easily securitized than others, because the spatial connotations of referent objects are non-equivalent. For instance, territorial integrity and national identity have direct spatial connotations; therefore, they have more value at risk than anthropocentric objects such as eco-sustainability (Brauch, 2008: 340–341). Consequently, referent objects of security bind the members of the RSC together, and non-consenting parties are tied to the referent objects by negative externalities. Through the same process, complexes and sub-complexes could be turned into referent objects of either larger complexes or an international system dominated by rivalries among the great powers.

We have outlined the concept of RSC analysis by reviewing the literature on subordinate systems and security complexes. In summary, the RSC applied in this study consists of at least three components:

1. *The group of member units* (states) bound together by the referent object of security and located within delineated spatial areas, leading to interactions manifested in many forms, including conflict and war; the members are not delineated by geographical proximity but by security interdependence.
2. *The pattern of amity and enmity* (primarily antagonism) defined in terms of historical relationships arranged by the comity of nations: hence, the social construct.
3. *The distribution of power* determined by military and economic capabilities.

Multi-level parameters can also be added in the form of other complexes or an international system whose structural effects trigger down to the RSC.

Findings and Discussion

The Revival of Traditional Antagonism:

The corollary of the Second World War affected the configuration of the international system in terms of power transitions and geo-political strategies. As A. F. K. Organski (1958) points out, a power transition occurred in the early post-war period: the US replaced the British and European powers as the 'dominant nation'; nevertheless, he adds, there were also challengers, the Soviet Union and Communist China, and power struggles among the US and its allies could lead to wars (Organski, 1958: 316–325). The decline of the European empires brought about the emergence of numerous states. Because of the timing of their independence, the former colonial states inevitably faced a tightly bipolar environment and became the referent objects of the great powers' strategies to create their spheres of influence.

In Southeast Asia, direct and indirect battlefields formed, especially after the withdrawal of France, the former colonial power. Cambodia was one of those states that had become *de facto* independent in November 1953 and then officially received international recognition by the Geneva Accord in July 1954 (Lee, 1976: 236–237). In contrast, Thailand had been neither a *de jure* colony nor a *de jure* defeated state in the great wars, despite its ambiguous status during the two world wars. Nevertheless, what both states had in common were their Third World characteristics, i.e. weakness, vulnerability and insecurity.

As Third World states, both Thailand and Cambodia may be defined as prismatic polities, connoting a

sense of immature state formation. Thus, they "impinge upon the state-making process of other states in their neighborhood, especially those contiguous to them" (Ayoob, 1995: 47). For Thailand, a further complication is its lack of national identity or nationhood since its population is multi-ethnic, especially in southern Thailand (Alagappa, 1987: 198). Nationhood is substantial to modern states, especially those newly born, not only in relation to domestic aspects but also to international ones. As Pavin Chachavalpongpun (2005) indicates, nationhood "plays an important role in shaping the peoples' consciousness and the way they perceive their place in the global community" (p. 10).

Nevertheless, nationhood is not intrinsic but a social artifact; therefore, it requires construction (King, 2008: 133). In Cambodia, unlike Thailand, 90 percent of the population is Khmer (Acharya, 2000: 57); however, this does not mean that Cambodian nationhood has always been firm. Rather, Cambodian leaders have tried to bind the nation to the great empire of Angkor, which flourished from the ninth to the fifteenth centuries (Wood, 2011: 39–42). This study argues that the cults of Thai and Cambodian nationhood were crucial ingredients in the boundary conflict between the dyad after the French withdrawal from Indochina.

In 1954, the year Cambodia became officially independent, the Preah Vihear temple became a referent object of security in the dyadic relation due to a negative externality initiated by Thailand, though this process had begun years earlier with Thailand stationing its keepers around the temple area in 1949 disregarding the French calls for their removal (Leifer, 1967: 85). The temple was located on the Dangrek mountains on the Cambodian frontier; after Cambodia became independent, the temple was immediately occupied by Thai police forces (Smith, 1965; Reddi, 1965: 210). In addition, Thailand, as David Chandler states, "was reluctant to accept that its satellite of the 1840s was now a sovereign state" (Chandler, 1998: 36); Cambodia used to be under Siamese (Thai) dominion before the arrival of Western colonialism.

On the other hand, for Cambodia, Thailand's reoccupation of the temple was not merely a violation of its territorial integrity but also a symbolic invocation of the history of subordination that was still remembered by Khmer elites (Leifer, 1974: 51). This event exposed the reality that the removal of colonial rule brought about a fear of threats from traditional antagonists, as the cocoon guaranteed by a big power no longer existed. Therefore, a traditional antagonism was revived and intensified through the political maneuvers of dyad members designed to maintain the legitimacy of their regimes.

We realize that the pattern of relationships between Thailand and Cambodia was deeply rooted in the memory of the rise and fall of the great ancient empires with which they identified themselves, thus the constellations of enmity. In this sense, the dispute over the temple, as Michael Leifer (1967) indicates, was not "a matter of substance, but it was certainly symptomatic of the two countries' mutual suspicion" (p. 85). This mutual suspicion stemmed from historical myths symbiotic to both sides, drawing their nationhood on the perception of their position in the regional and international spheres.

The Nationhood of Thailand and Cambodia:

After the collapse of Thailand's absolute monarchy in 1932, Field Marshal Phibun Songkhram, the statist leader in power from 1938 to 1944 and again from 1948 to 1957, propagated the chauvinist cult of the 'Greater Thai Empire' (Baker & Phongpaichit, 2005: 131–132) on the idea of a golden land (*Suwannaphum*).

> "Southeast Asia is composed of small nations … Siam, being situated in the centre of the group
> and the only independent country so far, naturally will be looked up to as an 'elder brother'
> nation" (Tarling, 2006: 71).

From the Thai perspective, its neighbors, including Cambodia "were all of 'original Thai stock' and should be united with Siam" (Baker & Phongpaichit, 2005: 132). Furthermore, since the Phibun premiership, communism had been negatively identified by Thai leaders as the 'contrary' to Thainess, thus aligning Thailand with the 'Free World'. Finally, Phibun attempted to regionalize the notion of Thai nationhood as Southeast Asian-ness by joining the Southeast Asia Treaty Organization (SEATO), the US-led anti-communist alliance (Chachavalpongpun, 2005: 48). Hence, from the world-view of Thai nationhood, Thailand labeled itself as the regional hegemony whose stance was opposed to communist domination.

After the decline of the Angkor Empire in the fifteenth century, Cambodia was annexed by its neighbors. After the French intervention in the second half of the nineteenth century, it became a French protectorate. In this regard, as V. M. Reddi (1970) states:

> "Khmer nationhood was not exclusively the product of French rule. The love of freedom is embedded in the culture, history and, above all, the religion of Cambodian society. This rather dormant national trait was kindled and invigorated by centuries of conflict with the aggressive neighbors, Thailand and Vietnam" (Reddi, 1970: 225).

Given the nature of Khmer nationhood, Cambodia's foreign policy direction was "shaped by old fears and new anxieties", especially concerning its traditional antagonists (Leifer, 1972: 119). This induced a strong feeling of being vulnerable to its more powerful and aligned neighbors, hence its "hypersensitive attitude to national security" (Leifer, 1974: 50–51). In this regard, non-alignment was pursued by Cambodia's leaders to ensure their country's safety.

The nationhood of both states and their nationalist sentiments escalated their inclination to securitize the Preah Vihear temple. For Thailand, its forcible occupation of the temple signified a patronizing outlook towards Cambodia in its unilateral proclamation of a regional hegemonic status (Leifer, 1967: 85). Cambodia's reaction, by contrast, was more complicated, though Thai aggression reaffirmed its fear of traditional antagonism. This derived from the fact that Cambodia, as a newborn state, was relatively weak, militarily and economically; in addition, in geo-political terms it was encircled by traditional adversaries that aligned themselves with the great powers.

Consequently, Cambodia was confronted with the security predicament that either securitizing the border problems and reacting forcefully or ignoring the Thai presence would produce a boomerang effect not only upon regime stability but also on the existence of the state. Given this dilemma, Cambodia decided not to securitize the issue immediately; rather, it chose diplomatic negotiation with Thailand (Pradhan, 1985: 71–72). From 1954 to 1957, there was no official response from Bangkok, yet Norodom Sihanouk, the former King and Cambodian leader, insisted that Cambodia withhold the use of force, so as not to deteriorate the border situation (Leifer, 1967: 86).

Nevertheless, after Sihanouk's visit to China in 1956, Thailand boosted its police forces in the temple areas. In April 1958 Bangkok announced to Phnom Penh that the Preah Vihear temple belonged to Thailand, as Thailand had been compelled under pressure to sign the Franco-Thai Treaties of 1904 and 1907 over the issue of Cambodia's boundaries and frontiers, and therefore the treaties were no longer applicable (Leifer, 1967: 86–87). The behavior of both states, this study contends, was not merely a product of domestic conditions; rather, both regional and international structures made Thailand's aggressive actions possible and narrowed Cambodia's options in responding to such aggressions.

Indochina as the Mainland Southeast Asian Complex:

In the 1950s, the international climate was strained by the bipolarization of international politics, particularly after the 'loss of China' and the Korean War. The anti-Communist campaigns in the US had also been stirred up, becoming widely known as 'McCarthyism', an overwhelming fear of Communist threats, which put pressure on the politics of the Potomac (Crockatt, 1995: 93–95). The threat of communism seemed affirmed by the triumph of the Red China and the invasion of South Korea.

In addition to the instability in East Asia, Washington was also concerned by the weakening of French power in Indochina. This was expressed in the National Security Council Paper 64 (NSC-64) in February 1950:

> "Indochina is the area most immediately threatened. It is also the only area adjacent to communist China which contains a large European army, which along with native troops is now in armed conflict with the forces of communist aggression. A decision to contain communist expansion at the border of Indochina must be considered as a part of a wider study to prevent communist aggression into other parts of Southeast Asia" (NSC, 1950).

The views of NSC-64 were then confirmed by the subsequent top-secret paper, NSC-68, which pointed to the need to contain the communist spheres of influence on a global scale. Southeast Asia became the foreign policy priority of the US and a chance for local state leaders to gain American support and recognition and thus the legitimization of their regimes. Thailand under Phibun zealously took this opportunity, despite the low degree of communist insurgency (Bamrungsuk, 1988: 43–47).

Nevertheless, the US conducted a neutral policy concerning independence in Indochina since it preferred the presence of France in the region (Bamrungsuk, 1988: 39). This was also the case when Sihanouk discussed Cambodian independence with John Foster Dulles, the US Secretary of State, in 1953; American sympathy with colonial powers let Sihanouk down (Lee, 1976: 235–236; Kirk, 1971: 43–44). However, the network of security interdependence had more players, which became apparent during the establishment of SEATO.

Despite the words 'Southeast Asia' in its name, most of SEATO's members were Western powers, including the US, the UK, France and Australia, as only two Southeast Asian states, Thailand and the Philippines, joined the alliance (Phuangkasem, 1973: 9). This implied the importance of security interdependence not only for the US but also for the former colonial powers and local states. Even though the US wanted to bring Indochinese states into the alliance, the UK disagreed after meeting with the Communist China at the Geneva Conference, wanting Indochina to become a neutral zone instead and SEATO to be only a safeguard of Indochinese neutrality (Pradhan, 1985: 38–39). Sihanouk was again disappointed with the US refusal of any solid guarantee of Cambodian security, apart from the 'rights without duties' of the SEATO umbrella, against the threats from neighboring countries (Pradhan, 1985: 40; Kirk, 1971: 45). This heightened Cambodia's anxiety over American sincerity.

The role of the non-aligned movement, particularly India, was also crucial to the pattern of relationships within mainland Southeast Asia, especially after the Bandung Conference in 1955. At Bandung, the promotion of *Pancha Shila*, the India-enunciated principles of peaceful coexistence, seemed to offer a way out of the security predicament faced by newborn states such as Cambodia (Kirk, 1971: 46). In addition, Cambodia was convinced by India not to forge closer ties with the US and SEATO since from the Indian perspective a military alliance was the wrong way to secure Asia; Cambodia was inclined to adopt this view (Pradhan, 1985: 42–47).

The aforementioned demonstrates the complexities of security interdependence and power relations as well as the pattern of relationships between the units tied to mainland Southeast Asia in general and Indochina in particular as a security complex. To consider Indochina as an important part of the Southeast Asian security complex serves to comprehensively explain the Thai and Cambodian behavior during the conflict over the Preah Vihear temple, particularly given the structural constraints on the dyad.

In terms of the security complex, it is fair to say that Cambodia was the most vulnerable, because its capabilities were inferior to those of its neighbors who were its traditional antagonists; moreover, the pattern of relationships among the local states that were member units of the complex was antagonistic. Thailand was much less vulnerable since it had aligned itself closely to the US immediately after the region had become strategically significant to Washington (Phuangkasem, 1984: 34–36; Kirk, 1971: 177). Due to its strategic significance, it was logical for Bangkok to choose aggression in reclaiming its superiority and to ignore Phnom Penh's objection since the small border issue would appear insignificant to the great powers compared to the greater strategic relationships.

On the other hand, because of its structural constraints and weakness, selecting a diplomatic negotiation (a normal procedure) and proclaiming neutrality were the only options open to Cambodia to minimize a negative backlash. Cambodia's neutrality was neither neutral nor non-aligned, however; instead, as Melvin Gurtov (1971) observes, Cambodia attempted to preserve an equilibrium between the two blocs; Gurtov calls this 'positive neutralism' (p. 57). Despite Sihanouk's distrust of communism (Pradhan, 1985: 47), he visited Moscow in 1956 and Beijing in July 1958 (when he officially announced Cambodia's recognition of Communist China), soon before negotiating with Thailand on the issue of the temple conflict (Pradhan, 1985: 66; Leifer, 1967: 86). For Sihanouk, the recognition of China also partly occurred because "there never has been a Chinese attack on Cambodia" (Deshpande, 1966: 17).

For Thailand, this was Cambodian intimidation as an invitation to communism and a threat to Thailand (Leifer, 1967: 86–87; Pradhan, 1985: 72; Jha, 1979: 114–115); consequently, Thailand responded by declaring a state of emergency along the border (Leifer, 1967: 86) and in other words, securitizing the conflict. Sihanouk's visit to Bangkok for negotiations did not reach a settlement; rather, it resulted in a breakdown in negotiations, which was followed by anti-Cambodian campaigns throughout the Thai press as well as violent demonstrations outside Cambodia's embassy in Bangkok (Smith, 1965: 144; Leifer, 1967: 87). Subsequently, diplomatic relations between the dyad were suspended and in 1959, the situation was intensified by Cambodia's accusation that Thailand and the US Central Intelligence Agency (CIA) were supporting a plot to overthrow the Sihanouk government (Leifer, 1967: 88).

In 1959, Cambodia proposed two possible resolutions: establishing a joint administration for the temple composed of both parties or presenting the case to the International Court of Justice (ICJ) (Smith, 1965: 145). Ultimately, in October both sides decided to take the issue to the court. The decisions of the dyad, I argue, were the result of strategic calculations swayed by the dynamics of the regional structure.

Conclusion

By taking Indochina as the mainland Southeast Asian complex, this study argues that both the distribution of capabilities and the pattern of relationships (particularly antagonism) shaped the behavior of Thailand and Cambodia concerning the temple conflict. The decision of the dyad to present the case to the ICJ was to

some extent the result of the structural influence on their strategic calculations. As Donald Nuechterlein (1965) states, "so sure were Thai leaders that their case would be upheld that they did not seriously consider the possibility that the court might rule against Thailand" (p. 250). This resulted from Thai leaders' strong belief in Thailand's strategic importance to the US and its stance as the loyal ally of the 'Free World' for nearly a decade. Their trust in US assistance was also manifested by Thailand's fierce rejection of the court's jurisdiction over the Preah Vihear temple case; however, this objection was denied by the court (Jha, 1979: 115–116).

We conclude that the decision was a calculated risk for Cambodia: they were bogged down by the two available options, either using the mechanism of international law or avoiding conflict by *de facto* accepting their inferiority in a hierarchical accommodation, in the traditional Asian manner (Joo-Jock, 1984: 75). The former option was more favorable to Cambodia, however, because even if the ICJ's verdict favored Thailand, Cambodia would still benefit from the tension and unstable environment that might have been triggered by further Thai claims over more Cambodian territory because of its positive neutralism; this would allow Cambodia to utilize the instability of the regional complex to retain the support of both blocs (Gordon, 1965: 447–448; Gordon, 1966: 66–67).

In June 1962, the ICJ delivered a verdict favorable to Cambodia, and Thailand had to remove its presence from the Preah Vihear temple (Singh, 1962: 24). Thailand, under Field Marshal Sarit Thanarat, the King Bhumibol–backed leader of the 1957 and 1958 coups (Bamrungsuk, 1988: 78–80), was shocked and irritated by the judgment. Our conclusion is that this derived from Thai leaders' misperception of the American attitude to Cambodia, as demonstrated by Donald Kirk (1971): "U.S. diplomats hoped to improve relations with Cambodia…while continuing to support Thailand and South Vietnam as allies not against Cambodia but against the Communists" (p. 51).

Thus, the Thais committed a strategic miscalculation due to their overestimation of their position in the security complex. Instead of complying with the verdict, Thailand reinforced its presence around the temple (Jha, 1979: 116). In addition, the Thai Foreign Minister criticized the decision as a 'miscarriage of justice', charging the judges of being the representatives of communists and colonial powers and blaming the US stance (Singh, 1962: 24–25). Domestically, massive protests against the court's decision were mounted and approved by the government (Gordon, 1964: 225). The possibility of war was also discussed in Bangkok after the court's judgment (Nuechterlein, 1965: 254). Cambodia proclaimed immediately after the court's verdict that Thailand's presence on Cambodian soil would not be tolerated, and top representatives were sent to Beijing for consultations (Pradhan, 1985: 74).

The turbulence of the dyad led the US to be concerned that Thailand would attack Cambodia (Clymer, 2004: 92–93) and that this would lead to a confrontation between Washington and Beijing. Consequently, the US and its allies pressured Thailand's leaders, who eventually decided to relinquish the Preah Vihear temple (Leifer, 1974: 51; Singh, 1962: 26). To constrain Bangkok, President Kennedy sent messages not only to Sarit but also to King Bhumibol concerning the matter (Clymer, 2004: 93). After 1962 and until the end of the Sihanouk era, however, there was no sign of improvement in the relationship between Bangkok and Phnom Penh (Gordon, 1966: 64).

The loss of the Preah Vihear temple in 1962, this research argues, intensified Thai feelings of antagonism towards Cambodia and became a source of conflict that could be easily securitized by Thai leaders and elites because, as noted by Manu Walyapechra (1975), "the Thais still considered the temple to be Thai, not Cambodian" (p. 115).

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REVIEW:
Rural illiteracy and poverty in Sierra Leone and Sub-Saharan Africa

Sheka Bangura [1]

Abstract

Despite heightened global efforts, effective solutions to rural poverty in Sub-Saharan Africa have remained evasive. In this region, endemic poverty is correlated with inadequate rural education. Sierra Leone, located on the West African Atlantic coast has witnessed persistently high rates of illiteracy and poverty. The key objective of this paper is to identify key predictors of educational outcomes to help suggest effective policies for poverty alleviation in rural Sierra Leon. An empirical analysis of the Sierra Leone 'integrated household surveys' 2003/04 and 2011 suggest the following predictors as significantly correlated with the level of education in rural Sierra Leone: expansion of farm acreage, adoption of improved technology, provision of credit facilities, and an equitable distribution of socio-economic services. Lessons are also drawn through a review of other countries' experiences in the promotion of rural education. Key lessons from the review include: improved incentives for rural teachers, and the development of customized models for rural education.

Keywords: Illiteracy, Poverty, Rural education, Sierra Leone, Sub-Saharan Africa

Introduction

The progress of Sub-Saharan Africa (SSA) has been held back by a lack of the capacity to transform rural economies which explains the continuous documentation of endemic and chronic poverty in this region. About 50% of the region's population is poor if a daily expenditure benchmark of US$1.25 is taken as the borderline. The prevalence of poverty at the benchmark of US$2 per day would be about 70%. It is also noted that 32 out of the 48 poorest countries in the world are located in SSA (Chen and Ravallion, 2008).

Rural areas in the region hold most of the poverty which is not surprising as about 70% of the poor at the global level lives in rural areas. In terms of absolute numbers, the prevalence of SSA's rural poverty grew from 268 to 306 million people during 2000 ~ 2010, and those in extreme poverty, estimated at 62%, decreased only by 3 points during the same period (IFAD, 2010). This retrogression has taken place in a period of renewed international commitment to fighting global poverty; the 21st century was ushered in with various development pacts including the Millennium Development Charter and Goals, a series of Aid Effectiveness Agendas, and elegantly articulated national poverty reduction strategies advised by donor communities through the IMF and the World Bank.

Yet appropriate solutions to addressing poverty appear to have remained evasive and Sub-Saharan Africa has not made much progress on the Millennium Development Goals, and the number of the poor has doubled since 1981. This lack of progress is in sharp contradiction to the endowment with huge natural resources in many SSA countries. Recent institutional efforts at rethinking poverty for Africa include the staging of a conference in Nairobi, August 2012 to provide an anthropological explanation for the region's underperformance in the MDGs, a need that Booth et al. (1999) had heralded.

Sierra Leone has followed the poverty outlook of SSA amidst abundant natural resources and relatively high per capita 'official development assistance' (ODA). Located on the West African Atlantic coast, the

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country had a relatively promising beginning after independence in the 1960s with a GDP per capita in 1965 of US$151 which exceeded that of Indonesia (US$55), Thailand (US$138), China (US$97), and South Korea (US$106), according to the World Bank data. But Sierra Leone has retrogressed since the 1970s; its GDP growth rate slipped constantly from 3.8% during 1961 ~ 1969, to 2.7, 1.1 and - 4.2 percent in the decades that followed until the end of the civil war (1991 ~ 2001), while the Asian economies emerged and maintained growth at far more impressive levels. While Indonesia and Thailand both reduced their impoverished population from 60% in 1965 to 8.0 and 9.0 percent currently, and China from 30.7% in 1978 to less than 2.0% now, Sierra Leone's prevalence of poverty remains at 54%, with the rural areas remaining the most impoverished at 70%. Sierra Leone's national illiteracy rate sticks at 59%, life expectancy at about 40 years, under-five mortality rate at 262 per thousand (2007), and malnutrition among children under 5 at 23%; all these measures are higher in rural areas (UNDP data).

Although Sierra Leone is endowed with abundant mineral resources, its socio-economic performance has been falling behind other nations with far less natural resources; one could argue that a key predictor of this outcome is an inadequate investment in education and knowledge, especially in the rural areas which hold the vast majority of the population as well as the impoverished. Inadequate rural education has been identified as the main driver of poverty in many parts of the developing world, explained by a number of factors including inappropriate policies, weak institutions, and cultural factors. It has been argued that sustainable development cannot come by without adequately resolving rural poverty with education at the fore (Acker and Gasperini 2003).

The need for education and knowledge-driven development strategies for transformation of the 'Third World' has long been emphasized (Romer 1992, 1993, Solow 1956, Dalton 1971) and continues to be underscored in contemporary poverty scholarship including growing arguments about the need to focus on increasing human capability and functioning for poverty reduction (Udaye 2010, Sen 1993). Otsuka and others argue with an empirical demonstration using rural poverty data that SSA has lagged behind Asia because of the huge human capital differentials between the two regions, especially among the rural households (Estudillo et al. 2009, Ostuka et al. 2009, Takahashi and Otsuka 2009, Cherdchuchai et al. 2009, Hossain et al. 2009, Kajisa and Palanichamy 2009, Matsumoto et al. 2009, Cunguara and Kajisa 2009).

The criticality of human capital formation (as a function of schooling) for rural poverty reduction is captured in five hypotheses put forward by Otsuka et al. (2009: 201-209) in discussing farm versus nonfarm income in the transformation of rural sub-Saharan Africa compared to rural Asia. They acknowledge and call for the recognition of the critical role of the farm sector at the initial stage of development, as in Dalton's (1971: 88-92) analysis of primitive and peasant economies; that naturally societies start from a rural status with farm incomes as the mainstay for progress. These incomes initially finance child schooling because the vast majority of those interested in educating their kids are earning most of their incomes from farming; later, schooling would provide the inlet for the creation and stimulation of nonfarm jobs with higher returns to human capital than returns produced by farming; the nonfarm sector will then become more critical in reducing rural poverty and achieving sustainable development.

It is noted in light of the development of rural Philippines, Thailand, Bangladesh and Tamil Nadu in India that:

"…the development of the nonfarm sector and increased access of households to nonfarm
labor markets are clearly the major driving force behind the reduction in poverty in rural

villages in Asia….economic development in Asia is clearly pro-poor and returns to labor have increased relative to the returns to land." (ibid).

A similar commentary runs about the South Korean approach to rural transformation in Mengistu (2009). Also a 'Green Revolution' is projected to be indispensable for reducing widespread poverty in SSA. Otsuka and others are mindful of the regional environmental differential that may pose a challenge for the adoption of 'productive and profitable technologies' in Sub-Saharan Africa, but they argue that there has been a "…remarkable advancement of molecular biology and genomics [that] has opened up new scientific possibilities for developing appropriate technologies for sub-Saharan Africa" (Otsuka et al. 2009). However a 'Green Revolution' would not have the intended impact if it were not accompanied by educational programs in rural areas (Dowling and Valenzuela 2010). Education is therefore critical at every stage in the development process.

The key objective of this paper is to identify key predictors to promote rural education in Sierra Leone, and in the process, it explores the experiences of other countries in promoting rural education to learn policy lessons for poverty reduction in Sierra Leone.

Methodology

This paper includes a review of other papers as well as an analysis of secondary empirical data. The review aspect entails a survey of other countries' experiences and lessons in promotion of educational opportunities in rural areas in the developing world. Lessons have been drawn from Latin America, Africa and Asia.

The empirical section undertakes a recursive model with structural path equation estimation to determine the direct and indirect effects of rural educational investment. This is an improvement on related studies analyzing rural poverty and income dynamics, which have conducted a single equation estimation of schooling investment function without tracing path effects as done in this paper (see Estudillo et al. 2009, Ostuka et al. 2009, Takahashi and Otsuka 2009, Cherdchuchai et al. 2009, Hossain et al. 2009, Kajisa and Palanichamy 2009, Matsumoto et al. 2009, Cunguara and Kajisa 2009 on modeling rural schooling investment in Asia and Sub-Saharan Africa, and World Bank 2008 on modeling schooling investment at national level in Sierra Leone).

Structural Path Equations:
The recursive model estimate is specified as follows:

(1) $HIncome_{it} = \Delta_{it} + \alpha_{it}HEdL_{it} + \beta_{it}HSize_{it} + \theta_{it}LaSize_{it} + \emptyset_{it}LoSize_{it} + \pi_{it}ATech_{it} + \rho_{it}OffFEm_{it} + \mu_{it}HLoc_{it} + \varepsilon_{it}$

(2) $SInvest_{it} = \nabla_{it} + \partial_{it}HIncome_{it} + \alpha_{it}HEdL_{it} + \beta_{it}HSize_{it} + \theta_{it}LaSize_{it} + \emptyset_{it}LoSize_{it} + \pi_{it}ATech_{it} + \rho_{it}OffFEm_{it} + \mu_{it}HLoc_{it} + \epsilon_{it}$

Notes: The variable HIncome is an intermediate endogenous variable denoting the income of the household head that is predicted by purely exogenous variables on the right side of equation 1. The variable HEdL is the household educational level, and expected to positively impact on income. HSize is the household size expected to negatively affect income; investible resources are expected to decline with increased consumption spending from expanded families in line with the quantity-quality family models (Black et al.

2005, Bongaarts 2001, Becker and Lewis 1973, Becker 1960). LaSize is the size of the land owned by the household, expected to positively impact on income through expansion of farm acreage and other uses. LoSize is size of loans granted to rural households, and expected to positively affect income. ATech is an agricultural technology factor, a composite/index variable gauging effects of access to fertilizers, other chemical inputs, machinery, irrigation and hired labor; the higher the factor value the more income expected. OffFEm denotes an off-farm employment factor as an index for gauging differential effects between farm and off-farm returns and is expected to have a positive effect on income (Otsuka et al. 2009). HLoc is an index factor variable denoting the effects of household residential location on income, gauging income differentials among households located in regions with better socio-economic services and those in regions with less services; it is expected to have a positive coefficient. The variable SInvest is the target endogenous variable in the study; it is the level of spending on child schooling in the path analysis predicted by both the intermediate endogenous variable, income, and all pure exogenous variables just explained, and is expected to affect schooling directly or indirectly (through income) based on the same a-priori grounds as in the intermediate income model. The logic of these equations is more clearly captured in Figure 1.
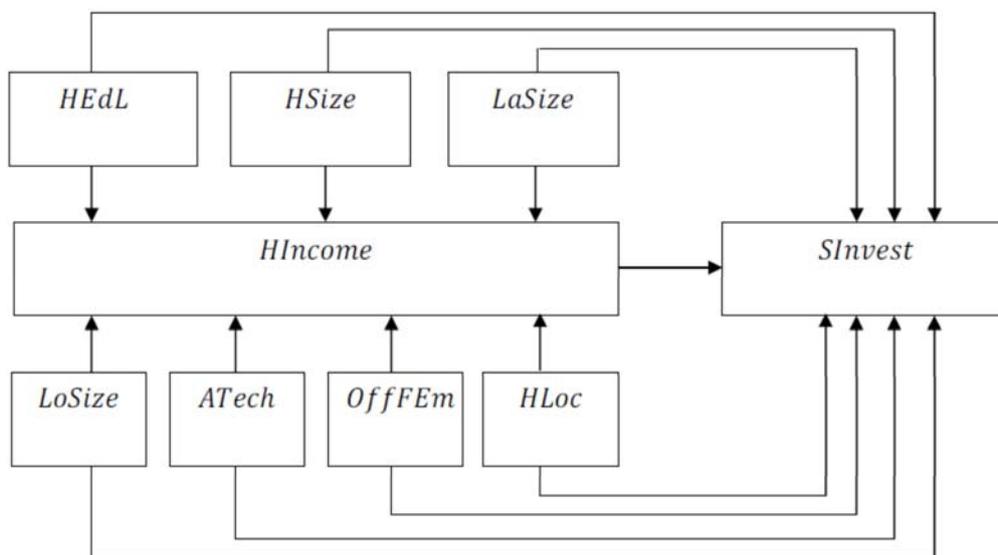
Figure 1: Structural path diagram; the model is estimated based on two data sets: the Sierra Leone Integrated Household Survey 2003/04 (SLIHS2003/04) and SLIHS survey 2011. Results of the two surveys are compared and some dynamics are tracked to help predict the rural educational situation (see text for abbreviations).

Findings and Discussion

Review of the experiences of other countries in the promotion of rural education:
The unproductive rural-urban migration witnessed in the 'Third World' is a derivative of un-employability associated with the low level of skills and education of migrants. In response, the Chinese introduced a strategy to industrialize the rural areas and established compulsory rural education systems (Binglong et al. 2009). As a result, migration to big cities produced multiple positive effects, eased labor pressure on land, and significantly contributed to rural productivity and incomes.

A challenge that poor countries have faced in their effort to support rural education is the deployment of teachers in remote areas. The generally poor socioeconomic conditions in the rural areas have been the key obstacles to attracting teachers. Those already employed frequently seek for transfers to urban centers. This has caused huge differentials in teacher supply both in quantity and quality between rural and urban areas. Mulkeen (2005) has commented on efforts to address teacher shortages in Mozambique, Lesotho, Malawi, Uganda, Tanzania, South Africa and Ghana. Uganda and Mozambique considered posting teachers with health problems to schools near to medical facilities.

Mozambique ensured that recruitment and deployment of teachers would be done at the regional level with each region recruiting its own teachers. In Lesotho, given the poor infrastructure and the mountainous and diverse climatic conditions, recruitment of teachers was decentralized to the community level, through the school management committee (SMC). However, the disadvantage was that preference would often be shown for a 'local' applicant who was less qualified than a more qualified outsider interested in moving to the community in question. Malawi recruited untrained temporary teachers who were later trained.

Some countries provided monetary and non-monetary incentives to attract teachers, ranging from provision of hardship and travel allowances to household subsidies, special study leave, and better training opportunities. However, incentives were not substantial enough to outstrip the socioeconomic costs associated with deployment in rural areas, and a transparent and accountable system didn't exist for classifying and determining the schools as having top priority. Some countries, such as South Africa, attempted a forced deployment of teachers in rural areas but this was not successful, even though it saved financial resources for the government. A sustainable model in other cases was to require teachers to serve in a remote community only for an agreed period of time in exchange for promotion and career development opportunities later. Ghana adopted a policy of posting newly qualified teachers in pairs so that one could draw strength from the other.

Distance has been a great impediment to rural school enrolment. Mulkeen (2005) and Moulton (2001) discuss lessons to address this: Mozambique maintained a reasonable school size of 100 to 200 in rural settlements to increase chances of educational engagement, but this strategy was associated with some economic inefficiency in the utilization of teacher capital, especially where dropout rates were high. Lesotho had a policy of making more qualified teachers teach lower grades so as to lower dropout rates and even-out pupil teacher ratios across all grades. In Ethiopia, growth in rural educational enrolment was partly attributed to home visits by teachers, while for communities dominated by nomads and pastoralists, such as in Kenya and Uganda, specific strategies were employed to educate children since building schools was not economically efficient. In the Karamoja region in Uganda, for instance, a mobile educational system was introduced by the government of Uganda, with teachers following children wherever they took their animals to graze; classes were conducted under the trees.

It has been suggested that the most successful rural school models can be designed with gradual modifications to the national school system in order to suit specific rural situations and to ensure sustainability. Globally celebrated initiatives along these lines are the Escuela Nueva in Rural Columbia, and the Bangladesh Rural Advancement Committee (BRAC). Established in the early 1980s, the Escuela Nueva program has been the best known example for conducting multi-grade schooling, and pupils who were unable to attend school are taught at home. Homework was aided by student study groups; teachers benefited from on-the-job training and learned from practical examples through the supplied material rather than depending only on pre-service lectures; networks of rural community teachers were established to ensure interaction

among teachers and to discuss pedagogical and other pertinent materials and to cross-fertilize experiences. Also parents worked closely with teachers, integrating the former's cultural and other concerns into the curriculum to ensure that schooling was culturally sensitive and sustainable. Soon after the inception of this model in Columbia, the number of rural schools expanded to 22,000.

The BRAC schools in rural Bangladesh targeted mainly girls, and capitalized on already successful rural development projects like credit support and healthcare programs. The initiative started in 1985 with each school catering for 30 children within a few kilometers, and renting a room in houses to conduct classes. Teachers are picked from the communities, intensively trained for 15 days, provided with retraining at least once a month, and paid modest wages. To enhance sustainability, simple materials were used for school; no fees were paid and parents attended school meetings. The government permitted BRAC school leavers to enter the fourth grade in government schools. By 1998, about 34,000 BRAC schools were servicing not less than 1.2 million children that would otherwise have been left out of schools.

In West Africa, various countries adopted the community school models including Mali, Ivory Coast, Mauritania, Nigeria, Togo and Burkina Faso. They are especially critical in countries emerging from civil wars, and have been extensively supported by NGOs. In the formerly crisis ridden country of El Salvador, a Community Education Association was formed and contracted by the government to coordinate community educational needs and operations. In Cambodia, following the end of the war, with 85% of the population sparsely distributed in rural areas, a cluster community schooling system was introduced in which schools were clustered together to share resources.

The educational situation of rural Sierra Leone before, during and in the immediate post-conflict period:
Sierra Leone has had the vision to establish a robust educational system for all, starting with the 1991 constitution which amongst other things had recognized 'inadequate education' as the root cause of bad governance and poverty; these evils were squarely blamed for causing the civil war (1991 ~ 2001). The prevalence of poverty (those living on less than a dollar par day) was measured at more than 80% before the outbreak of the war in 1991. The post-conflict phase was met with an institutional re-engineering to back the Constitution. An Education Act was passed in 2004, with a focus on strengthening primary and junior secondary schooling and a special emphasis on girls' education.

A Local Government Act was enacted to resuscitate Local Councils with a responsibility to facilitate development at the community level. The Government's Interim Poverty Reduction Strategy (IPRSP, 2001 ~ 2004) and the first comprehensive PRSP (2005 ~ 2007) were developed to provide an overall national development framework with education as a key pillar. The sector remained a priority in the subsequent PRSPs. Compelling these efforts was a poignant educational outlook for the country, especially for rural areas and the female population (Table 1). Statistics are not available on illiteracy for the rural sector and other relevant strata until 2004 as the Table indicates.

At the national level, an illiteracy rate of 87% was recorded in 1985, split between males and females at 83 and 91 percent respectively; it only dropped to 70% in 2000, split between males and females at about 60 and 80 percent respectively, widening the gender gap further. In 2004, the rural illiteracy rate was estimated at 63% against the national rate of 61% and the urban rate of 38%. The male-female gap narrowed but the split remained wide at 52 and 67 percent, respectively. It was worrying that in 2004, illiteracy among the rural youth (aged 15-35) was estimated at 74%, against 39% in the urban areas and 60% at the national level.

Table 1: Illiteracy rate 1985 ~ 2004 (before, during and the immediate post-conflict phase)

Gender	1985 Census	1995 Estimates	2000 MICS	2004 Census
National Average	87%	79%	70%	61%
Male	83%	69%	60%	52%
Female	91%	89%	80%	67%
Rural Areas	-	-	-	63%
Urban Areas	-	-	-	38%
15-35 Years (Rural)	-	-	-	74%
15-35 Years (Urban)	-	-	-	39%
15-35 Years (National)	-	-	-	60%

We examined whether the implementation of comprehensive PRSPs since 2005, including the first and second generation PRSPs (2005 ~ 2007 and 2008 ~ 2012) has directed rural education towards a better outlook, using 2003/04 as the baseline. Since rural farm incomes have been hypothetically perceived as highly critical in the promotion of rural education in countries at their early stage of development, we first looked at changes in the structure of the rural economy comparing SLIHS Surveys 2003/04 and 2011. Table 2 shows that the vast majority of rural household members were employed in farming in 2003/04, irrespective of age (92% of the less than 35 year olds and 93% of the 35 and more year olds). In 2011, the share of the less than 35 markedly declined from 92% to 53%, mostly due to engaging a larger number of children in labor, while among older persons (35 years and above) it only declined from 93% to 76%.

Table 2: Share of all employed household members by main occupation, comparing 2003/04 and 2011

a. SLIHS2003/04

Activity	Overall		Age						Sex			
			<15		15 to 34		>=35		Male		Female	
	Obs	%	Obs	%	Obs	%	Obs	%	Obs	%	Obs	%
Farming	6614	92.65	2753	92.41	2006	92.44	1855	93.22	3076	92.37	3538	92.89
Rice	4876	68.30	2061	69.18	1472	67.83	1343	67.49	2306	69.25	2570	67.47
Other Crops	1738	24.35	692	23.23	534	24.61	512	25.73	770	23.12	968	25.41
Nonfarming	525	7.35	226	7.59	164	7.56	135	6.78	254	7.63	271	7.11
Mining	54	0.76	20	0.67	19	0.88	15	0.75	36	1.08	18	0.47
Others	471	6.60	206	6.92	145	6.68	120	6.03	218	6.55	253	6.64
Total	**7139**	**100.00**	**2979**	**100.00**	**2170**	**100.00**	**1990**	**100.00**	**3330**	**100.00**	**3809**	**100.00**

b. SLIHS2011

Activity	Overall		Age						Sex			
			<15		15 to 34		>=35		Male		Female	
	Obs	%	Obs	%	Obs.	%	Obs	%	Obs	%	Obs	%
Farming	10054	48.67	960	13.90	3926	56.68	5168	75.73	4871	48.21	5183	49.11
Subsistence	6847	33.15	649	9.40	2656	38.34	3542	51.91	3299	32.65	3548	33.62
Other Crops	3207	15.53	311	4.50	1270	18.33	1626	23.83	1572	15.56	1635	15.49
Nonfarming	10602	51.33	5945	86.10	3001	43.32	1656	24.27	5232	51.79	5370	50.89
Mining	89	0.43	2	0.03	50	0.72	37	0.54	74	0.73	15	0.14
Others	10513	50.90	5943	86.07	2951	42.60	1619	23.73	5158	51.05	5355	50.74
Total	**20656**	**100.00**	**6905**	**100.00**	**6927**	**100.00**	**6824**	**100.00**	**10103**	**100.00**	**10553**	**100.00**

The structural shift in sex was similar to age employment during the same period; male-female shares drastically declined from 92-93 percent in 2003/04 to 48-50 percent, respectively, in 2011 with females slightly surpassing males. Although mining plays a key role in the macro-economy as the main export

revenue for the state, rural households generally depend less on this sector for their livelihood. SLIHS2011 depicts the same outlook, although it indicates that in the long run a structural shift could be expected from farm to nonfarm activities in general, given the huge reduction of the farming share from 92.65 to 48.67 percent between the two surveys, and a huge increase in nonfarm share from 7.35 to 51.33 percent, although, again, the increase in the nonfarm may be due to the high rate of child labor employment in 2011.As for the changes in rural educational ratios, Table 3 examines whether there was a significant change in the number of school age children who were out of school between 2003/04 and 2011 for ages less than 22 years. A person is expected to have attained a university degree at age 21. More than 60% of all respondents were found as not in school in both surveys, in fact increasing from 61% in 2003/04 to 65% in 2011. About 32% of those below 15 years of age were not in school in 2003/04, increasing to 46% in 2011. This population should have been in elementary school (kindergarten, primary) or junior secondary school. The not in school proportion was the highest for the 15 to 21 year olds at 59% in 2003/04, but decreased to about 42% in 2011.

Table 3: Share of school going children not in school and those in school comparing 2003/04 and 2011 (Obs for 'number of observations')

	SLIHS2003/04						SLIHS2011					
	Total		School age children				Total		School age children			
			Less than 15 yrs		From 15 to 21 yrs				Less than 15 yrs		From 15 to 21 yrs	
	Obs	%	Obs	%	Obs	%	Obs.	%	Obs	%	Obs	%
Formal school	4297	33.6	2540	53.8	583	40.8	8464	34.0	4860	54.4	1435	57.4
Informal	685	5.4	656	13.9	6	0.4	342	1.4	5	0.1	4	0.2
Not in school	7808	61.0	1529	32.4	840	58.8	16114	64.7	4074	45.6	1059	42.4
Total	12790	100.0	4725	100.0	1429	100.0	24920	100.0	8939	100.0	2498	100.0

Table 4 looks at education by economic activity. Farming (rice and non-rice) contributed to the uneducated more than non-farming. About 84% of the rice farmers never went to school in both surveys compared to 77% and 78% for non-rice farmers in the two surveys, respectively. The ratio of the uneducated in mining was also high at 71% and 80% in the two surveys; the observations were very small however. The nonfarm sector generally had more educated individuals than the farm sector; the uneducated in this category decreased from 47% to 42% between the two surveys. Informal education, where literacy training was offered mostly to adults that did not go to school before, constituted 5.4% and 1.4% of the total number of respondents in the two surveys, respectively.

Table 4: Share of household members that never went to school and those who did by economic activity, comparing 2003/04 and 2011(Ob for 'number of observations')

	SLIHS2003/04								SLIHS2011							
	Types of economic activity								Types of economic activity							
	Rice farming		Other farming activity		Mining		Other non-farming		Rice farming		Other farming activity		Mining		Other non-farming	
	Ob	%	Ob	%	Ob	%	Ob	%	Ob	%	Ob	%	Ob	%	Ob	%
Formal school	265	15.5	76	22.4	5	16.7	105	52.2	1124	16.4	518	14.9	22	23.4	6086	57.9
Informal	9	0.5	1	0.3	1	3.3	1	0.5	0	0.0	264	7.6	5	5.3	4	0.0
Never went to school	1435	84.0	263	77.4	24	80.0	95	47.3	5722	83.6	2689	77.5	67	71.3	4424	42.1
Total	1709	100.0	340	100.0	30	100.0	201	100.0	6846	100.0	3471	100.0	94	100.0	10514	100.0

We examined the highest educational level attained among those who went to school. Table 5 shows that about 71 and 63 percent of the respondents attained only primary education in 2003/04 and 2011, respectively. Those attaining secondary education (JSS and SSS) were estimated at 13 and 26 percent in the two surveys. There was insignificant attainment of tertiary education in terms of those able to obtain certificates from technical and vocational institutions, teacher training colleges, nursing, university, and religious studies.

Table 5: Highest educational level attained comparing 2003/04 and 2011

School Grade	SLIHS2003/04		SLIHS2011	
	Obs	**%**	**Obs**	**%**
Informal	685	13.8	342	4.1
Nursery	-	-	441	5.2
Primary	3501	70.5	5308	63.1
Junior Secondary School (JSS) 1-3	411	8.3	1608	19.1
Senior Secondary School (SSS) 1-3	232	4.7	571	6.8
Technical and Vocational	51	1.0	58	0.7
Nursing (Medical)	5	0.1	64	0.8
University	10	0.2	7	0.1
Religious education	74	1.5	12	0.1
Total	**4969**	**100.0**	**8411**	**100.0**

Regression results:

Table 6 and Figure 2 report the recursive path structural regression output, determining the direct and indirect effects of the predictors of school investment in rural Sierra Leone. All eight predictors investigated were found to be significant in at least one path situation in 2004 and 2011 surveys. Standardized beta (slope) coefficients are reported (Table 6).

The effect of the intermediate endogenous predictor (income variable) on school investment turned out to be positive; increasing school investment spending by 2.5% was associated with a 10% increase in the income of the household head. Among the purely exogenous predictors, only household size was found to have a significant effect both indirectly (through household income) and directly on school investment. Its indirect effect is negative at - 0.073; that is, a percentage increase in household size transmits an effect to reduce school investment by 0.073%, associated with a reduction of income by 0.29%. However, the positive direct effect of household size at 0.20 outweighs the negative indirect effects, leaving a net positive effect of 0.13% increase in school investment for every percentage increase in household size.

Table 6: Path regression results for household income and school investment

Predictors	2004				2011			
	Hs.hld income		School investment		Hs.hld income		School investment	
	Beta	**P-Value**	**Beta**	**P-Value**	**Beta**	**P-**	**Beta**	**P-Value**
Log of Household Income	-	-	0.25	0.00	-	-	0.02	0.57
School grade attained (HEdL)	0.03	0.49	0.45	0.00	-0.05	0.18	0.48	0.00
Log of Household Size (HSize)	-0.29	0.00	0.20	0.00	0.19	0.00	0.26	0.00
Log of Land Size (LaSize)	0.12	0.00	-0.05	0.11	-0.03	0.40	0.05	0.14
Log of Loan size (LoSize)	0.16	0.00	-0.04	0.19	0.18	0.00	0.07	0.04
Agric Technology (ATech)	-0.12	0.00	0.04	0.20	0.01	0.75	-0.02	0.58
Off Farm Employment (OffFEm)	0.18	0.00	0.03	0.39	0.04	0.29	-0.09	0.01
Household Location (HLoc)	0.05	0.14	-0.14	0.00	-0.12	0.00	-0.14	0.00
	N=652; R^2=144		N=652; R^2=139		N=659; R^2=106		N=659; R^2=378	

The school grade level attained by the household head had only a direct positive effect at 0.45; the size of the land owned had a positive indirect effect at 0.03; the size of loan to the household also had a positive indirect effect at 0.04. The effect of improved input factors was significant but unexpectedly negative at 0.03 (indirect effect); off-farm employment had a positive indirect effect at 0.013; and household location had a directly significant but negative effect at 0.14.

In 2011, the effect of income as an endogenous predictor was not significant. The exogenous predictors of land size and loan were significant directly and indirectly with expected positive effects. The location factor is also significant directly and indirectly but again, with an unexpected negative effect, leaving a net effect of - 0.26 in disfavor of rural people who were assumed to be located in better serviced regions. Two predictors had only significant direct effects: the school grade level attained, with a positive coefficient of 0.48, and off-farm employment with a negative coefficient of 0.09.
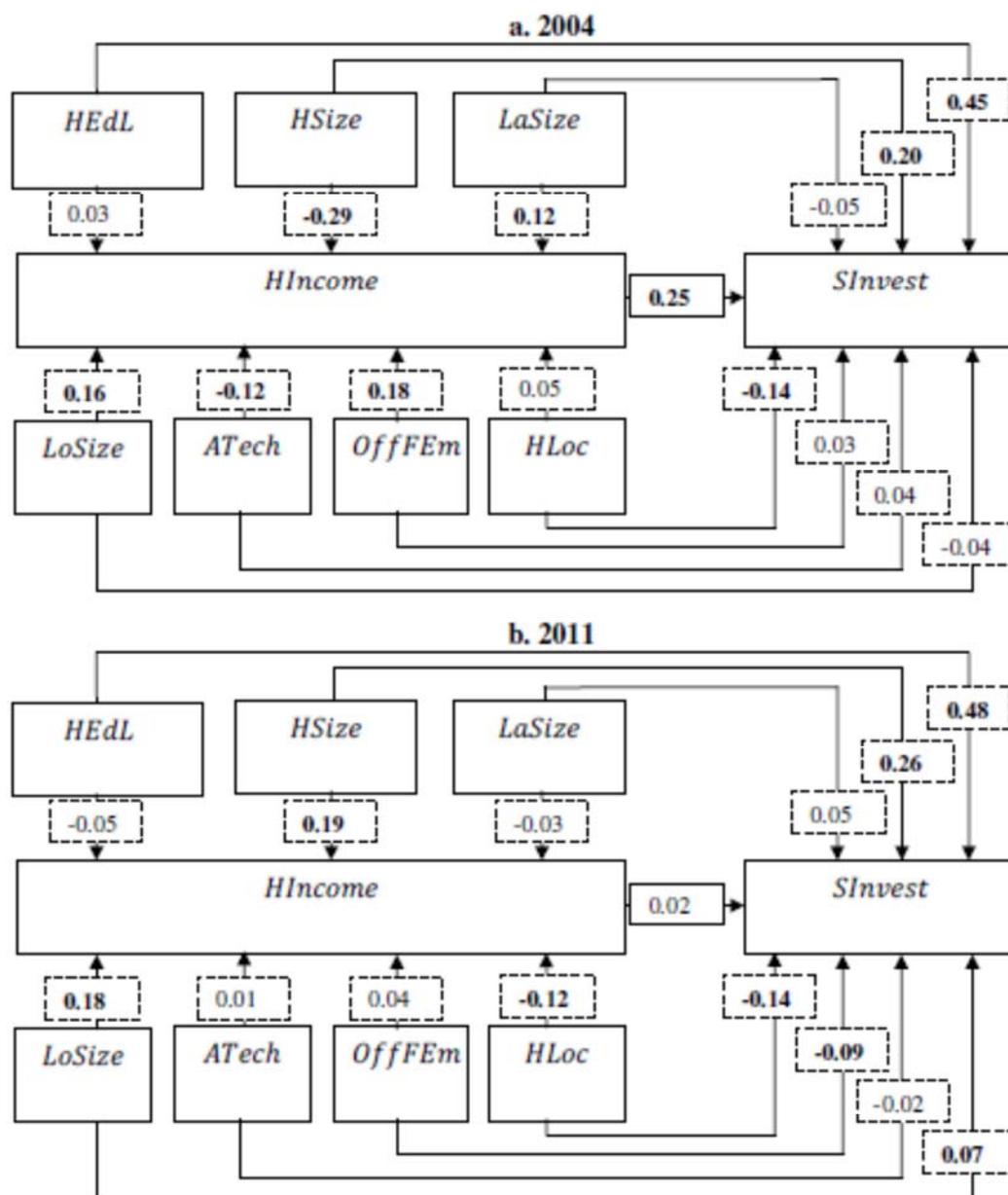

Figure 2: Path regression coefficients for household income and school investment

Conclusion

The descriptive statistics indicate that Sierra Leone is in the early stage of development consistent with the hypothesis offered by Otsuka et al. (2009) and related literature (Dalton 1971, Rostow 1960). The vast majority of the economically active rural inhabitants were engaged in farming for the period under review, from 2003 to 2011, with generally little or no educational achievement. Confirming some of these early development theories, the regression results suggest that household income had positively impacted on school investment in 2003/04 although the association was not significant in 2011.

While not significant in generating income, the level of educational attainment of the head of the household has had direct effects on child school investment since 2003/04. This implies the value of increased spending on child education in rural areas could be associated with awareness raising and knowledge that may not necessarily translate to increased farm or household income.

The low utilization rate of improved agricultural technology in descriptive statistics is corroborated by the regression results. The argument that in the early stage of development, farm employment could be more significant for child schooling than off-farm employment (because those in favor of financing school are engaged in farming) seems to have been supported by the regression results for 2011 by a higher factor than the reverse effect shown for 2003/04. Revealing better returns from farming in some instances is not surprising since the rural inhabitants that engaged in non-farm activities might have a generally low level of education (GoSL 2012).

While the location of a particular household theoretically matters in terms of regional differentials in access to social services, households located near big cities or within regions with better social services did not appear better in school spending, suggesting a welfare negation in rural-urban migration. The results also suggest that owning land in large size matters at the initial stage for supporting schooling through improved incomes, with access to credit becoming critical in the procurement of inputs. The results generally indicate that having a larger household size is critical to supporting child schooling, though this appears counterintuitive according to quantity-quality models and other perspectives that call for minimized family sizes in the development process (Black et al. 2005, Bongaarts 2001, Becker and Lewis 1975, Becker 1960). Nevertheless, the limited means to hire labor for rural farming in the early stage of development as in Sierra Leone, may explain the positive effect of household size (for general arguments, see Bongaarts 2001, Lin 2003, Becker 1991, Kuznets 1978, and Dalton 1971).

The results of this study suggest the need to support farmers to expand acreage and adopt improved technology, and to provide more credit facilities to rural inhabitant as a means to increase incomes and investment in schooling. They also suggest a need to increase rural awareness over the long term rewards of schooling and support literacy programs for adults that never went to school. The review of other country lessons over the promotion of rural education also suggests the need to support customized rural educational programs to fit the context of rural communities.

There is a need to devise policies to attract teachers in the rural areas, and improve infrastructural and general environment to attract non-state actors in the provision of educational services. With careful policy and development planning, education can be enhanced in remote rural areas. There is also a need for concerted efforts from state and non-state spheres in the provision of educational services for the rural people. Opportunities can be leveraged to bring back to school those who were not in school during their school age, as Ghani and Lockart (2008) suggest that education is turning into a life-long process.

The predictors that were especially significant in promoting rural education in the current stage of the country's development include an expansion of farm acreage, adoption of improved technology, provision of credit facilities, and ensuring an equitable distribution of socio-economic services. Key factors coming out of other country reviews include better incentives for rural teachers, and development of customized models for rural education.

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ORIGINAL RESEARCH:
Impact of globalization and trade openness on economic growth in Bangladesh

Muhammad Meraj[1]

Abstract

We investigate the impact of globalization and openness in trade on the economic growth of Bangladesh by econometric testing using an autoregressive distributed lag (ARDL) model and the Granger causality test. The key variables used in the study are in log transformation i.e. the log of GDP, log of exports and log of imports. In order to examine the existence of a causal relationship (both long run and short run) between economic growth and globalization in terms of trade openness measured by exports and imports of Bangladesh, the Granger causality was used with vector autoregression (VAR) methodology along with two different approaches for testing of cointegration: Johansen cointegration and autoregressive distributed lag (ARDL). The results of the error correction model (ECM) and Granger causality test suggest a causal relationship between GDP and exports and imports. The exports show bidirectional Granger causality with economic growth, but imports do not Granger cause GDP and exports. This indicates a positive impact for globalization over trade and economic growth in the least developed countries (LDCs) such as Bangladesh. This vital connection may become a footstep for those LDCs who are reluctant to open up their trade barriers. The empirical findings suggest bidirectional causality between exports and GDP, with impacts of globalization in terms of exports affecting economic growth (GDP). Accordingly, more export oriented policies may be recommended with strong checks on imports because expansion of exports may generate more foreign exchange for payment of import bills as well as enhance capital accumulation.

Keywords: Bangladesh, Economic growth, Exports and imports, Globalization, Granger causality, Trade openness

Introduction

Globalization refers to an increasingly integrated global economy with less trade barriers, unrestricted capital mobility, economical labor and laissez-faire economy which implies less government intervention (Merriam-Webster 2012). Being a broad concept, globalization can also be defined in other ways, as Looney and Frederiksen (2004) explain: "globalization means quite different things to different people. To some scholars, globalization per se is not the means to the desired end". Here, we focus on globalization in terms of 'free trade' and 'trade openness'. Free trade refers to policies whereby a government does not interfere with imports or exports. It does not require that the government refrain from all control and taxation of imports and exports; however, it does not pursue actions that may hurt international trade, such as tariff barriers, quotas and other restrictions (Merriam-Webster 2012).

Bangladesh was ruled by four military regimes in the very first decade after its creation in 1971, but from 1982 shifted its strategy from import substitution to outward orientation which resulted in rapid economic growth. After the end of martial coups in 1982, the policy makers of Bangladesh adopted more liberalized trade policies which provided a new dimension to the economy. This turned out to be the right pathway for economic growth as the International Monetary Fund (IMF) ranked Bangladesh as the 47th largest economy in the world in 2010 with a GDP of approximately US$270 billion and an annual growth rate of 6%. Since 2002, the economy has grown at a rate 4% to 6% per year. The recent data of per capita

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income of Bangladesh show increase from US$460 in 2006 to US$484 in 2007, US$509 in 2008, US$532 in 2010 and US$588 in 2011 (constant 2000US$) (World Bank Report, 2012). High population growth, a relative lack of energy supplies and capital investments in infra-structure, and bad governance with high corruption in the public sector hinder its economic development.

Currently the trend of exports from Bangladesh has shifted away from raw materials to more finished products; the major exports are garments, textiles, jute and jute goods, ships, leather, frozen fish and seafood, pharmaceuticals and ceramics. Bangladesh is abundant in fish and sea foods, fruits and vegetables. The majority of the labor force is employed in the agricultural (45%), industrial (30%) and the service sectors (25%). The service sector plays a major and dominant role in the economy; growth of Bangladesh was resilient to the global financial crisis and recession during the period 2008-09 thanks to garment exports, totaling $12.3 billion in fiscal year (FY) 2009 and remittances from overseas Bangladeshis, totaling $11 billion in FY10 (CIA World Fact Book, 2012).

According to Hultman (1967) a country's trade is closely associated with its stage of development and level of industrialization. Along with economic advancement of a nation, the structure of its foreign trade changes to follow a shifting pattern of available resources and its comparative advantage. In most development planning exercises, the significance of export for domestic growth has been appreciated through the acquisition of foreign exchange by the export of goods and services (Sultan 2008). Over the years the volume of exports in Bangladesh has substantially increased; the strategy of outward orientation has worked well. The growth of exports has also enhanced the capacity to remain solvent for its imports.

It is beneficial to use the excess foreign exchange earned from export proceeds for acquisition of economic capital accumulation (specifically for plant and machineries), to enhance the productive capacity of the country and shift the 'production possibility frontier' (PPF) of the country outward. Taylor (1998) and Wacziarg (2001) support the idea that trade liberalization works only in combination with other appropriate policies e.g. investment may be a key link through which openness affects growth. Sultan (2008) stresses that trade policies must be integrated with economic growth and development strategies. Trade openness is a better strategy for rapid economic growth; if we assume that export is the only crucial factor for economic progress, we may neglect the role of imports. Theoretically imports can have a powerful role in economic growth due to the potential of capital accumulation for productivity enhancement; in other words, technological improvement leads a long run impact on economic growth in terms of physical capital accumulation.

Hossain, M. A., Haseen, L. and Jabin, N. (2009) have examined the external economic sectors of Bangladesh and noted that the export base is narrow as there are very few countries in the international trade market of Bangladesh. Neoclassical growth theory postulates that technological change is the main driving force of economic growth; a steady state growth may be accomplished by stabilization of three factors i.e. labor, capital and technology. Adjustment in labor and capital is required to maintain long-run growth with the help of technological advancement in order to increase productivity. During 1990s Bangladesh showed multi-factor productivity (Rahman and Yusuf, 2010). In the Solow-Swan model of economic growth, contribution of labor in total productivity is twice as high as the share of capital (Krauth, Chapter 1: 6). The initial growth path of Bangladesh shows it was able to accumulate capital despite tough challenges. Figure 1 shows the trend of 'gross capital formation' in Bangladesh from its liberation year 1971 to 2011. The higher productivity capacity of Bangladesh has allowed fulfilling the domestic as well as international demand through higher exports; and higher export proceeds mean higher economic growth.
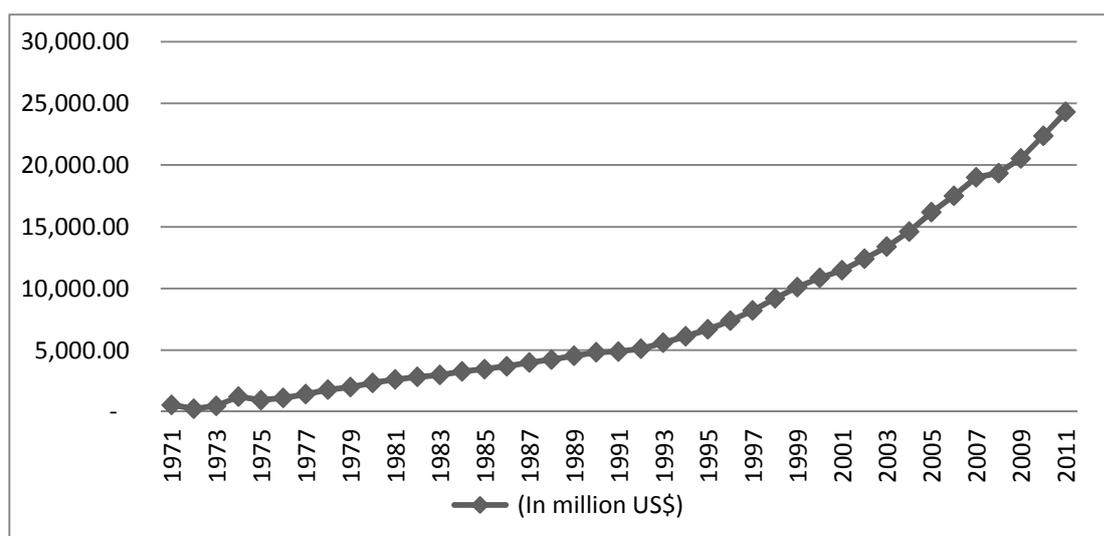
Figure 1: Gross capital formation in Bangladesh. After independence, initially investment was very low relative to GDP but during 1980s the investment to GDP ratio increased significantly and enhanced the capacity for higher productivity. (Source: author's compilation of WDI, World Banks' data)

According to exogenous growth models like the neoclassical, accumulation of capital or higher ratio of capital per worker leads to higher growth (Rahman and Yusuf, 2010). The ratio of capital per worker has steadily increased in Bangladesh during the era of 1990 -2011 as shown in figure 2.
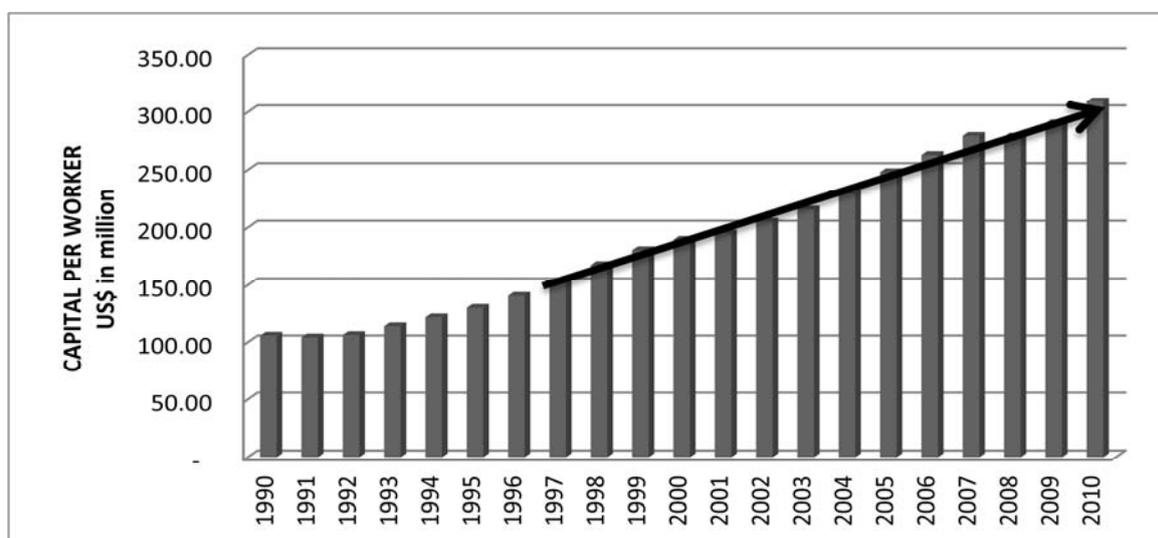
Figure 2: The growth of capital per worker in Bangladesh. (Source: author's compilation of WDI, World Banks' data)

Globalization in terms of trade openness and economic growth has been studied by many researchers with sometimes different conclusions but the main objective of this study is to test the impact of globalization in terms of trade openness on the economic growth of Bangladesh using advanced econometric testing i.e. 'auto regressive distributed lag' (ARDL) with 'error correction model' (ECM) and 'Granger causality'. Al-Mamun and Nath (2005) studied the export led growth for Bangladesh using the

'error correction model' (ECM) on time series data and found unidirectional causality from exports to growth. Hossain et al. (2009) conducted a similar sort of study in an export-import-income framework with the help of 'error correction model' (ECM) on annual data and reported a 'Granger causality' direction running from exports to income and suggested that an export promotion strategy could contribute to economic growth in Bangladesh; this justifies the increasing level of trade openness in Bangladesh.

Sultan (2008) found no significant relationship in the growth rate of exports and the growth rate of GDP; using the annual data for 1965-2004 from 'world development indicators' by the World Bank and the International Financial Statistics of International Monetary Fund (IMF), he found a pair-wise Granger causality after converting the data by logarithmic transformation. It appeared that the growth of total exports Granger causes the growth of GDP positively but not vice versa.

A similar study was done by Kónya (2004) wherein he tested the export led growth or growth led export using Granger causality between real exports and real GDP in twenty five OECD countries. He arrived at some mixed results and conclusions: no causality existed between economic growth and exports in the Netherlands and Luxembourg, while exports caused growth in Iceland, growth increased exports in Japan, Canada and Korea, and bidirectional causality existed between economic growth and exports in the UK and Sweden.

Maneschiold (2008) analyzed the export led growth hypothesis for Argentina, Brazil and Mexico using causality and cointegration techniques within an 'error correction framework'. He divided the data into two periods i.e. before and after the break in which the break is about the introduction of the NAFTA (for Argentina and Mexico). He concluded that export was the leading variable in cointegration between GDP and exports in Argentina but in both of the two periods GDP was the leading variable in Mexico. The causal relationship was bidirectional for Argentina and Mexico in the period after the break but unidirectional from exports to GDP in the period before the break. Unidirectional causality from export to GDP was found in Brazil. This study supports the export led growth for both industrial and developing countries.

Anderson (2007) studied and tested the export led growth hypothesis for the economy of China wherein he concluded that Chinese economy has shown export led growth. Palley (2002) tested the hypothesis that export led growth for one country may be caused by export displacement for another country. He found significant evidence of crowding out among countries, where export to the U.S. from the four East Asian Tiger economies (South Korea, Taiwan, Singapore and Hong Kong) showed a large crowding out effect from China. Similarly Japanese exports to the U.S. have demonstrated a large crowding out effect from Mexico.

Shahbaz et al. (2011) have studied a similar relationship in Pakistan's economy. They used the data period from 1960 to 2003. They applied cointegration and multivariate Granger causality, developed by Toda and Yamamoto (1995). Their empirical findings confirmed that a long run relationship existed between import, export and output growth with unidirectional causality from export to output growth but no significant causality between import and export growth. Hye and Siddiqui (2011) found similar results in a study of Pakistan. In their investigation, they used the 'autoregressive distributed lag' (ARDL) and 'rolling window regression' methods and found a relationship between exports and growth. There was a significant long run relationship between real GDP and real Exports.

Herzer, D., Lehman, F. N. and Siliverstovs, B. (2006) studied the same idea for the economy of Chile in a production function framework by using annual time series data. They investigated how manufactured and primary exports affected economic growth via an increase in productivity. They used several single

equations and system cointegration techniques and found productivity enhancement for manufactured exports and productivity limitation for primary exports.

Afzal, M., Butt, A. R. and Rehman, H. (2010) investigated human development, exports and economic growth in Pakistan. They examined the relationship in 'autoregressive distributed lag' (ARDL) framework by using the data set from 1970-71 to 2008-09 and found that cointegration existed among economic growth, real exports, physical capital and human development, with human development taken as a dependant variable; there was unidirectional Granger causality from real GDP to real exports in a number of causality frameworks they built. Their study did not support export led growth for Pakistan's case; it was rather growth driven exports.

Canuto (2010) favored the idea of export led growth in the context that a lot of the recent growth in exports of developing countries resulted from demand in other developing countries. Therefore developing countries can rely on South-South trade for recovery from the global financial crisis of 2007-2009. China is actually the leading country in the recovery process based on its strong import demand. Thus the formation of an 'export led growth' where South-South trade has a major role would be important; the liberalization of South-South trade through appropriate policies, especially through non-tariff measures can help support the process.

Smith (2001) investigated the validity of the export led growth hypothesis among developing countries with a case study in Costa Rica. He didn't use the traditional neo-classical theory of production through estimation of the augmented Cobb-Douglas production function but instead used exports as a third input, to examine 'total factor productivity' (TFP) growth. He analyzed the data for the period 1950 to 1997 and applied several econometric procedures to find cointegration and short run and long run relationships. The empirical results confirmed an export led growth in this particular case and also showed the inverse effects of physical investment and population on the economic performance of Costa Rica from 1950 onwards. He does not believe in the export led growth hypothesis as an engine for growth or the promotion of exports as a comprehensive development strategy, but believes that the export led growth hypothesis probably only works to a certain extent in a few developing countries.

Smith (1901) pioneered in establishing the theory of trade on the basis of 'absolute advantage'. According to him the division of labor leads to specialization which creates efficient productivity and more output. Countries produce and export products to trading partners to which they have an absolute advantage by being specialized. Subsequently Ricardo (1821) favored the Smith's theory of 'absolute advantage' and supplemented the idea further saying that even if a country has an absolute disadvantage but a comparative advantage in production of one good it should produce that good and export it to its trade partner. Bhagwati (1978) stated that free trade and globalization bring specialization to a nation's productivity, which has been documented and also commonly discussed in the literature on economic development.

The advocates of export led growth emphasized that there is only an engine for growth i.e. exports, especially for countries like Hong Kong, Singapore, Korea, China and Bangladesh. The promotion and expansion of exports in external trade open the gate of growth, and export led growth leads to better resource utilization and increased efficiency due to large scale manufacturing. It also enhances labor productivity due to specialization, higher wages and better employment opportunities in order to meet the higher export demand, and provides incentives to the entrepreneurs to attain the economies of scale due to high productive efficiency. Incentives for the country are to get more foreign exchange inflow which ultimately increases the trade surplus which is important for the improvement of 'current account balance'.

Data and Methodology

The data set used in this study is secondary and has been collected from 'World Development Indicators' published by the World Bank, and includes annual data of exports of goods and services, imports of goods and services, and GDP for the period of 1971 to 2005. The base year for the three data series is 2000 with the values mentioned in a constant U.S. dollar.

All the three series are transformed into natural logarithms. The variables EX, IM and GDP are used for exports, imports and GDP, respectively. For compilation of data Microsoft Excel and econometric software package E-Views was used. Figure 3 shows the graphical trend of the three series over time. Since all three variables trend over time, it is possible to have a causal connection between the variables.
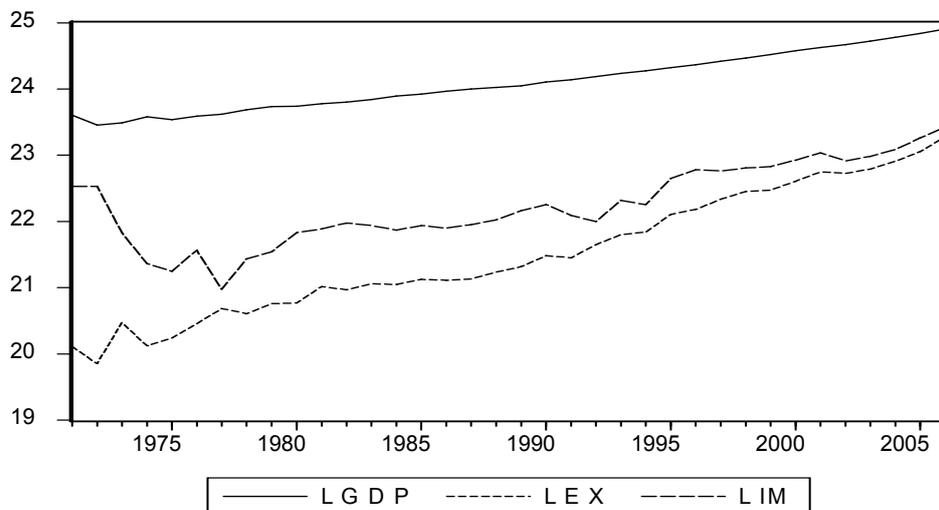
Figure 3: This figure shows the graphical trend of the three series of the log of exports, imports and GDP (from top to down, respectively) over time.

Findings and Discussion

Testing for order of integration:

For testing the stationary properties of variables, we used the 'augmented Dickey-Fuller and Philips-Perron unit root testing' procedures. Table 1 shows the results; all three variables are I(I) i.e. non-stationary at level and become I(0) i.e. stationary after first differencing applied.

Table 1: Unit root testing (note: * shows significance at 10% level and ** shows significance at 5% level)

Variables	Augmented Dickey-Fuller		Philips-Perron	
	At level	Δ	At level	Δ
Lgdp	2.089	-7.387*	2.337	-10.986*
Lex	0.371	-12.419*	1.641	-12.893*
Lim	-0.360	-5.623*	-0.381	-5.622*

The test equation can be specified with an intercept and a trend, as shown below:

$$\Delta Z_{it} = \alpha_{i0} + \alpha_{i1}t + \gamma Z_{it-1} + \sum_{i=1}^{p} \beta_{ij} \Delta Z_{it-j} + \varepsilon_{it}$$

In which, Z_i is the variable of interest, where $i = 1,2,3$ indexes the variable (i.e. $Z_1 = y$ and $Z_2 = x$), α_{io} represents the intercept, t is the time trend, ΔZ_i for the augmented terms, p shows the appropriate lag length of the augmented term and ε_i shows the white noise error. The 'augmented Dickey-Fuller test' is basically a test of significance for the coefficient of γ in this equation, and is commonly used for the stability of its critical values. The results were also verified by Dickey-Fuller and Philips-Perron (1988) tests.

Testing for cointegration with the Johansen-Juselius technique:

After confirming that all variables of the study are integrated of order 1, I(I) we proceed to test the cointegration between the variables. According to Iqbal (2011) "two time series are cointegrated when a linear combination of the time series is stationary. Since non-stationary time series do'nt return to their long run average value following a disturbance, it is important to convert them to stationary process because regressing one non-stationary series to another non-stationary series may lead to spurious results."

Two cointegration testing techniques were used: Johansen (1990) and the 'auto regressive distributed lag' (ARDL) technique by Pesaran, M. H., Shin, Y. and Smith, R. J. (2001). For the Johansen (1990) technique the number of cointegrating vectors must be known which include the trace statistics as well as maximum Eigen value test statistics. The trace test statistics for a null hypothesis which says there are at most r cointegrating vectors can be shown as:

$$\lambda_{trace}(r) = -T \sum_{i=r+1}^{g} \ln(1 - \lambda_i)$$

The maximum Eigen value statistics for testing the null hypothesis of r cointegrating vectors against the alternative hypotheses of $r+1$ cointegrating vector is given by:

$$\lambda_{\max}(r) = -T \ln(1 - \lambda_{r+1})$$

The trace statistics test implies that the time series under consideration is cointegrated (Table 2).

Table 2: Johansen cointegration testing (note: * indicates rejection of H_0 at 1% level. Likelihood ratio test (LR) indicates 1 cointegrating vector of group of variables.)

Hypothesized Cointegrating H_0	No. of Relationships H_1	Test Statistics LR	5% Critical Value	1% Critical Value
r = 0	r > 0	50.602*	39.04	45.370
r ≤ 1	r > 1	17.446	23.37	28.800
r ≤ 2	r > 2	07.579	11.55	15.780

The result of Johansen cointegration testing shows 1 cointegrating vector between the variables, which is the evidence of a long run relationship among exports, imports and GDP of Bangladesh.

The 'auto regressive distributed lag' (ARDL) technique:

Pesaran et al. (2001) developed another method for finding cointegration among variables which is based on an ARDL model augmented by level variables. Contrary to the Engle Granger and Johansen approach, pre-testing of the unit root is not needed because the test can be applied on both I(0) and I(1) variables. This is seen as a major advantage over the ARDL approach.

Iqbal (2011) realized this by conducting a comparative study on three cointegration techniques (E.G, Johansen and ARDL) and noted that the 'auto regressive distributed lag' (ARDL) technique provided better predictions as compared with other cointegration methods. Also these tests are subject to pre-test bias that can distort the size of the test. Therefore it is recommended for these tests to use a bigger size for significance such as 10% but not 5%. With the ARDL method such pre-test bias is not an issue. The general equation of the ARDL is as below:

$$\Delta y_t = \alpha_0 + \sum_{i=1}^{m} \beta_i \Delta y_{t-i} + \sum_{i=1}^{n} \theta_i \Delta x_{t-i} + \phi EC_{t-1} + \varepsilon_t$$

The specification of the model of this study is the following:

$$\Delta Lgdp_t = \gamma_0 + \sum_{i=1}^{4} \gamma_{1i} \Delta Lgdp_{t-i} + \sum_{i=1}^{4} \gamma_{2i} \Delta Lex_{t-i} + \sum_{i=1}^{4} \gamma_{3i} \Delta Lim_{t-i} + \alpha Lgdp_{t-1} + \beta Lex_{t-1} + \phi Lim_{t-1} + \varepsilon_t$$

As a first step we specify 4 lags on 1st difference of each variable i.e. log of GDP, log of exports & log of imports (on the basis of AIC & SBIC criteria) and run the regression on the above equation. Then we apply the F-test of zero restriction:

$$\alpha = \beta = \phi = 0$$

Table-3 shows the evidence of significant cointegration among the three variables i.e. log (GDP), log (exports) and log (imports) as:

$$\alpha \neq \beta \neq \phi \neq 0$$

Table 3: ARDL cointegration testing **(**F/Wald-Test of zero restriction)

F Test value = 5.628 (p.val=0.0087)		
Critical values	I(0)	I(I)
5%	3.79	4.85
10%	3.17	4.14

critical values from table C1-iii Pesaran et.al (2001)

Since the possibility of co-integration is shown (as suggested in the ARDL), the 'error correction model' can be formulated as follows:

$$\Delta Lgdp_t = \gamma_0 + \sum_{i=1}^{4} \gamma_{1i} \Delta Lgdp_{t-i} + \sum_{i=1}^{4} \gamma_{2i} \Delta Lex_{t-i} + \sum_{i=1}^{4} \gamma_{3i} \Delta Lim_{t-i} + \lambda EC_{t-1} + \varepsilon_t$$

The 'error correction term' was formulated using the long run coefficients in the above model.

Granger causality in ECM-VAR:

Empirical findings shown in Table 4 suggest that the export led growth hypothesis is valid for the case of Bangladesh. Granger causality is running from exports to GDP bi-directionally but not from imports to GDP and vice-versa.

Table 4: Granger causality (Note: *, ** indicate significance at 5% and 10%, respectively)

Dependent variable	Significant level of F statistics		
	ΔLgdp	ΔLex	ΔLim
ΔLgdp	-	9.212*	1.989
ΔLex	2.456**	-	0.307
ΔLim	2.103	1.909	-

Conclusion

We have investigated the impact of globalization and free trade on the economic growth of Bangladesh by econometric testing using 'auto regressive distributed lag' (ARDL) and Granger causality, to show the importance of globalization in terms of enhancing the volume of foreign trade in Bangladesh as one of the least developed countries of Asia. The Granger causality ran bi-directionally from exports to GDP implying that export was the key factor determining the growth of Bangladesh during the period under consideration.

A limitation of this study is the lack of a specific variable to indicate 'openness in trade' in the tests; the improvement in trade imbalance may have contributed to the GDP growth in Bangladesh. However, we assumed that there was a correlation between the improvement in trade imbalance and openness in trade. We referred to the changes in the economic policies of Bangladesh since its independence till present to demonstrate a historical trend of gradually enhanced openness in trade.

The conclusion of our study may also require an assumption that the increase in volume of trade has contributed to 'technological change' which could be calculated as residuals in the economic growth model. However, other factors could have contributed to technological change during the period being tested. Our assumption was that other factors related to economic growth have been quite neutral during the period. Since this study could not cover the whole aspect of the problem under consideration, because of its limited scope, further reading in this area is suggested.

Finally, the empirical findings of this study and the review of the current situation of Bangladesh in international trade suggest the following policy recommendations, in that order:

a) To enhance economic growth, the government may adopt stronger export promotion strategies in Bangladesh. Free trade policies may be implemented i.e. lowering trade and tariff barriers and relaxation of trade barriers so that bilateral trade with neighboring countries may increase.

b) Development of infra-structure may facilitate exports, as well as provision of uninterrupted energy supplies. Other possible solutions include enhancing the incentives on exports like duty drawback / rebate and refund payments.

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ORIGINAL RESEARCH:

A system dynamics approach to supply chain performance analysis of the ready-made-garment industry in Bangladesh

Behrooz Asgari[1,2] and Md Aynul Hoque[1]

Abstract

The ready-made garment (RMG) industry has recently occupied the largest part of exports and foreign currency in Bangladesh and has been for more than a decade the second largest contributor to gross domestic product (GDP). Millions of poor women and men are employed in this industry. However, a supporting import quota system in the USA was stopped in 2005 which has left the RMG sector struggling against new challenges that need to be properly addressed. As the end consumers of the apparel fashion market are becoming increasingly time-sensitive, a decrease in lead time, besides quality and cost criteria, is needed to win more orders from buyers. We have examined the opportunity that lies in an integrated supply chain to provide a competitive advantage to the Bangladesh RMG sector. A system dynamics approach has been used to identify the dominant variables of supply chain performance (such as enablers, performance or results, and inhibitors) in the RMG sector. A survey and individual interviews were conducted with senior management personnel, supply chain professionals, and merchandisers of the RMG industry. Based on the findings, a causal loop diagram is proposed to help understand the dynamic behavior among the said variables so that the top management may take effective decisions in order to enhance the supply chain performance in the long run.

Keywords: Bangladesh, Causal loop diagram, Integrated supply chain, Lead time, Ready-made garment industry, System dynamics analysis

Introduction

The export of ready-made garments (RMG) from Bangladesh has been increasing so rapidly for the last two decades that it has come to occupy the lion's share of its total exports. Bangladesh started exporting RMG at an annual value of about US$32 million in 1983-84 but experienced a continuous massive growth which resulted in an almost US$18,000 million of export value of RMG in 2011-12 (Export Promotion Bureau, Bangladesh, 2012). Once heavily dependent on exporting jute products, the economy of Bangladesh is now experiencing more than three fourths of its export contributions from the RMG sector alone. In Bangladesh, the export value of RMG out of total exports was almost 76% in 2008 and 79% in 2012 (Export Promotion Bureau, Bangladesh, 2012). This newly born industry has become immensely significant in the economy of Bangladesh due to its high contributions to the total export value, Gross Domestic Product (GDP) and job creation, especially for women, as well as helping the backward-forward supply chain industries to grow.

Among developing economies such as Cambodia, Sri-Lanka, China, etc, Bangladesh has achieved a strong position as one of the global suppliers of RMG, mainly due to having one of the cheapest labor costs among the apparel manufacturing countries. The globalization of industries created pressure for location-based manufacturing economies which were also supported by the US and European Union (EU) import policies. The 'multi-fiber arrangement' (MFA), a quota system imposed by the US federal government forced US importers to source from less developed countries with the aim of fostering their manufacturing ability and supporting the growth of the apparel industry in countries from South Asia, China and other developing nations. After the MFA system became defunct in 2005, Bangladesh started to counter more rivalry, both

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anticipated and unanticipated, from many producers and suppliers because it turned into an open market for all. Now, the RMG industry of Bangladesh is struggling with many global competitors in terms of cost, quality, customer service, and lead time.

In recent years many reputable organizations are purchasing products, and sourcing, distributing and selling simultaneously from different corners of the world. This globalization of operations has become inevitable because cheap labor is available in some countries while raw material is readily available in others. Moreover, the time, cost and quality sensitiveness are also significantly varied among customers in different regions of the world. Through an efficient implementation of integrated supply chain management, the RMG industry in Bangladesh could stay competitive by maintaining the required efficiency and responsiveness. This was the traditional view of all companies that they existed as single and complete units and operated their businesses separately.

However, the business environment has changed in the 21st century such that working alone is less competitive while collaborative working among upward and downward supply chain partners is more profitable. Through managing the supply chain, the ultimate objective of companies is offering maximum value to customers for the delivered products or services by achieving either responsiveness or efficiency. To add dynamic capability to the RMG sector and enhance supply chain performance, manufacturers should plan and work collaboratively with the upward suppliers of fabric and accessories as well as the downward buyers and partners of the supply chain.

Scott and Westbrook (1991) and New and Payne (1995) describe the supply chain as "the chain linking each element of the manufacturing and supply processes from raw materials to the end user, encompassing several organizational boundaries". According to this broad definition, supply chain management (SCM) "encompasses the entire value chain and addresses materials and supply management from the extraction of raw materials to its end of useful life". Farley explains (1997) that SCM "focuses on how firms utilize their suppliers'' processes, technology, and capability to enhance competitive advantage".

Houlihan (1987, 1988) defined SCM as the technique of combining various key departments such as production, finance, marketing and human resource of a company so that this unified chain links tier-one suppliers and distributors to enhance performance by reaching the final customers on time. There is already some scholarly work that shows focal companies can utilize vendors' manufacturing expertise and other R&D assets to design new products at lower costs through collaboration among trading partners.

SCM in the RMG Sector:

Some of the key characteristics of the fashion industry are that the life cycle of any new styles of apparels is continuously decreasing, end demand for any garments is highly fluctuating and changing over time, various kinds of designs and styles are evolving everyday worldwide, and the total chain from yarn and cotton supplies to final garments through a lot of suppliers from many countries is very dynamic and difficult to manage (Sen, 2008). So, apparel manufacturing companies of any country should manage the supply chain in a way that meets the total needs of the end consumers (Gunasekaran et al., 2008). This has caused the fashion industry to become increasingly complex and dynamic, and this sector has attracted many new market entrants and thus has triggered intense competitions (Gunasekaran et al., 2008).

The business of the fashion industry is so volatile and competitive that the driver for successful entrepreneurship is capitalizing on opportunities and scopes by integrated efforts among supply chain partners (Sen, 2008); apparel manufacturers and traders are engaging themselves to utilize integrated supply chain management as a source for improving their business performance (Gunasekaran et al., 2008). Lam

and Postle (2006) found in their study that supply chain management consciousness was still comparatively low among the apparel manufacturers and traders in Hong Kong. Lee and Kincade (2003) mentioned some of the key dimensions they found in the US apparel supply chain including "partnership, information technology, operational flexibility, performance measurement, commitment of top management and demand characterization".

The current RMG manufacturers of Bangladesh are importing most of the required woven fabrics from China, India, Pakistan and Indonesia. As a result, the total lead time is becoming longer, putting a negative edge on competitiveness. It is possible to reduce the total lead time through supply chain integration among upstream and downstream partners to make RMG manufacturers more competitive (Nuruzzaman and Haque, 2009). Supply chain integration makes it possible to manufacture fabrics before taking orders from buyers but requires more collaboration among buyers, fabric suppliers and garment manufacturers in Bangladesh.

Nuruzzaman et al. (2010) realized that a long lead time was one of the greatest problems of the RMG sector in Bangladesh and that its top five causes constituted the issues of integrated supply chain management (SCM). They emphasize that SCM is basically a complex process for countries, and a new in the apparel sector especially in the least developed countries like Bangladesh. Nuruzzaman *et al.,* (2010) concluded that a country like Bangladesh may create a remarkable position in the world's total apparel export by managing the partners of supply chain to reduce the lead time.

However, there are only a few in-depth studies about SCM for the RMG sector in Bangladesh and no study offers indications on how factories can increase productivity, reduce costs, and respond to changing customer needs using effective and efficient integration among supply chain partners. The primary purpose of the study is to identify the interdependence and dynamic behavior that exists among supply chain performance variables.

Methodology

A questionnaire was designed as a survey instrument. The questionnaire included both closed ended and open ended questions. We asked respondents to indicate the importance of supply chain performance variables using a five-point Likert scale. We also carried out separate depth-interviews with one managing director and owner, one general manager, one merchandising manager and one factory manager from different garment factories to construct the causal loop diagram among supply chain performance variables.

Modeling using System Dynamics:

System Dynamics has evolved mainly from industrial dynamics which was first written by Jay W. Forrester in 1961. Forrester (Industrial Dynamics, 1961: 13) explained industrial dynamics as a complex system of inter-dependent industrial organizations; this interdependence changes over time as information feed-back changes and that's why it is called a dynamic system. Sterman (2000) used industrial dynamics for analyzing business systems depending upon changing information and time. Thus system dynamics is very useful to craft future policies for running businesses in a complex environment as time changes. In addition to tangible factors, it can also be used to model intangible factors which are not easily measureable such as human behavior, customer satisfaction, and employee skills. Simulation of intangible factors is sometimes called strategic simulation because it doesn't actually quantify the exact numerical value but shows a pattern

of the likely outcome for intangible factors when they are acting in various feedback loops with inter-relations, change over time, or demonstrate a dynamic behavior.

There are two structural ways to analyze any dynamic systems: 'causal loop diagram' (CLD) and 'stock and flow diagram'. CLD diagrams can be used to show the governing inter-relations among a number of different variables using feedback loops. A positive feedback loop means the dependent variable moves in the same direction as that of the independent variable; as such, the polarities are assigned as a plus (+) sign on the arrowhead of feedback loops. In the case of negative feedback loops, if the independent variable increases, the dependent variable decreases and vice versa. Thus a minus (–) sign is assigned to the arrowhead of the feedback loop.

The other structure of system dynamics is a stock and flow diagram which is used to explain both variables, i.e. the stocks and flows. Stocks refer to the status of variables at a point/moment of time while flows exist during a period of time. Stocks are accumulated over time through inflows and outflows. Apart from stock and flow variables, another kind of variable called an 'auxiliary variable' has been used here. Auxiliary variables are used to connect between stocks and flows as well as among themselves. By using all these three kinds of variables, we can explain dynamic systems more appropriately. Many researchers and authors have used stock and flow diagrams to model and describe supply chain performance variables (Agarwal and Shankar 2005, Campuzano and Mula 2011).

Table 1: Definitions of variables

Variables	Remarks and meaning	Types	References
Supply chain performance/ orders/sales	Includes all variables listed below. Lead time reduction, cost minimization and quality improvements are achieved through all other activities as listed below.	Supply chain performance index	Agarwal & Shankar (2005)
Lead time reduction	One of the key order winning criteria from buyers. Lead time is the duration of time from order placement to order shipment date. Lead time reduction signifies agility of the particular company's supply chain.	Result	Towill (1996)
Cost minimization	Another key order winning criteria along with lead time reduction. It can be achieved through lean manufacturing, collaborative planning, and integrated supply chain	Result	Mason-Jones, Naylor & Towill (2000)
Quality improvement	Sophisticated products at a reasonably low price. It's very important for EU buyers.	Result	Christopher & Towill (2001)
Process integration	Working together of suppliers & buyers, a joint effort to solve problems or develop products or quality or system	Enabler	Christopher (2000)
Collaborative planning	Use partners facilities and opportunities to maximize efficiency, capture market potential	Enabler	Christopher & Towill (2001)
Delivery speed	Prepare for short-term and long term changes based on market trends/changes and buyers expectations	Enabler	Christopher & Towill (2001)
Use of IT	Using software and hardware to share information effectively and to improve quality and production speed	Enabler	Yu *et al,* (2001), Fasanghari *et al.* (2008)
Uncertainty	Effect of changing market situations, and supply chain unpredictability, bullwhip effect	Inhibitor	Agarwal & Shankar (2005), Mason-Jones & Towill (2000)
Market sensitiveness	Achieve quick responsiveness to the changing market environment in terms of demand pattern and quality so that supply chain becomes agile.	Enabler	Christopher (2000)

Variables of the system dynamics model for RMG in Bangladesh:

After the 'multi fiber arrangement' (MFA) phased out in 2005, the Bangladesh RMG industry had to compete with all other apparel manufacturers and suppliers around the world. As a result, it was forced to reduce costs while maintaining reasonably good quality. According to experts in the industry, good quality means sophisticated products that are somewhat difficult to sew and conform to buyers' requirements. They also comment that buyers from USA focus more on reduced costs while buyers from Europe emphasize on high quality and fashionable products, but also reasonable costs. As the product life cycles are decreasing continuously, the lead time is also decreasing and putting extra pressure to the Bangladesh RMG industry. So, RMG manufacturers have to supply high quality products at a reasonably lower cost and shorter lead times than before to attract customers from USA and Europe. Some key variables have been identified from the literature review and opinion of experts in the RMG sector. These variables are classified as results, enablers and inhibitors (Table 1).

Components of each variable:

A number of factors were identified to represent each enabler, result and inhibitor variable, through a search in the literature including published articles and supply chain management textbooks. After listing these factors, questionnaires were distributed among respondents of the sampled factories to collect their opinions. Factors associated with each variable have been listed in the Table 2.

Table 2: Factors associated with the variables under study

Variable	Components (associated factors)
Market sensitivity	Starting time of raw material sourcing and procurement. Training managers, technicians, workers to manufacturing ability of sophisticated and fashionable garments. Procuring sophisticated machinery to increase the sewing ability of sophisticated garments and improve quality
Delivery speed	Assigning importance/priority on special tasks to meet future requirements of market demand such as training of human resources, usage of IT, working together with buyers & suppliers, exchange of necessary information among supply chain partners, enhance collaboration with suppliers and buyers, having stable workforce
Process integration	Strategically fixed and fewer numbers of suppliers and buyers. Joint work team with buyers and suppliers to solve problems. Providing feedback information to buyers and suppliers to keep them updated.
Collaborative planning	Using centralized collaboration teams among factories or production facilities. Informing suppliers and buyers about changes of product design/specification well in advance so that necessary preparation can be taken to reduce waste. Maintain and share up-to-date production and inventory status with buyers and suppliers
Use of IT	Using both hardware and software at least in three aspects such as internal operations, purchasing and vendor management, and on buyer relationship. Different kinds of hardware and software can be used for managing all these aspects like ERP software, marker and pattern making software, inventory management software, etc.
Uncertainty	How many times did the buyers change their order quantities and product specifications? What is the rate of shipments of 100% quantity of original orders or without shortage by the factories? How many times factories could not ship out within the original lead time? How frequently did the overseas and domestic suppliers fail to deliver fabrics and accessories within lead time, without quantity shortage and with appropriate quality?

Findings and Discussion

There are several loops among supply chain performance variables in the casual loop diagram (Figure 1), while the variables have been grouped into three categories of enablers, results and inhibitors. The supply

chain performance is the sum total of all these three kinds of variables. We have used sales as the proxy for supply chain performance under the assumption that if the total number of orders increases then it proportionately increases the sales value and signifies the level of supply chain performance variables at any particular time. So, the higher the sales value is, the higher the total supply chain performance index is.

The Vensim software can show all the loops among the variables at different nodes. At the supply chain performance node, there are five loops among the variables involving different numbers of variables. For example, if the target cost minimization increases then the difference between target cost minimization and actual cost minimization increases and the feedback loop between them is positive. As the difference in cost minimization increases, the company obtains fewer numbers of orders from the buyers. Thus the feedback loop between target cost minimization, actual cost minimization and supply chain performance variables becomes negative (the first loop at the node of supply chain performance).
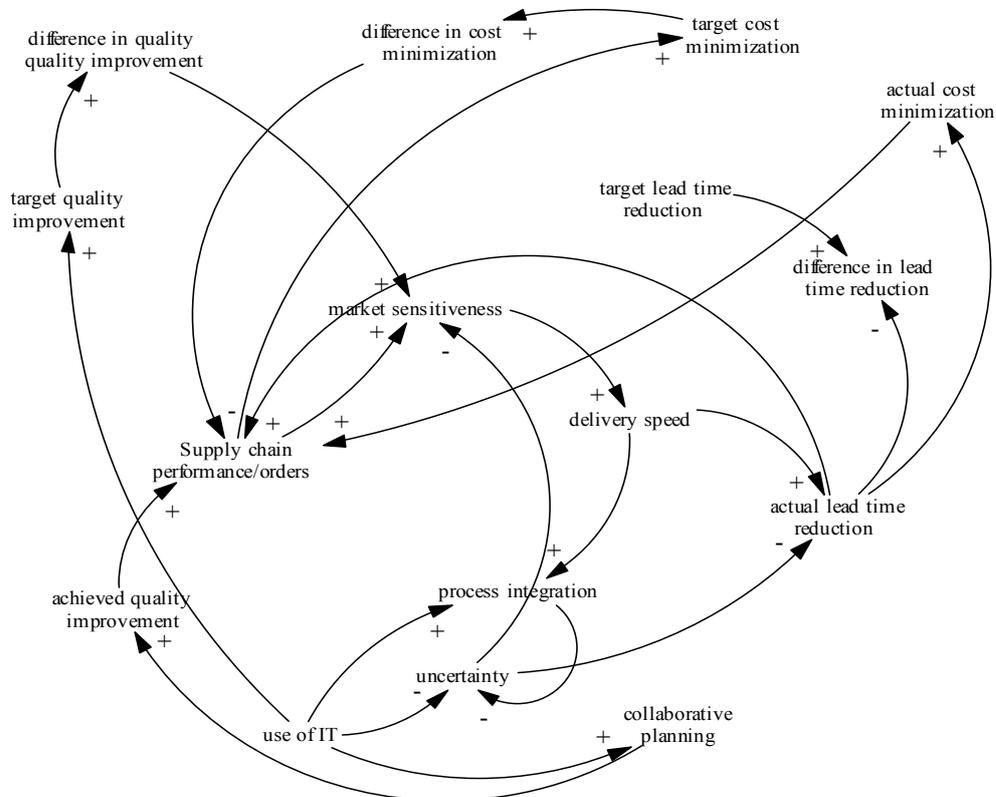
Figure 1. Causal loop diagram among variables in the RMG supply chain (see text for explanation)

In the second loop, when companies plan to obtain more orders from buyers they increase market sensitiveness which also helps to increase the delivery speed. When the delivery speed increases it reduces the lead time of the orders for production and shipping. Reduced lead time has become the second most important factor for USA buyers and the most important order winning criteria for European orders as well as for any fashionable items or orders irrespective of markets (USA or Europe or any part of the world). As the product life cycle is decreasing continuously, the reduced lead time is playing an important role for securing orders from buyers. Thus increased market sensitiveness, increased speed of delivery and reduced lead time increase the sales or supply chain performance index and the feedback loops among these variables are positive (Figure 1).

If we move from the second loop to the third loop, an additional variable involved is actual cost minimization. From the third loop, we see that lead time is reduced through increased market sensitiveness and speed of delivery. When lead time decreases, the throughput in the supply chain increases rapidly. All the inventories including finished garments, fabrics, accessories and other raw materials and any unfinished items (work-in-process) will stay in the store for a shorter length of time than usual. Thus the inventory turnover ratio will increase and the financial ratios will be positively affected. As a result, cost minimization will be achieved proportionally, minimizing the cost and helping secure more orders from buyers.

In the fourth loop, the variables involved are supply chain performance/orders, market sensitiveness, delivery speed, process integration, uncertainty and actual lead time reduction. In this loop, market sensitiveness and delivery speed tend to increase process integration. When process integration increases among the companies, then uncertainty of buyers and suppliers in the entire supply chain decreases. Thus the feedback loop between delivery speed and process integration is positive, as is the one between process integration and uncertainty. When uncertainty is reduced and process integration is increased, lead time is again reduced which in turn increases sales or the supply chain performance (as described in the previous paragraph).

The fifth loop shows how increased process integration and reduced uncertainty can lead to increased actual cost minimization by reducing lead time. This loop encompasses two extra variables, namely process integration and uncertainty, and shows a combination of one to four loops.

Some empirical evidence from Bangladesh RMG:

It is very difficult to exactly quantify the value of market sensitiveness and process integration since they have various qualitative and quantitative dimensions. So, we have assumed the number of factories and domestic supply of fabrics as proxies for market sensitiveness and process integration and the sales as a proxy for supply chain performance. The number of garment factories is assumed to represent the proactive market sensitiveness in responding to an increased demand for Bangladeshi garments in the global market. We have assumed that the present factories (BGMEA, 2013) are fully capable of meeting their present demands, and the numbers of factories in previous years have been divided by the number of factories in 2010-2011 (as base year) to get the market sensitiveness for the corresponding years. The sales of garments have constantly increased as market sensitiveness increased (Figure 2).
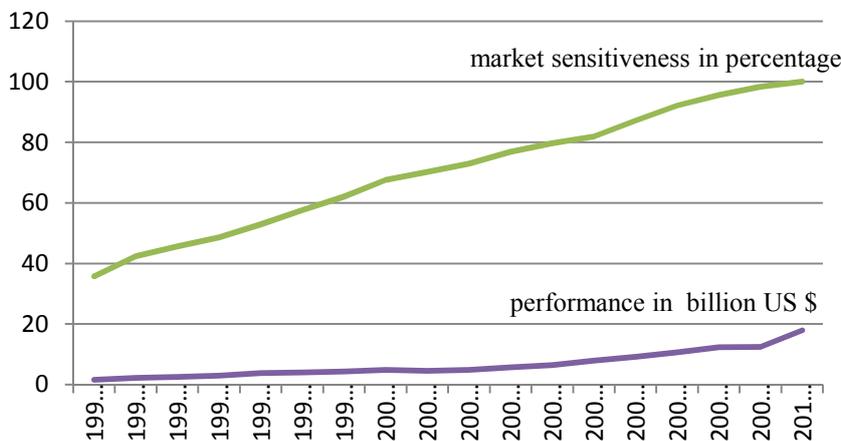
Figure 2. The relationship between market sensitiveness and supply chain performance

Since fabrics is the single most important raw material to produce garments, the percentage of its domestic supply to total demand (BTMA and Bangladesh Ministry of Textile, 2013) indicates the strength of process integration in the backward supply chain of garment industry. The more fabrics supplied from the domestic textile industry, the less Bangladesh garments are dependent on imported fabrics, thus an indication of improvement in process integration. The domestic supply of fabrics can reduce lead time and cost and improve quality by providing swift feedbacks and joint work which is less feasible with foreign textiles. Figure 3 demonstrates that performance has increased greatly as the supply of fabrics from domestic sources has increased.
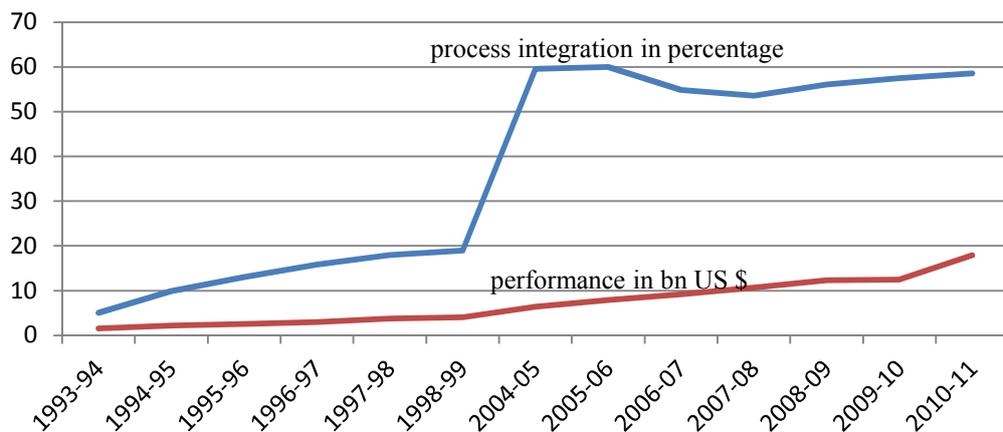
Figure 3. The relationship between process integration and supply chain performance

The results of our survey responses and depth interviews confirm that the lead time has become a crucial factor to increase competitiveness. We have divided lead time into two components of export and import lead time (World Databank, 2013). These two lead times are largely beyond the control of garment manufacturers, instead the government and other players in the backward and forward supply chain linkages are the main actors; however, they have decreased over time as the garment sector has played a key role in the national GDP and exports. Supply chain performance has increased as these two variables decreased over time (Figure 4).
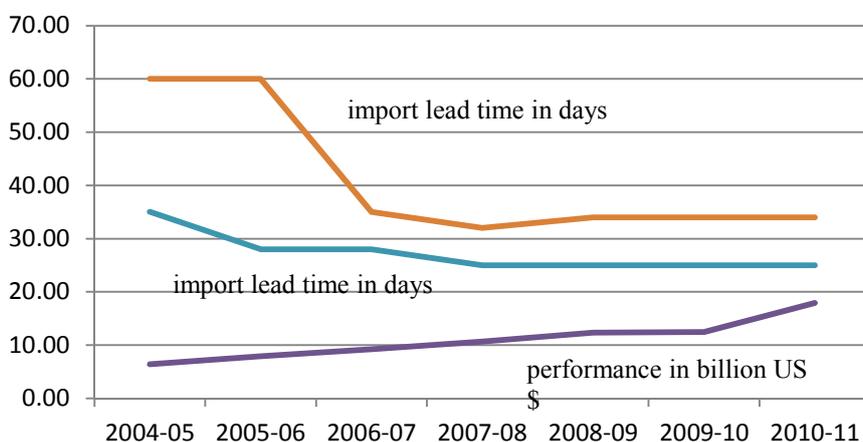
Figure 4. The relationship among import and export lead times and supply chain performance

Limitations of research:

There are some other enabler variables such as data accuracy and introduction of new products, and two other inhibitors, namely, a lack of trust and resistance to change (Agarwal et al., 2005) that can affect supply chain performance. These variables are not considered in our research. Customer satisfaction was also excluded from our research though it could be used as a result variable. Though customer satisfaction is the measure of availability of garments to the buyers' location when they are required, measuring this index seems to be very difficult in the case of Bangladesh RMG industry. Thus customer satisfaction has not been considered in our research. Nowadays, green supply chain management has a significant impact on the sales performance of garments in developed countries. But green supply chain has also not been taken into consideration to develop the causal loop diagram because its exact impact on supply chain performance was difficult to identify. We have considered the cost, quality and delivery (CQD) as the order qualifiers; flexibility has not been considered, though it can have a significant impact on sales or the order winning process. The results of the supply chain models might vary when more variables are included.

Conclusion

The cost, quality and lead time are the most important result variables to sell garments to the buyers. While other competitors from different countries are providing garments with the same quality and at reasonably low costs, reduced lead time becomes the final criterion to secure sales. Thus, both the sales and supply chain performance can be improved if apparel manufacturing companies can further reduce the lead time. When lead time is reduced, it has a great impact on other key variables such as cost and quality. If lead time is reduced, then not only waste in different processes and departments along the garment supply chain partners can be minimized but also cost may decrease because the inventory cost and capital investment decrease. As a result, a company can gain more orders from the buyers. The use of information technology (IT) among the supply chain partners and within the planning and operations of internal processes like pattern making, cutting, sewing and finishing, etc. may help reduce the lead time. When the use of IT is increased, collaborative planning and process integration also increase. As a result, it helps to reduce uncertainty along the total chain and results in increasing supply chain performance and meeting buyers' order quantities and delivery dates.

The survey responses and depth interviews show that the competitiveness of Bangladesh garment industry is such an important issue that most respondents in the survey ranked it one of top priorities for securing new orders. We also discussed this matter with the experts in the industry. All agreed that lead time reduction can help increase industry's competitiveness and sales accordingly. To emphasize on the point, we have included a separate section about lead time reduction strategy in the questionnaire to collect suggestions from the respondents.

This model helps to maximize the scope of attaining optimum solutions in the supply chain since it shows the interdependence among variables and the dynamic behavior of the variables. The CLD shows a complete or apt picture of how the whole supply chain variables are interlinked and how they can be affected by other variables. A department may obtain its optimum objectives even if sub-optimum solutions are taken by other departments or for the whole supply chain.

The system dynamics model can help achieve local optimum solutions for a global supply chain, through better understanding and policy making. The system dynamics model helps policy makers to

understand how to integrate supply chain trading partners in backward and forward linkage to maximize supply chain surplus. Finally it can help the top management to understand and analyze how the performance variables are inter-related, where to de-couple some performances, and where to emphasize and de-emphasize to achieve the whole supply chain objective.

As for future research, it seems that compliance issues have become a newly emerging vital factor to attract orders from developed countries after some deadly fires and accidents in Bangladesh garment factories. So, it should be taken into consideration in the future growth of the industry. A few more variables such as the effect of research and development (R&D), domestic cotton production, and supply chain complexity can be invoked to model the performance more accurately. Moreover, new components can be added to the proxy parameters for market sensitiveness and process integration as well as lead time.

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REVIEW:
Attitudes towards intra-lingual and inter-lingual translation in courtrooms in Japan: implications for court interpreters

Parvin Kida [1]

Abstract

This paper discusses the challenges faced by Japanese court translators and interpreters, and some of the possible reasons for a lack of interest in the Japanese judicial system to ensure competent legal support for defendants who do not understand Japanese. It is argued that often the role of the interpreter is mainly to help maintain a smooth legal process rather than to provide a good understanding of the proceedings for non-Japanese speaking defendants or to guarantee their 'equitable access to justice'. By bringing up examples of the realities that exist in actual practice at the courtroom, the major issues that stand in the way are identified. The difficulties of non-professional translators and interpreters in observing accuracy in language adaptation while maintaining faithfulness to the original meaning are also exemplified. The implications of this study can be beneficial for a more deliberate evaluation of the efficacy of the current system of legal translation and court interpretation in Japan, and it is hoped that such studies may improve an awareness of the measures that may enable interpreters to render a better service to the justice system.

Keywords: Courtroom interpretation, Japanese courts, Justice, Legal translation, Non-Japanese defendants.

Introduction

Language is a crucial tool in any courtroom, and was considered a priority when the judiciary system in Japan introduced the lay judge system, '*saiban-in'*, in May 2009, in which six ordinary adult citizens (above 20 years of age) are chosen randomly to work in conjunction with three professional judges to deliver a verdict (Saiko Saiban-sho, 2008: 12 and Naka et al., 2011). The Japanese judiciary system spent five years preparing an introduction to the new system in order to help with the lay judges' understanding of the special language and terminology used in the courtroom. This sudden awareness of the linguistic demands of the courtroom on lay judges who are native Japanese, and the recognition that they may be unfamiliar with legal terminology and may need intra-lingual support, is in sharp contrast to the situation that foreign interpreters for the court have faced over many decades, commonly having to solve communicative conflicts on their own in the hope of providing an adequate understanding of courtroom proceedings by non-Japanese defendants.

About 8.3% of the defendants, 5,870 out of the total number of 70,610 tried in the courts of criminal justice in 2009 were foreigners (Supreme Court of Japan, 2009: 44). Nevertheless, the court interpreters still lack the support they need in order to render a quality job. This results in misunderstandings in the inter-lingual mediations in the courtroom, though the proceedings are likely to have as profound of an impact on the life of foreign defendants as Japanese defendants who are tried in the lay judge system. Indeed, what is the role of the court interpreter in Japanese courtrooms, where almost 99% of all cases heard end in convictions?

A historical overview of the Japanese legal system:

According to the Supreme Court of Japan, the current Japanese law for criminal procedures is a mix of European and Anglo-American legal traditions (2009: 5), moving gradually from the inquisitorial model to the accusatorial (Reynolds and Flores, 2002: 5). In the Meiji period, as part of its modernization agenda, the

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government looked to Western models to revamp the criminal justice system. In 1880, it enacted 'c*hizaiho'* modeled on the Napoleonic code of criminal justice, which was then revised in 1890 to become the Code of Criminal Procedure '*keiji soshou hou'* which became 'the first Western style comprehensive criminal justice system in Japan (Supreme Court of Japan, 2009: 5).

Amidst the growing militarism of the 1920s, the 1922 Code of Criminal Procedure was enacted, heavily influenced by German law. The military had a hand in shaping the later legal system, as well; the New Code of Criminal Procedure of 1948, which was adopted post-World War II under the New Constitution of 1946, incorporated Anglo-American legal concepts into the general scheme of the old law in order to protect human rights. As prescribed in the Juvenile Law of 1948, family courts were also set up with their own special jurisdictions and procedures (Ministry of Justice, 1981: 9). The system did not undergo any substantial changes until 2009, when lay judges were introduced.

When does the court interpreter come into the historical record? I looked at two versions of a document published by the Ministry of Justice in 1981 and 2009, respectively. The 2009 version shows significant revision, and indicates the presence of interpreters in the courtroom, although this information is confined to two tables of statistics included at the very end of the 44-page booklet covering the years 1998-2007; it lists the total number of the accused and those who used an interpreter, followed by the number of defendants who were convicted and those who used an interpreter. The information is ambiguous, and the implications are problematic. The 2009 pamphlet indicates the presence of foreign defendants as well as interpreters in Japanese courtrooms, though it does not discuss the languages used by the 'foreign' defendants, or what crimes they were accused or convicted of. It also does not indicate if the interpreter was Japanese or foreign. In other words, in documents issued by the Ministry of Justice, the interpreter is a nebulous figure in the courtroom. I would like to bring the court interpreter into a better focus by relating to the actual challenges they face in Japanese courtrooms.

Methodology

The author of this paper came to Japan from Iran in 1979, and has worked as a Japanese-Persian interpreter for more than two decades in Japanese courtrooms in Chubu region including Nagoya High Court, Nagoya District Court, Gifu District Court, Okazaki Branch *('shibu'*) Court, and Toyohashi Branch Court. This study is partly grounded on her experience as a regular interpreter for the courtrooms and her observations over a large number of exemplary cases over this period of time, and partly on a review of associated documents and literature from different sources including academic journals and textbooks, news reports from Japanese media, etc. The author specifically compares the paradox of inter-lingual support provision to Japanese laymen in the new system of criminal rulings for Japanese defendants versus the long and continuing practice of hiring non-professional translators and leaving them with little support over the delicate and complex job of inter-lingual translation and interpretation for non-Japanese defendants.

Moreover, some of the interesting observations and experience as well as a few exemplary cases are introduced to help the readers become more familiar with some of the unique features and issues in the Japanese system of justice. Therefore the framework of this study is mainly based on a review of professional observations as a registered court interpreter as well as an academician, official documents, and literature in the form of academic papers, textbooks and news reports. All findings that might be considered subjective have been corroborated with information from academic journals and publications as well as evidence from other sources, and listed in the references and in the text.

Findings

A sudden demand for court interpreters:

In the early 80s, many Iranian workers suddenly poured into Japan, entering on tourist visas, but with the purpose of getting employed at the sort of jobs known as '*3K*', for *kitsui* (difficult), *kitanai* (dirty) and *kiken* (dangerous), at low wages, forming the underbelly of a booming bubble economy. However, when the bubble burst in the early 90s, Japan no longer turned a blind eye to all foreign laborers staying and working illegally. Instead of simply deporting the workers most of whom were working hard to send money back to their family home, all these illegal foreign workers were taken to court. Many of the Iranian workers had a limited command of Japanese, and their arrests created a sudden and great demand for court interpreters.

There were, however, almost no trained interpreters available. Similar to an infamously common misconception in 1970s Japan that any Anglophone from the US, the UK or Canada could be an English teacher, the Japanese courts believed that anyone, such as myself, who was a native speaker of a foreign language, such as Persian, with Japanese conversational skills could be a court interpreter. The courts contacted language schools to recruit translators; I was working in one at the time, and was approached by the Nagoya District Court, who was in urgent need of Persian-Japanese interpreters. I was not asked whether I had qualifications or experience in court interpreting or any other experience as a translator or interpreter, for that matter. Thinking that I was being asked to handle a special case, I accepted the offer without any hesitation, mainly out of a sense of community service. I did not even ask how much the job paid or what the job entailed. Given my naïve idea of court interpreting at the time, I assumed my role would be to simply orally convey the story of each side to the other. I had absolutely no idea that by taking this job on, I would step into a new and challenging career that would eventually lead me to reassess not only the role of court interpreters in general, but also the particular role they play in Japanese courtrooms.

Challenges facing the court interpreter in Japan:

Over the past two decades I have come to realize that there are three basic requirements to make a qualified court interpreter: 1) basic knowledge of the legal system and the jargon used only by the judicial professionals, 2) skills in translation and a good command of the source and target languages, and (3) a cultural awareness and sensitivity to cultural differences. I would like to elaborate on each of these items by offering examples from my own experiences in the courtroom.

Many of us get involved in translation activities in everyday life while traveling to or living in a foreign country, conversing with somebody from another country, surfing the internet, or reading subtitles on a foreign movie. But interpreting in the courtroom is much more complex and carries a heavy responsibility. Proper training is absolutely necessary for such a job to ensure an accurate transmission of information in the courtroom as the outcome may have a profound impact on the defendant's life. As Erik Hertog has noted:

> "Without competent qualified and experienced legal translators and interpreters there cannot be an effective and fair legal process across languages and culture. …Reliable standards of communication across languages are therefore an essential pre-requisite to deal effectively with this increasing number of occasions when there is no adequate shared language or mutual understanding of legal system and process". (Quoted in Mikkelson, 2008: 82)

When the presence of court interpreters became visible in courtrooms in the early 90s, the media showed concern for the accuracy of the language and credibility of the non-professional interpreters hired for trial sessions of foreign defendants. However, in the ensuing decades, training of court interpreters has remained a low priority. Nevertheless, since the advent of the lay judge system in the Japanese judicial system in 2009, some journalists have speculated about the effects on lay judges if a foreign language is used during the trial and whether or not the understanding of courtroom proceedings would be impeded by a defendant who does not speak Japanese and hampered further by a lack of professionally-trained interpreters, which places foreign defendants as well as other parties involved in the public trial at an even greater disadvantage. However, inside the courtroom there seems to be very little concern with how well an interpreter translates from Japanese, which raises concerns on whether there can be a fair trial particularly for foreign defendants speaking an unfamiliar language.

Procedures for registering as a court interpreter:

We may review the preparations needed to become a registered court interpreter based on a two-page handout titled "to those who wish to apply as court interpreter" (*houtei tsuuyakunin-o kibou sareru kata-e*), issued by the Nagoya District Court of criminal law, and handed to applicants who wish to register as court interpreters. It reveals the following points: there is an interview to decide whether the applicant can register as an interpreter or not, however, there is no need for any special qualification, work experience, or educational background. There is also no need to pass any examination for the job. This means that even if one is a registered interpreter s/he is not considered as employed by the court. There is no contract between the court and interpreter for that matter, either, even after one has been accepted as a court interpreter. The interpreters are simply registered on a list and contacted when their services are needed. In addition, after one has been registered as an interpreter, there is no systematic policy or transparency for the assignment of cases which are decided by the judge.

After passing the first interview, applicants will observe a public hearing to evaluate their own ability whether they can actually handle the job or not. Should they decide to continue, they need to write a report of their impression on the case they have observed in the public hearing. The impression must be written in Japanese; this will allow the court to evaluate the applicant's Japanese ability, as the purpose is to ensure smooth trial procedures. After that, there is another interview and the judge decides whether the applicant should be registered as an interpreter or not.

After one is registered, there is a mock trial for the candidate interpreter to practice before being assigned to an actual case in the court. There are also short term seminars where the experienced interpreters bring up issues that may occur during the public hearing and give advice on how to handle the issue. However, the primary purpose of these seminars is mostly providing an orientation to familiarize the new interpreters with the justice system to avoid confusion during the public trial. There is a next to nothing check of the applicant's ability in the foreign language especially in the case of less popular languages such as Persian. The number of years living abroad (for Japanese applicants) and number of years living in Japan (for foreign applicants), and certificate of language proficiency are given consideration, which of course, are not necessarily a guarantee of one's language ability in translating, let alone legal translation and interpretation.

Ironically, though there are no special qualifications required, it emphasizes in the end of the handout that this is a job which needs a high level of skills, and court authorities often remind the already registered interpreters that they need to constantly raise the level of their interpreting ability in the judiciary system on their own. To do so the interpreter must take an oath for each new case "I swear, according to my conscience,

that I will translate faithfully the proceedings of this court". But there is almost no actual support for the interpreters.

Preparations before the launch of the lay judge system in 2009:
In contrast to these rather simple steps to register as a court interpreter, when the 'lay judge' system in Japan was launched on 15 May 2009, there was a sudden and acute awareness of the linguistic challenges found in the courtroom. According to the handbook published by the court ('*gaido bukku saiban-in seido*'):

To prepare for the introduction of the new system, courtrooms were renovated and big display screens were installed to enable prosecutors and attorneys to show documents and other pertinent evidence visually whenever they felt it was necessary for the lay judges to have a better grasp of the documents. Furniture was replaced too; even the view from the deliberating rooms of the lay judges was scrutinized. Further, the linguistic aspect of courtroom procedure and its impact on the ability of lay judges to render judgment was given tremendous consideration. With the aim of making citizens feel at ease when participating in the new system, the Japan Federation of Bar Associations ('*nichibenren*') became fully active in the preparation process. To begin with, a project team was set up to simplify the difficult legal terminology. They studied the legal terms that were being used exclusively by the judicial officials, and tried to change them to vocabulary and expressions accessible and understandable to a lay judge. Professors from law schools in the United States, a country with a long history of using a jury system, were invited to give lectures, and there was even a course on how to speak ('*hanashi kata kouza*'), in which TV announcers were invited as guest speakers to teach lawyers how to speak in a way that members of the public would find easy to understand. (Translated from the guidebook, 2006: 37)

An article in *The Daily Yomiuri* 'No detail too tiny for the lay judges' (23 April 2009: 3) about the final preparations by district courts for the new system demonstrates the extent to which the courts have considered the comfort of the lay judges:

"Some district courts stressed the importance of having a good view from the conference room. For example, a room at the east side of the fourth floor of the Kyoto District Court building has been chosen for its panoramic view of the mountains in Kyoto. Foliage on the grounds of the Kyoto Imperial Palace and Mt. Hiei also can be seen from the room."

In the same article, a district court spokesman was quoted as saying: "We hope the nice scenery will provide a soothing atmosphere when lay judges are deliberating". In the conference room at the Saga District Court, nine lay judges and other judges will be seated on expensive chairs (14,000 yen each) that had won an award for their unique design which allowed the back to naturally align with the chair and enhance a good posture. (*The Daily Yomiuri,* April 23, 2009: 3).

Meanwhile, at courtrooms in Chubu region, interpreters do not even have a space allocated to them for resting or to perhaps exchange ideas about their experiences in the courtroom, let alone a room with a view. In short, the significance of inter-lingual translation was recognized from the onset. The purpose was of course to ensure 'justice for all'. However, this amount of attention to the linguistic demands of the courtroom, to facilitate a better understanding of legal Japanese terminology for the lay judges, stands in striking contrast to the lack of support or interest in court interpreting services for foreign defendants tried in Japanese courts. Let's review how this lack of interest affects the quality of translation and interpretation in the courtrooms.

Some examples of misinterpretations in the courtrooms:

The 'media' seems to be concerned about a lack of professionalism on the part of 'interpreters' and a lack of interest on the part of 'court authorities' regarding inter-lingual misunderstandings that occur in public hearings, and the impact of interpreters' presence on the legal proceedings. There are often articles in Japanese 'media' about erroneous interpretations and concern about the fairness of trials because some of these mistakes in interpretation can have serious effects on the result of the trial. I would like to review some of these mistakes which were reported in the newspapers, and how it might affect the outcome of the trial.

A well-known daily, *Asahi Shimbun* (March 19, 2010) reported that according to an expert's opinion, in the interpreting process of the trial of a foreign defendant who was charged with violation of the stimulant drugs control law in Osaka court, misinterpretation or omission of the statements of the speaker by the two interpreters of the statements of the defendant from English to Japanese, were observed on several occasions. In fact, in the case of long sentences, the rate was over 60%. The Defense Counsel demanded that the court of appeals return the case to the district court. The reason for this demand was the high possibility of the influence of the mistakes on the lay judges' deliberations and on the verdict. The article continues by saying that the defendant was a 54 year old German woman, charged with attempting to smuggle three kilos of stimulant drugs that she was asked by an acquaintance to carry to Japan. She was caught upon arrival at Kansai Airport, indicted, and later sentenced to nine years of penal servitude and 3.5 million yen in penalties. Being born in South Africa, her mother tongue was English, so two interpreters were assigned to the case, who took turns in translating. At court, the defendant denied the charges by claiming that she was not aware what she was carrying was stimulant drugs and insisted on her innocence. However, she got a guilty verdict.

The court stated that her statements at the interrogation stage were more reliable and gave her the imprisonment verdict. In the court of appeal, to verify the accuracy and therefore the credibility of translation, the lawyer took the DVD in which the trial proceedings were recorded (in February of the same year) to the court. According to that expert's opinion, studying the parts with a subject and predicate verb in the context, there were either mistakes or omissions in 65% (that is 40 out of 61 parts) of the defendant's statements. The expert indicated that, as a whole, there were 34% misinterpretations (52 out of 152 parts). As an example, among the questions of the defense counsel, he asked the defendant, "as a result of your action you carried illegal drugs, how do you feel about this?" The defendant answered "I felt very bad." The interpreter, instead of interpreting as such (*totemo warui kibun ni)*, translated it as "I repent my action" (*hijouni hansei shimasu).*

The word '*hansei*' (repent one's action) has a very significant emotional implication in the justice system in Japan. In a case where the defendant is denying the charges, using the word '*hansei*' can have serious consequences. When the defendant shows his/her regret for their action by saying '*hansei shimasu*' (I am sorry for what I have done), it is usually considered as a favorable point for the defendant in deciding the amount of punishment and is always mentioned in the verdict. However, in the above case, obviously, the translation was quite contrary to the defendant's claim of innocence.

Misunderstanding can also be disadvantageous to other people involved in the case such the victim's family. *The Japan Times* (July 21, 2010: 3) reported that "many errors by a court interpreter, from slight differences in nuance to the loss of a few details, have so far been observed during the high-profile case" ("*Ichihashi trial bares translation woes*"), and added that "court refuses to admit that interpreters often lack

skills". Ichihashi's trial had already received a lot of public attention because the victim was a foreign woman from a Western country, the criminal was on the run for two years before he was caught, having plastic surgery on his face to avoid arrest, and the crime was especially cruel. In addition, it was one of the first cases with a court interpreter appointed by the court for the sake of the victim's family during the trial proceedings; the victim, a British woman, had been raped and then murdered, and her body was later dumped in a bathtub filled with mud.

According to the same article, since 2008 it has been possible for families of victims to participate actively in court proceedings, bringing their own attorneys, questioning the defendant, and expressing their opinion to the court authorities. If the family of the victim does not speak Japanese, the court needs to appoint an interpreter competent in the foreign language used in the courtroom. The court-appointed interpreter was assigned to translate not just the testimony of the foreign witness but the entire court session for the "benefit" of the victim's family. However, among the several mistakes, one was when the mother of the victim, as a witness, was asked about the impact of her daughter's death on the family; the mother said that "she blamed herself for allowing her daughter to come to Japan", she went on to say "I could not take a bath for two years." That is apparently because of her daughter having been found in a bathtub, the article said. But the court interpreter translated it as "I cannot take back the two years." Such an error could have certainly made a difference in the judgment of a member of the lay judge panel. The article raised concerns, once again, by saying "this prompted the legal professionals and linguistic experts to call on the courts to face up to the quality of interpretations when foreign nationals are involved in the court cases and to improve the training and status of interpreters."

The same article cited Professor Makiko Mizuno of Kinjo Gakuin University, a specialist in linguistic analysis of court interpretation, as saying "the courts are naïve in believing that unless there is a dispute of guilt or innocence, a loose interpretation of the testimony won't pose a major problem."

From the two examples above, while the latter could be a simple mishearing mistake, the former is about one of the most complicated issues in legal translation which is verbatim, 'word for word' translation. There are a lot of debates as to whether translation should be meaning-based or form-based. The linguists who are aware of 'culture bound language' argue over the limitations of a form-based translation and favor meaning-based interpreting. But then, there is a possibility that the intended meaning is distorted through the translation process when the interpreter alters the statement of the speaker for clarity. The above case is a caveat of the difficulty of meaning-based translation. One can realize how much skill is needed in the language adaptations for a job with such a huge responsibility. The interpreter has only a few seconds in a public hearing to use his/her judgment on the linguistic choices.

One must remember that such mistakes were detected because the foreign language used in the courtroom was English, considered as one of the major languages in Japanese courts, understood by the majority of foreigners. When a person is standing trial and the interpreter is mediating on his behalf, if the interpreter changes, adds or omits words, the intended statement may become distorted. There are no measures to check the mistakes that occur in the interpretation, especially in the case of less popular languages such as Persian. Sometimes if the defendant has enough money to pay, the defense counsel brings an interpreter to check the trial proceedings. If not, the mistakes usually go unnoticed. The only other way the court might realize that some language problem has occurred is when the defendant cannot understand the interpretation and starts asking the interpreter questions for clarification. In case the interpreter is a

novice, s/he tries to make the translation clear and the two engage in a two-party conversation, which of course, should not happen in a public hearing.

Moreover, a common misconception among court authorities is that native speakers of Japanese are preferable as court interpreters to the non-Japanese. *The Japan Times* (August 28, 2002, "*Persian-language court interpreter lives on a tight rope*") reported on the merits of both culture and pressure for accuracy. A Tokyo District Court judge said about an interpreter, "We are relieved when we hear her interpret, so we ask her to handle difficult cases in which the defendants deny the charges." The interpreter, on the other hand, in the same article said about her job in court, "I get frightened to enter the courtroom." This contrast is because Japanese translators speak (nearly) perfect Japanese in the courtroom. However, given the gravity of being a foreign defendant in a Japanese courtroom, should there not be more concern for how much or how well a defendant understands the proceedings?

The court authorities should take into consideration the fact that everyone (including interpreters) who speaks a second language is almost always weaker in his/her second language than their native tongue. That is, only the presence of an interpreter in the courtroom should not be viewed as 'enough' to maintain the smooth running of the Japanese-language court proceedings; it certainly must also 'benefit' the defendant.

Lexical challenges:

Another factor which may result in erroneous interpretations in the courtroom is the lexical complexity of legal terms. The following example indicates how important it becomes for the interpreter to know the significance of key words which have legal implications, beforehand.

In a case of attempted murder once I was assigned to, there had been a fight between the defendant and the victim during which the victim was injured. The prosecutor was trying to prove that the defendant was aware during the fight that by attacking the victim he might kill him, a charge denied by the defendant. The term the prosecutor used to accuse the defendant of his intention of murder was 'willful negligence' (*mihitsuna koui*). However, in the adversarial justice system, where language is an important tool, the definition of 'willful negligence' is not enough to fully convey the implication of the term. The word 'negligence' usually conjures up the idea of the absence of action. On the other hand, the word 'willful' means deliberate action, so one may be confused as to how these two words can go together. Although I somehow could infer that the word had legal significance, I was not sure about the meaning of this term in a criminal court case, and just gave a literal translation. Probably the defendant did not understand it fully either, and certainly in as much as the justice system in Japan has changed to include lay judges in the courtroom, such legal terms must be simplified and explained as follows: the suspect knew that the victim might die but in spite of that he attacked the victim. Okawara has written about this issue in detail (2012: 381-394).

In complex cases it is very important to convey the testimony of the defendant accurately because depending on the understanding of the defendant of the implications of the term, his testimony and the outcome of the trial can change. During this particular trial, the prosecutor asked the defendant to explain the circumstances of the fight. The defendant seemed unaware of the importance of choosing his words, and as I listened, he used the two phrases "I hit him with the sword" and "the sword nicked him" interchangeably, with no indication of whether there was any intention to injure the victim. Apparently the lawyer did not inform his client about the significance of this part of his testimony in court because the defendant was using the two expressions randomly without giving much thought to their different implications. I was not aware of the significance of the words legally but managed to make the distinctions

of the two words the defendant was using in his testimony and decided to interpret the words in Japanese as '*attata'* (the weapon hit) and *'kiritsuketa'* (I hit).

The lawyer, however, was aware of the subtle difference the prosecutor was listening for and though he could not understand what his client was saying, suggested that the interpreter was making mistakes in conveying the defendant's statement, saying, "Objection: the translator is not translating correctly." The lawyer did not even understand Persian but recognizing the Japanese translation was incriminating his client chose to protect his client by undermining the credibility of the interpreter. The legal ramifications of the linguistic choices of the interpreter are significant, but the courts do not prepare the interpreter to be alert to the implications of subtle shifts in their translation of a defendant's testimony. So the lawyer, prosecutor or judge may use the interpreter as a scapegoat for 'mistakes' embedded in testimony that Japanese speakers would not understand.

Such examples show the level of respect for the role of the interpreter as a linguistic mediator and suggest that like the defendant on trial the interpreter may also be a suspect, not to be trusted. They happen frequently because lawyers know that court translators are not professionally trained for the job and have no agency to protest against such charges. Unfortunately there is no pressure from the 'Bar' either to urge the implementation of programs for training 'qualified' interpreters.

The challenges of 'not guilty' cases:

Translation becomes more complex and crucial when the defendant denies the charges brought against him. Although it is usually difficult for a lawyer to prove his/her client's innocence, it is important for the translator to correctly convey each party's story to the other side because it can affect, at the very least, the extent of punishment. For somebody whose freedom is to be taken away, even one day makes a difference, let alone weeks or months. Among the cases I have handled, I have come across quite a few factors causing confusion in translation of denial cases.

A situation to make translation challenging involves cases that the defendant is lying or hiding the truth. In such cases, translation becomes difficult. Why? Sometimes the defendant does not answer the question being asked and gives an irrelevant answer to the question. At other times the defendant gives a deliberately vague answer. As a translator, I have found that, more often than not, the court's reaction to such answers is to wonder whether the defendant gave an answer that was lost in translation. That is, when a vague answer or irrelevant information is delivered by the interpreter, there is a tendency to be suspicious of the quality of the linguistic mediation; to see the interpreter as the source of the vague terms or irrelevant information. The defendant's lawyer especially will try to suggest that his or her defendant is trying to prove her or his innocence, but the translation is standing in the way.

There are cases where a lawyer wants to show that an interpreter is incompetent by asking the same question in two different ways and getting two different answers from the defendant. But it is probably too late and also the wrong place to give the interpreter a 'qualification' test! This kind of attitude exists mainly because the translators are not viewed as professionals. And defendants are not the only ones in the courtroom who make translation difficult with vague or irrelevant answers. Sometimes the lawyer's questions are complicated too, especially when he/she is not familiar with the interpreter present in the courtroom. From time to time the lawyer may receive a reminder from the judge about keeping the questions focused.

There are times that problems arise due to a lack of access to information. In big cases where, for example, the police discover and confiscate a large quantity of illegal drugs, the written documentation

needs to be carried in a suitcase. The questions asked by the lawyer and prosecutor, respectively, are based on these written documents which are not accessible to the translator. The only information the translator receives is the content of the indictment, the opening statement of the prosecutor, and a summary of the evidence in the case. If the lawyer is court-appointed and the defendant cannot speak Japanese, the lawyer will be accompanied by a translator when visiting a defendant in preparation for the court proceedings. This enables the translator to understand the crux of the case, which makes translation much easier, more accurate and efficient, and benefits both the court and the defendant.

When the defendant has enough money to hire a lawyer, the translator may or may not accompany the lawyer to visit the defendant before the public hearing. If the lawyer decides not to bring a translator with him, the translator's first encounter with the defendant takes place in the courtroom. In big cases, several other people (including alleged accomplices and the police investigation team) are interrogated and reports are made containing their statements and submitted to the court as evidence against the defendant. When a statement by someone is false or detrimental to the defendant, a lawyer, through his questions at the public hearing, will try to discredit it. When the translator does not know the purpose underlying a lawyer's series of questions, translation can be difficult; like reading a book in the dark, it is not easy to see the words. Nevertheless, some argue that in order to ensure the impartiality of the translator it is better if s/he does not know what a defendant had said at other times.

In one of the handouts given to interpreters during a training seminar, the proper position for an interpreter was explained as "white sheet of paper". However, the code of impartiality may have been given so much emphasis that efficiency has been forgotten. In the case of the Japanese courtroom, where translators are not necessarily trained professionals, preparation is necessary, particularly in more complex cases.

Yet another reason for errors in interpretation can be the stress of providing testimony during the police or prosecutor's interrogation, which must be cleared up in the courtroom. When a defendant is arrested for the first time, he is usually in a state of shock and sometimes very nervous, particularly when s/he feels the difference in the weight of his/her words against the assumptions of the police. Under such circumstances, communication can be difficult even when all the parties involved are speaking the same language. From time to time defendants have complained that they could not understand the translators well. If they speak Japanese to some extent, they sometimes may notice errors being made by their translator. After interrogation, the statements of the, then suspect, is made into a report which becomes evidence in the court to prove that the suspect is guilty. After reports are made, they are read to the suspect through the translator and he/she is asked to sign them. If the translator cannot read Japanese, the police or prosecutor reads it and the translator just translates orally. Sometimes, the defendant raises doubts whether the police really read what was actually written. In some cases the lawyer asks the court to summon the translator who was hired in the investigation stage to testify. But it is rare that a translator is summoned to court for testimony.

Unfortunately, another difficulty here is that it is not always the translator who made a mistake. Sometimes, a defendant tells a lie but later forgets what he had said previously and changes his statements and then puts the blame on the translator's mistake in translation. In cases like this the translator is an easy target to be blamed for. Translation in the courtroom becomes very delicate when this kind of problem occurs in the investigation and the defendant is trying to prove his innocence.

Translation problems can also occur when there has been an irregularity in the collection of evidence by the police. The lawyer will call for his defendant to be acquitted on the basis of the invalidity of the evidence. In such cases, there is a great deal of discussion about legal procedures for seizing and collecting evidence. I believe it is necessary for the translator to be familiar with the general aspects of law. In these cases, the police officer who arrested the suspect is usually summoned to the courtroom as a witness and testifies. They talk about their rank in the police force to begin with. That means that the translator needs to know these ranks if she/he wants to be precise. Here, I simply translate as the witness is a police officer.

When questions and answers between a police witness and the lawyer or the prosecutor are focused on legal procedures concerning evidence collection, for example, it is difficult for the translator if she/he is not familiar with the terms for the various procedures. For example, once there was a case where the defendant had been arrested for possession of illegal drugs for sale. The arrest had involved an undercover operation ('*otori sousa*'). The defendant had sold drugs to the undercover police officer pretending to be a customer, and had then been arrested. The problem was that I did not know that '*otori sousa*' was illegal.

Discussion

The courts have made some attempts to tackle the translation problems by arranging seminars, discussion meetings, and other kinds of gatherings. On a few occasions, these provided opportunities for interpreters to voice the actual problems they faced in the courtroom, but most of the meetings served as no more than orientation sessions for new interpreters; the court explained the procedures and what to expect to avoid confusion during public hearings. In other words, the meetings were primarily for the purpose of providing a smooth process for the sake of the system and not for the defendant, or the interpreter.

Why is the court not so interested in solving these issues? I believe a potential factor, as Mikkelson has also mentioned in her article '*Evolving views of the court interpreter's role*' (2008:81), is related to the legal system, which has its roots in the history of criminal law of that country. So how does the legal system work in Japan?

As mentioned earlier, the current Japanese criminal procedure is a mix of European and Anglo-American legal tradition. As Atsushi Nagashima mentioned in his essay '*The accused and society*', "the main difficulty in the administration of criminal justice in Japan seems to derive from the conflicting origins and fundamental principles contained in the present hybrid code". That is to say that the present code of criminal law was influenced greatly by Anglo-American criminal law after it was enforced in 1949. However, little has changed in some fields of procedure such as the 'function of the public prosecutor' and the 'status of the defendant' because the tradition of continental law still had its strong influence (Nagashima, 1963: 297-298).

In his essay, Nagashima talks about the major difficulties encountered in the administration of criminal justice in Japan and mentions four areas that he says "may serve to highlight these difficulties". Among them, as one of the unique characteristic of Japanese procedures, is the "very wide discretionary power granted to the public prosecutor". That means if the prosecutor thinks there is not substantial evidence against the criminal, they will not persecute the suspect. The fact that a person has been indicted and taken to court means that there was enough evidence for probable proof of guilt, "no case is now brought unless the procurator has made a full investigation of facts surrounding the crime prior to the filing of the information" (Nagashima, 1963: 299).

When a case reaches the court it is mostly to determine the amount of punishment. The very low rate of acquittals in Japan is a proof of this; according to statistics for the year 2007, for example, they were only 99 cases out of a total of 69,238, about 0.14%, with two reopened cases (Supreme Court of Japan, *outline of criminal justice in Japan*, 2009: 40). Although there is no separate statistics, in the case of foreigners, I believe, this rate is even lower. In the highly hierarchical society of Japan, the prosecutor has substantial power in the court. On the other hand, false charges by a prosecutor (*enzai)* can also be damaging to his career.

Conclusion

For the last two decades the court interpreters have been playing an important role in the judicial system. As this paper has shown, the court interpreter in Japan faces a number of challenges. The legal system in Japan went through major changes with the introduction of the lay judge system and the enlargement of the role of the defense counsel. However, not all cases are tried before the jury. Even if a foreign defendant is tried in the new system the interpreters may enter the scene with a new set of problems some examples of which have been discussed in this paper.

In my opinion the judicial system has yet to give due recognition to the vital role that the interpreter plays in the courtroom. On 15 May 2009, Japan's criminal court system changed to a lay judge system. Many detailed considerations, at probably a high cost to the taxpayer, were given into the preparation for the new system that makes one wonder, yet again, how seriously the role of the court interpreter has been considered. If Japanese speakers who are lay judges need linguistic support to understand what is going on at the courtroom, what about the needs of the interpreters who work there every day?

The extent of the final preparations by district courts to improve the comfort of the lay judges for the new system suggests the extent to which translators of foreign defendants have been ignored. For years, judges, prosecutors, defense counsels, and court clerks have sat on big and comfortable executive-style chairs with the interpreter on a small chair in the middle of courtroom at a desk the size of one used in an elementary school. During a complicated case with a lot of documentation, the desk is so small that sometimes papers fall off. Where the interpreter sits gives a clear sense of where the interpreter stands in terms of the hierarchy of the Japanese courtroom.

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REVIEW:
Planning sustainable tourism for agricultural heritage landscapes

Kazem Vafadari [1]

Abstract

The globally important agricultural heritage systems (GIAHS) initiative has a mandate to promote mutual support and synergy between agriculture and tourism through public and private sector involvement for sustainable tourism. It emphasizes the role of education and capacity building as facilitators of sustainable tourism development in agricultural heritage landscapes. This research examines the role of GIAHS in tourism as a practical tool to promote sustainable tourism development in agricultural landscapes by all the stakeholders involved in tourism and agriculture. Tourism in GIAHS sites can help with the diversification of livelihood strategies. Maximizing the number of tourists or tourism revenue does not necessarily enhance people's livelihood in rural areas unless there is a proper consideration of the sustainability aspects in tourism development as well as of local priorities. Sustainable GIAHS tourism requires a significant role for local people in decision making for tourism development with emphasis on local needs and agricultural heritage. A participatory approach would allow local people to determine their main concerns and expectations based on which GIAHS tourism development policies and guidelines should form. In this approach, GIAHS tourism development is part of a broader concept of GIAHS development and must be integrated within the development plan of GIAHS sites. GIAHS landscapes at present face different problems such as inadequate facilities and economic capitals in less developed countries, and depopulation and aging communities in developed countries like Japan; however, tourism is expected to introduce new jobs and development opportunities to GIAHS destinations by enhancing the attraction of rural lifestyles in GIAHS communities.

Keywords: Agricultural heritage, Agritourism, Globally important agricultural heritage systems (GIAHS), Rural community development, Sustainable tourism.

Introduction

Agriculture and tourism are both important sectors of the world economy and contribute to the livelihood of many people by providing food and jobs. In comparison with the agricultural sector, tourism is a new and rapidly growing industry, and creating synergies between the two can be a challenging process. The tourism industry has turned into one of the most important and fastest-growing economic sectors worldwide. The World Tourism Organization (WTO) reported that 'international' tourism in the year 2012 for the first time reached one billion international arrivals with a growth rate of at least 3% (WTO 2012). However, the real significance of tourism in the local economy and its impact on the livelihood of communities lies in a much more important form of tourism, namely the 'domestic' travel market, which is about 10 times bigger.

Travel to natural areas in order to conserve natural and cultural resources and contribute to the well-being of local communities was the main objective of the alternative tourism movement called 'back to nature' in the late 1980s. This concept was suggested to counter the exploitative commercialization of natural and cultural resources in the form of mass urban-based tourism that could lead to the displacement of local people from their traditional livelihood, often agriculture. But for the alternative form of rural-based tourism to be effective, the demand for tourism in agricultural landscapes, both by domestic and

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international tourists, is especially important. Rural tourism can support sustainable socio-economic development and with proper planning and management may contribute to environmental conservation. However, when tourism development is not integrated into the overall development plan of local areas, it may result in negative percussions on the natural environment and associated cultural aspects, including agricultural systems and landscapes.

The history of recreation and tourism centered on farming goes back a long way (Sznajder et al. 2009; Sidali et al. eds. 2011). The term agritourism means different things to visitors and service providers, depending on the types of activities and facilities that exist on the site and the expectations of the customers ((Mwaijande 2007; Torres et al. 2011). Agritourism ranges from traditional visits to the countryside to enjoy agricultural landscapes to more modern commercialized recreation on agricultural land, which has become a dynamic business sector in many countries. However the importance and level of the contribution of tourism to the economy of agricultural landscapes varies in different sites according to the livelihood priorities of the local residents. From this point of view, traditional rural landscapes with predominantly small scale farming may be in need of agritourism to support their economies, as agriculture by itself may not always provide a sufficient and sustainable livelihood (Edgell 2006; Swarbrooke 1999; WTO1998).

Agriculture and tourism can therefore coexist as two major livelihood strategies. However a rural livelihood based on agriculture alone is often not sustainable. Problems may include the overuse of natural resources and outmigration from the local community. Tourism can contribute to the rural economy in many ways by utilizing available resources within the limits of the carrying capacity of the site. For this reason, ecotourism planning has to be integrated with conservation activities.

The process of tourism development should be managed to prevent the dominance of tourism itself by diversifying local livelihoods and observing the limits of carrying capacity (Capriello et al. 2008). Responsible tourism requires the use of local products and involvement of the local community in tourism activities. Traditional agricultural systems can often attract significant numbers of travelers and thus help create a market for agritourism. Therefore, keeping the right balance between the conservation of agricultural systems, biodiversity and tourism planning and development is a key concern for local, national and international institutions (Contini et al. 2009).

Globally important agricultural heritage systems (GIAHS) are an initiative by FAO (Food and Agriculture Organization of the United Nations). The concept aims to conserve natural resources and agricultural landscapes, and promote traditional knowledge through a focus on agricultural systems and their associated biodiversity (Koohafkan 2009). Outstanding agricultural landscapes from different countries are selected and proposed for inspection. This FAO initiative was first presented at the World Summit on Sustainable Development (WSSD 2002). The initiative aims to enhance awareness about the importance of such systems and facilitate their protection. It also calls for safeguarding and ensuring the sustainability of agriculture and livelihood of agricultural communities in the GIAHS landscapes.

Contribution to the GIAHS initiative has been high among many countries from different parts of the world. The program aims to select 100 to 150 GIAHS sites in the near future in order to promote conservation and management of agricultural heritage sites. According to the official website of GIAHS initiatives, there have been 10 countries from which GIAHS pilot sites have been selected since 2000 (Koohafkan 2009). The pilot sites are located in the Philippines, Chile, Kenya, Tunisia, Peru, China and Japan. There are currently also 9 candidates from Mexico, Italy, India, Poland, Iran and Sri Lanka that are in the process of GIAHS selection. The GIAHS program has also resulted in some local initiatives with similar

aims, such as Satoyama and Satoumi initiatives in Japan, to join GIAHS and became part of the international community for promoting agricultural heritage. Selection of the Satoyama sites of Noto Peninsula and Sado Island as GIAHS in May 2011 is a clear example of the leading role of the GIAHS initiative in agricultural heritage development (Nakamura 2010).

This study utilizes the experience of the author gained through research in the IFUGAO Rice Terrace (IRT) GIAHS site in the Philippines in 2011 in order to provide a general case for similar applications and experiences in any GIAHS sites. The IFUGAO Rice Terrace (IRT) is listed both as a world heritage and GIAHS site and considered by travelers as a heritage tourism destination located in agricultural landscapes; the site has attracted international tourists from different parts of the world (UNESCO 2008). GIAHS however, emphasizes living agricultural livelihoods and traditional agriculture systems and is more about present and future than the past. Tourism services such as accommodation, food, and recreational and health facilities can thus use the example of the IRT as both a world heritage site and a GIAHS site in order to meet the current expectations of visitors, and ensure the sustainability of the tourism business itself.

The use of the agricultural heritage of GIAHS for sustainable tourism can support agriculture and tourism through the involvement of both the public and private sectors. By investment in education and capacity building, they can facilitate the development of sustainable tourism in agricultural heritage landscapes (Vafadari 2012). Therefore, practical guidelines are needed to enable all stakeholders who are involved in both tourism and agriculture to act effectively. Long term education and capacity building is essential to ensure their effectiveness. The guidelines utilize the gained experience to provide a practical case for similar applications and experience in other GIAHS sites.

Several guidelines and manuals have been prepared for community tourism development in rural landscapes with protected areas and biodiversity, and for the associated natural resources such as wetlands and agricultural landscapes with historical and heritage significance (Eagles 2001; CBD 2004). However, there is no guideline on tourism development in GIAHS sites. Egales (2002) emphasizes visitor management through the techniques of limiting impact on natural resources while trying to maximize the benefits of tourism within the carrying capacity of the site. Such guidelines usually introduce some definitions and concepts of management for common issues in protected areas, and describe ways of enhancement of quality tourism development with examples.

Therefore, this paper demonstrates the significance of technical assistance, training and data collection in research on tourism and in the development of indicators of sustainable tourism for its proper management. The satisfaction of customers and local residents is a prerequisite for sustainable tourism management. Details of satisfaction levels provide the local decision makers with indicators and management tools to ensure the sustainability of the tourism industry as part of rural development.

Methodology

This study employed an interdisciplinary approach with a variety of disciplines such as sustainable rural livelihood, agricultural heritage, local revitalization, rural tourism and resource management on which the arguments and field studies were grounded. Our approach viewed sustainable tourism in a broader aspect as a development strategy for GIAHS sites rather than as an industry; we studied the role of sustainable tourism activities as a rural livelihood strategy for revitalization of *Ifugao* Rice Terraces (ITR) GIAHS sites

and the local community. The same method could be applied for future research on tourism in other globally important agricultural heritage systems (GIAHS) sites and associated local communities.

Primary data were collected through in-depth interviews and direct observation. The author began fieldwork with local communities during 2010, participating in research activities, local events and other programs in order to build up the necessary information networks and to ensure local participation in the study to increase the quality of data collection. The main research activities were conducted during 2011, through direct funding and support by the United Nations Food and Agriculture Organization (FAO), Land and Water Division. Consultative and participatory workshops with local government units and communities were used to gather primary data. In general, the field studies for this research relied on qualitative research methods based on direct observation to assess the rural natural, human, social and physical capital of the *Ifugao* Rice Terraces (ITR) GIAHS site, using the 'sustainable livelihood' approach, which is the basic method of research at GIAHS sites. To ensure the maximum support of the residents, local community members were asked and given the chance to participate in the research, not just as input providers but also for taking advantage of the educational and training aspect of the research initiative.

Preparing a strategic plan for tourism requires basic information on local facilities and livelihood assets. The key point is in whether tourism officials and other key persons from local government units have all the information required to develop strategic plans for sustainable tourism development with a focus on diversifying the livelihoods of local communities. Local communities, local government units and the local tourism industry should be included as they represent the three main players in sustainable tourism development. They are also the most important providers of survey information on developmental needs and the existing situation. Information on visitor satisfaction and community attitudes toward tourism are considered as a tool and criteria for building indicators of sustainability.

A potential method to assess the situation of tourism and the assets that can be used for community-based sustainable tourism is direct observation and surveying of a focused group of experts and authorities. This can help to determine and analyze what is already known about tourism in the area including the use of agricultural landscapes as a main attraction and tourism destination. A situation analysis and understanding of developmental needs of tourism facilities such as accommodation, attraction and transportation should also be done. The study examines the attitude and role of local government units (LGU) toward the evaluation of developmental projects and tourism events by asking about the history and existing systems for such evaluations. This emphasizes the role of LGUs as key players and brings more insights for sustainable tourism development.

Tourism resources, stakeholders, policy and management frameworks are therefore considered as the main areas of data collection; the results can be used to define sustainability objectives and issues related to human, social, cultural, economic and institutional capital (see Table 1). Local tourism should capitalize on its rich natural resources, landscapes and agricultural systems to attract tourism. However, it should be noted that tourism in those agricultural landscapes chosen for GIAHS differs somewhat with agritourism elsewhere because of its importance as both a living agriculture landscape and a GIAHS site. Therefore, it is necessary to define to what extent the tourism attractions are based on heritage tourism (to educate visitors about the uniqueness and importance of the site) and how they can be utilized for agriculture/agritourism activities at the same time. In the assessment report the major tourist attractions can be listed for a better understanding of the role and importance of each category of attraction (Table 2).

Table 1: Situation analysis for GAIHS sustainable tourism planning

Tourism assets and resources	Key stakeholders and partners	Planning, management and policy frameworks	Development and sustainability objectives
- Assets (SLA) - Attractions Unique/distinguishing features - Comparative advantages - Strengths	- Government (LGUs) - Private sector - Community - NGOs - Development agencies - Others	- Strategies - Plans - Regulations - Procedures - Coordination structures - Revenue generating, and sharing schemes - Existing development plans	- Human - Environmental - Social - Cultural - Economic - Institutional - Attraction

Table 2: Assessment of GIAHS tourist attractions

Type of attraction
Agricultural parks or complexes /entertainment facilities
High agriculture (agricultural museums or related art)
Agricultural heritage sites and historic farmhouse/ ancient agriculture systems
Agro-economy and local agricultural products (dried fruits, winery, dairy farms)
Authenticity and indigenous cultural experiences associated with agriculture
Agricultural festivals and religious activities
Natural (mountains, caves, rivers, irrigation canals, lakes, etc.)
Nature based tourism facilities (zoos/wildlife/aquaria)
Public facilities and Transport (railway, port, airport, etc.)

Other:
    Forest
    Waterfalls
    Geoparks
    Dams
    Cooking festivals
    Historical events
    Cultural villages
    Burial tombs and caves

Source*: Stakeholder workshop in IRT and personal interview* (2011)

The process of data collection and documentation in any industry is usually a costly and time consuming one that needs a systematic approach and coherent public policy towards sustainable data collection and monitoring systems. Tourism is no exception. Educating and awareness building at the community level is necessary in order to implement and sustain a tourism data collection system. The more people know about the benefits of tourism the better they will cooperate; this can result in high quality data at low cost. Government and policy makers use tourism data and information for detailed planning; however, the private sector that usually seeks higher revenue and target marketing can also take advantage of tourism information (Table 3).

Table 3: Key tourism information for local authorities and stakeholders

Information
Visitor number and profile to the site
Tourism income and other economic benefits
The capacity and variety of tourist accommodation and associated facilities in GIAHS destination
Diversity of tourist attractions and activities in the area
Estimation of GIAHS tourism demand and forecasting market size in the area for the next planning years
The impact on accommodation and the attraction requirements from the forecast visitor increases/decreases
Level of visitor satisfaction and the quality experience survey of GIAHS destination
Level of resident satisfaction in respect to the current levels of tourism in the area
Level of resident satisfaction in respect to the forecast levels of GIAHS tourism in response to destination branding
The capacity of current infrastructure and services to cope with existing and future demand from visitors
Environmental impact assessment of GIAHS tourism
The level of satisfaction of tourism service providers with maintenance and development of tourism infrastructure

Source*: Stakeholder workshop in IRT and personal interview* (2011)

Information is needed on the size and trends of tourism, and on travel motivation and length of stay (Table 4). There should be a data collection system to trace visitors within an area while they stay and move between sites including day trips and site visits. Tourism planners and policy makers need to know the length of stay for several reasons, including tourist demand for local facilities and services, water and solid waste management, security of travel and risk management, and planning for distribution of travel load and benefits among different localities based on the carrying capacity of each site, to avoid from overuse or under management of resources.

Table 4: Information on Visitor profile and Behavior

Information
1. Inbound and domestic tourism trends
2. The size of international and domestic tourism and their profile
3. The country of origin for international tourist arrivals
4. The origin of domestic travelers
5. The reason for travel to the destination
6. Means of transportation and alternatives
7. The type and level of accommodation they are staying in
8. The attractions and activities undertaken by visitors in the area
9. Length of stay for both domestic and international visitors
10. The number of day trips to the area as distinct from those who stay overnight
11. Seasonality of visitor profile for the area
12. Demand forecasting for both international and domestic market

Source*: Stakeholder workshop in IRT and personal interview* (2011)

Direct income and employment are immediate economic benefits of tourism development. Tourism revenue could be simply calculated by knowing the number of travelers in an area and more detail about how much money they spend while staying there. Total tourism revenue could be calculated as the number of visitors and trend of travel to the area. However, the economic impact is not limited to revenue and it is necessary to take into account other key information such as the number of jobs, direct employment and economic leakage for policy making and economic planning. Table 5 outlines the needed data on the economic contribution of tourism.

Table 5: Economic contribution of tourism

Key information
1. The number of travelers to the area
2. Visitor expenditure and main items
3. Tourist enterprise in the site and categories
4. Tourism employment and total number of jobs related to tourism
5. Tourism benefits for other industries and local government
6. Tourism multiplier effect and economic leakage
7. Marketing, competition and regional tourism market share

Source*: Stakeholder workshop in IRT and personal interview* (2011)

Surveys of the local community about tourism related issues are needed from the officials. Knowing the extent to which a local community is aware of the economic benefits of tourism can pave the way for further community-based tourism promotion planning. The local community cannot be expected to support tourism development without a basic knowledge about the potential impacts of tourism, both positive and negative. Any development plan cannot be implemented without the support of the local community. Therefore, the role of community in the tourism development process should be considered and integrated with the development plan for tourism. Community attitudes toward tourism need to be estimated (Table 6).

Table 6: Community support to tourism

Key criteria
1. How do people describe benefits of tourism development?
2. How is tourism represented by different social groups within local community?
3. What concerns do people have about tourism impacts on natural resources and cultural heritage?
4. What are general points and concerns about tourism development by the local community?

Source*: Stakeholder workshop in IRT and personal interview* (2011)

GIAHS designation will open the door for the international community to the area, which means that the possibility for external funding and investment will rise. Local authorities should have a specific process to evaluate the impacts of external projects and to maximize the benefits of the projects for local communities. Local tourism authorities are supposed to have their own policy to evaluate external projects

on tourism development in order to take advantage of these projects and integrate them into local development objectives. In this respect, the role that local government can play in integration and balancing the benefit of local people and external investor is significant. Table 7 shows the need to develop an area's own evaluation policy in this matter.

Event tourism can be a tool for managing the effects of seasonality on tourism revenue and reduces the vulnerability of the tourism business if well organized. In the case of agricultural landscapes with a long non-farming season, organizing events related to agricultural heritage can utilize the extra labor of agriculture and satisfy the demand for heritage tourism in agricultural landscape by diversifying tourism activities. Municipalities usually hold cultural events in rural communities. Specific research on the role of cultural events in tourism promotion for each GIAHS site is needed to determine the best season and theme for event. The type of event might be different in GAISH sites based on their potentials and geographical locations, and usually local authorities can fund them. Therefore in participatory tourism development, a system to evaluate the success of events in meeting the objectives of local authorities and event organizers need to be well defined, as implied in Table 8.

Table 7: Tourism project evaluation

Key criteria
1. What are the priorities of local government for accepting external projects?
2. What are evaluation criteria of local government for external projects and related cost benefit analysis
3. Assessment of external projects supported by the local authority and their success in gaining support of local

Source*: Stakeholder workshop in IRT and personal interview* (2011)

Table 8: Event evaluation

Key criteria
1. What are the key policy issues for selecting organizer and funding events by local government?
2. What are the processes for evaluating the relevance and the potential benefits of proposed events?
3. Level of satisfaction and participation of local community for supported events by the local authorities

Source*: Stakeholder workshop in IRT and personal interview* (2011)

Findings and Results

The demographic situation in rural areas and its consequent human resource management problem is one of the main challenges of the 21st century for both developed and developing countries. Abandonment of rural facilities and agricultural landscapes in the rich rural societies of Europe and Asia such as in Japan results from an aging society unable to continue farming. This is similar to less developed countries where the agriculture-based livelihood does not attract people to stay on their farms. The results are the same: outmigration and abandonment of agricultural land in rural areas. The difference is that young people in poor countries seek better jobs while old people in rich societies look for better social and medical care in cities. Many farmers migrate to nearby provinces for a better livelihood. Good health and the capacity for labor are considered as human capital for pursuing livelihood strategies.

Nevertheless, the majority of residents in an agricultural site may be native to the region with a long history of living in harmony with nature. Their traditional knowledge, skills and lifestyle itself can be made attractive for visitors from outside. It is very important to remind and educate the younger generations that they are associated with the famous sites in the eyes of visitors and the fact that the unique environment could not last without people. Tourism and human development are interrelated and well-educated human resources can improve tourism and also benefit from tourism development at the same time. The most important of these resources are:

Human capital for tourism development: Human resources at tourist destinations are a powerful tool to attract travelers and entertain visitors. Host and guest relationships should be managed in a sustainable way to preserve the authenticity and cultural values of the local community while they are utilized as tourist attractions. Therefore, keeping a balance between tourism development and agriculture as basic means of livelihood is the key point in attainment of the carrying capacity of tourism and preserving the authentic environment of rural communities.

Social capital for tourism development: The evaluation of social capital is based on women's status, trust and social networks which most local households rely on to obtain a better livelihood. Community leadership plays a significant role for utilizing social capital in the local community. Many potential communities are not yet ready in terms of capacity to take the responsibility of community based tourism and to integrate it with their current agriculture livelihood. Communities need a fundamental understanding of the tourism business notably capacity building, to ensure maximum benefits and a minimum negative impact of tourism on local communities and the sustainability of tourism itself.

The organization must search for local facilities with a good potential for tourism such as local houses in good condition with the standards to accept guests or serve in home stay programs. A limited training service may be provided for the owners of new guesthouses in need of development. Collaborations between local communities to develop their own CBT model based on local priorities are a very good possibility.

Natural capital for tourism development: According to the Sustainable Livelihood Approach (SLA) methodology, natural capital refers to the natural resources that are accessible to local communities for use as livelihood strategies. This can be either by direct use like planting rice in the rice terraces or indirectly as a source of cash income. *GIAHS* natural resources that are utilized by the local community for tourism are basically in 3 categories such as residential areas, farmland and agricultural sites and mountain forests as well as rivers.

There may be various kinds of rural tourism activities such as mountain trekking, camping, and collecting edible mountain plants. The nature may be subject to damage by deforestation and construction in farmlands. Taking the wood for the carving industry and craft making which demand large amounts of specific types of wood and mismanagement of residential development are the main factors in damage to valuable natural resources.

Economic capital for tourism development: Infrastructure and access to the site are the two main economic capitals and the most important livelihood assets requiring development. Both physical and financial capitals are considered important for local communities and LGUs to reach their tourism development goals.

The income portfolio includes both farming and non-farm business. Agriculture and forestry are the main livelihood sources. Recognition as a world heritage site and GIAHS is also an economic asset.

Decentralizing tourism by promoting community based tourism and nature based tourism activities will bring more economic benefits to local communities especially the farmers who are living in rice terraces.

Agriculture should remain the main source of livelihood as it has been the case throughout the history. With agriculture as the most basic and popular household livelihood, tourism can provide extra revenue and play a role in income diversification to promote agriculture and provide direct income for conservation of natural resources.

Institutional capital for tourism development: Tourist market access and the system under which the community shares the benefit of tourism enterprises play a major role in sustainability of tourism. It also depends on the extent to which local people are willing to participate in tourism policymaking and actually take part in the development process due to awareness of tourism benefits and related training.

'Institutional capital' can be evaluated by interviews and direct observation. The market sharing process is through organized tourism business with people and may not be well distributed.

Community leaders usually play the role of coordination for community-based tourism. They also provide consultation and training services when demanded for the community tourism service providers. Without a systematic and organized community service, guesthouse owners may not be able to access the market without business mediators such as wholesalers or through a travel agency and accordingly a charge may be imposed on the farmer by the travel agency reducing the benefit of CBT.

Direct marketing and contact may be done by some guesthouse owners which makes the job more profitable. The number of direct contacts is a good indicator for evaluating the level of institutional capital as well as the quality of guesthouse service because the customer is either a repeater or introduced through another customer.

Attraction capital for tourism development: All livelihood assets must work together to satisfy visitors in any destination. Therefore, all the livelihood assets such as human, social, natural, economic and institutional capitals function to attract visitors and can be utilized as tourism resources for GIAHS landscapes. Accordingly, local communities should capitalize on authentic resources among the five livelihood assets in order to utilize 'attraction' as a livelihood asset for GIAHS tourism. Tourists can bring insights for people in rural communities about the attraction capitals and the extent to which they can be presented as tourist attractions. In this context tourism development itself enhances the attraction capital of GIAHS destinations.

Visualizing sustainable livelihood assets with live examples from GIAHS destinations provides a realizable tool to educate local communities about what they have in their locality, a situation analysis for better use of SLA assets, as well as tourism applications of all resources and possibilities for generating additional income and employment through GIAHS tourism. In this concept, GIAHS itself can be utilized as a brand to attract a niche market among both the domestic and international travel markets with special interest in agricultural heritage.

The vulnerability context: Relying on tourism livelihoods should be within the limits of vulnerability and risk management for tourism development in a GIAHS site. The first and most important livelihood vulnerability is the concern over 'natural capital' and 'human capital'. More education may be needed about sanitation and nutrition provided for people in the villages. Many young people may have left the place with no hope to come back in the near future to continue farming. Concerns about preservation of natural resources are another vulnerability issue that goes back to the lack of economic and human capital.

Agriculture and forestry work in tiny farmlands are highly labor intensive and it is impossible to keep the situation managed as in the past without new manpower and a strong will especially from the younger generation to continue farming. In this context, volunteers who visit the farm to help with planting or harvesting rice have been considered by the farmers as a big help with financing their agriculture through tourism revenue but this might not be a sustainable or reliable solution yet. Local people may also raise many concerns over the lack of public transportation services that are categorized as 'physical capital'. The elderly may be concerned about financial support from the national government to develop transportation systems especially access from outside. The fear of being left alone under a landslide with no help on one hand and better job opportunities and income available for young people in urban areas on the other hand encourages local people to leave and move to neighboring urban areas.

Vulnerability concerns are not only the results of depopulation and out migration; there are also shocks from natural disasters such as floods and landslides and seasonality effects. In this context, if GIAHS tourism can provide enough economic benefit for creating a rural sustainable livelihood strategy, it could be a 'savior' of GIAHS resources to some extent.

Discussion

The outlines of proposed guidelines for GIAHS tourism suggested by the results of this study are:

Local satisfaction with tourism: Sustainable tourism in any destination does not happen without local support and GIASH destinations are not any exception. Therefore, it is necessary to build up a database on the level of community satisfaction from tourism, which provides a powerful tool for evaluation of sustainability once the data is accumulated. Guidelines for tourism development should provide sample tools (questionnaire) to be modified by each GIAHS destination for the purpose of enhancing the level of local satisfaction and support for tourism. Key factors in the assessment of local satisfaction with tourism include but are not limited to employment and livelihood opportunities, resource allocation, conservation and management, cultural heritage management and host-guest relations, and community control of tourism development.

Tourist satisfaction: Regular surveys should be conducted with tourists in GIAHS sites to ensure the reliability of data on tourist satisfaction. The attitude toward research and quality data collection on tourist satisfaction provides an indicator of sustainability of tourism by local community and needs to be included in the education and human resource development plan for GIAHS tourism development. Local communities should be able to conduct surveys on sustainability and tourist satisfaction on a regular basis through interview, direct observation or questionnaire based research activities. It is often the case that tourist perception about the value of money and percentage of repeaters are taken as strong indicators to measure the satisfaction level of travelers.

Tourism impacts on local communities: Conducting tourism within the carrying capacity plays a key role in the community impact management of tourism. One of the key factors is the ratio of tourists to locals in average and in high seasons. There is no specific criterion as a fixed number or limit as an optimum ratio of tourists to residents; so it depends on the capacity of the community in managing tourism activities and in ensuring the sustainable access of local community to social services and natural resources.

The public sector in most countries is expected to carry out tourism policy and planning at national, regional and/or local levels as an integrated part of development planning. As a part of the development process, tourism development needs to be considered in respect to resource allocation and more importantly the role that tourism is expected to play in the development of a destination. Basic information on these questions is necessary in order to picture the existing situation of tourism and to investigate the potential to achieve the development functions of tourism.

Vulnerability context and tourism seasonality: Tourism is not supposed to be the main livelihood activity in GIAHS sites because the nature of GIAHS is based on agriculture and sustainable livelihood based on agricultural heritage. However in order to minimize the negative impacts of seasonality of tourism, local authorities and community leaders should be supported with powerful indicators to direct them with seasonality and vulnerability of tourism in GIAHS sites such as detailed trends and number of tourists arrivals by month or quarter based, trends for accommodations occupancy rate and number of part time and permanent tourist jobs.

Economic benefits and impact assessment of tourism: The most tangible economic impact of tourism at the local level is the number of local people employed by tourism including the ratio of male and female employment as well as the ratio of tourism employment to total jobs. Insufficiency of agricultural revenue and products as the main source of livelihood is a common problem of rural life in GIAHS sites and the role that tourism can play in income diversification is significant. In this respect, the revenue of tourism in community compared with total revenue is also a good indicator for measurement of the economic impact and importance of tourism.

Water availability and conservation: Water management is considered as a general need of agricultural landscapes and their local communities. In the case of GIAHS sites, there is no doubt about the important role of water as a vital element for agriculture livelihood. Therefore it is very important to consider water use and demand of tourism in a GIAHS site in order to keep the business sustainable without conflict or competition between tourism and agriculture for using water. The total volume of water consumed by tourists and percentage of recycled water are examples of important indicators for water resource management in GIAHS tourism.

Also, waste water if not managed can cause sanitary problems for tourists, local community and even the agriculture. Local governments and municipalities need to check whether the tourism establishments and community have a proper water treatment system. The number or percentage of sanitary toilets per households is considered as an indicator.

Development control: Local authorities and LGUs are the agents that usually decide to what extend tourism is expected to grow and what are the limits of tourism. Total land use and development process including the tourism sector should be considered to clarify the share of tourism. Zoning provides a tool to control land use and allocate resources for tourism and other applications especially in the case of agricultural heritage systems with need for special care and protection. Any action for tourism development should give priority to local communities in access to the means of livelihood while developing tourism facilities.

Agricultural landscapes in GIAHS tourism are more sensitive than agricultural facilities used in agritourism as explained earlier. GIHAS landscapes are human heritage that demand careful use as tourist destinations as they are not originally created for tourism. The number of tourist arrivals and number of

tourists per square meter of the site should be considered along with other indicators based on characteristics of the site to prevent overusing and intensive use of GIAHS landscapes for tourism.

The sustainability of the tourism industry requires keeping a certain level of satisfaction among all stakeholders, importantly among the host community, tourists and service providers who are the three main players. In the case of rural tourism, GIAHS and tourism in natural areas with a focus on agriculture as the main attraction, satisfaction level depends on the quality of natural resources as the main component of agricultural heritage system. Therefore acquiring and updating data on satisfaction level is necessary to sustain tourism regardless of the type and geographical location of GIAHS sites. It is also necessary to document the satisfaction level of visitors and the likelihood of them recommending it to other potential tourists as well as the improvement they would like to see or their comments on the things that spoilt their visit during their stay at specific areas within the destination.

Access is one of the biggest challenges not only for sustainable tourism development in an area but also for the local people when they travel. Any decision to develop a transportation system depends on national policy and is unlikely to change in the short term. The limitations of transportation facilities should be considered in any tourism development plan and policy due to the importance of access to the destination and the potential travel market size. The destination may be attractive enough to have a certain number of travelers despite an inconvenient transportation, due to its unique landscape and other travel attractions.

Participatory planning for tourism and collaboration potentials: Identifying the prerequisites and potentials of collaboration at the community level is the key issue in participatory planning for tourism development in agricultural landscape. Promoting collaboration among people in a local community will result in enhanced social capital and accordingly increase the chances for community-based tourism development without which it might be impossible to access and utilize tourism potentials of GIAHS sites. All chances for collaboration between community members on the sustainable use of natural resources specially water and waste management should be considered.

Participatory planning can help find shared activities to improve access to the agricultural landscape and design activities to improve the overall outlook and impression of tourists from the site. According to the situation of each GIAHS site, there should be collaboration chances using a participatory approach at the community level. The overall result of participatory approach on tourism development would be enhancement of social capital, which means the promotion of the culture of collaboration among community members.

Conclusion

Tourism is considered as one of the important functions of rural studies, which can contribute to the wellbeing of local people and improve the livelihoods of the local communities. This study is significant because it provides complementary information on the above-mentioned issues. Also the results of this study introduce a model of sustainable tourism development in GIAHS sites as a tool for conservation and rural livelihood diversification. This research explains the situation and conditions under which tourism can improve the rural livelihood of GIAHS destinations and conserve natural and cultural resources.

This paper brings insight into the challenges of rural communities in some of GIAHS landscapes in order to conserve resources and the significant role of tourism as a tool for development. Guidelines for

sustainable tourism provided in this study are expected to promote collaboration on tourism related developmental issues between GIAHS communities.

Guidelines for sustainable tourism development in GIAHS landscapes can provide technical advice and support for stakeholders in GIAHS destinations to collaborate on building a pathway in which they can work together and benefit from tourism activities and at the same time ensure that the tourism itself is sustainable and contributes to the conservation of natural and cultural resources of a GIAHS destination. In this context, local community is aware of the role and capacity of tourism in the development of rural agricultural livelihood within the limits of carrying capacity for tourism development itself. Therefore, the risk for dominancy of tourism in agricultural heritage landscape would not be significant in the case of GIAHS tourism development.

In summary, local communities, local government units and the local tourism industry are the three main players in achieving sustainable tourism development. The level of reliable information on visitor satisfaction and local community attitudes toward tourism are vital as indicators of sustainability. The current situation and developmental needs of tourism facilities such as accommodation, attraction and transportation must be surveyed. The attitude and role of local government units toward the evaluation of developmental projects and tourism events must be considered and the role of LGUs as key players emphasized to bring more insights for sustainable tourism development. The results may define sustainability objectives and help better understand the range of issues with the human, social, cultural, economic and institutional capitals in relation to the development of GIAHS-based sustainable tourism.

Tourism can be adopted as a common development strategy in rural areas with potentials for job creation and generating additional income for farm-based livelihoods. However, the impacts of GIAHS tourism development may vary between rural communities in GIAGS sites. We cannot generalize either positive or negative experiences from one place to another and GIAHS destinations are not an exception in this concept.

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ORIGINAL RESEARCH:
The role of the Internet in the revival of Japanese *kimono*

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Abstract

This paper examines the role of the Internet in the present revival of wearing Japanese *kimono*. *Kimono* has continually changed through its history according to the sociopolitical situation and with developing technology. The present revival of *kimono* could be considered to be driven by developing technology. Technology driven developments of *kimono* in the 20th century include mass-production in the 1920s, developments in dyeing that enabled the production of cheap silk *meisen kimono*, and the use of chemical dyes which led to brighter and also fast colors. However, today's revival of *kimono* wearing is not generated by new technology in production; instead, changes in *kimono* wearing today are driven by the Internet technology which has enabled new developments in the way that *kimono*, *kimono* discourse, and information is appropriated. *Kimono* discourse is now 'out there' rather than being locked into the world of the *kimono* schools and businesses. This has resulted in a great challenge to the regular channels for the appropriation and education of *kimono*. This paper outlines the many ways in which *kimono* wearers are using the Internet to bypass established channels in favor of a casual and democratic exchange of information. This has resulted in an ongoing change in the metaknowledge that surrounds *kimono*, and the rejection of an iconic image of a formal and doll-like Japanese woman, in favor of a fashionable and expressive garment that may be used in the street every day.

Keywords: Fashion, Internet, Japan, Japanese women, Kimono, Metaknowledge.

Introduction

> "Clothing is part of material culture and has a double face. It is at one and the same time public
> and private, material and symbolic, always caught between the lived experience and providing
> an incredible tool with which to study culture and history" (Paulicelli, E. and H. Clark 2009:3).

Doing my PhD research "Revisiting Fashion and Tradition through the Kimono", I discovered that Western fashion theories commonly do not account for fashion in non-European nations. Traditional explanations for fashion, such as those by Flugel, Laver, Simmel, Veblen and others, locate fashion as developing from a European center, assuming that only Western Europe had the economic, social and political systems necessary for a fashion system to occur. However, historical research on *kimono* reveals that the *kimono* dressing system has always demonstrated the dynamics and change associated with a fashion system, in both its material and formal qualities and also in its social role. The research continues by examining contemporary *kimono* from multiple angles, to reveal the garment in both global and personal, material and symbolic dimensions, as a fashion with depth, as a consumer product in the market place, as a catalyst for group making activities, and as a casual garment worn by fashion conscious Japanese.

It became clear through this multi-methodological research that the Internet was playing a key role in all these phenomena. This paper examines how the present revival of *kimono*, as a street fashion or a casual garment, has been driven by the motor of cyberspace. Fashion is becoming increasingly central to discussions of culture (Lipovetsy 1994). My purpose was to identify whether *kimono* should be considered traditional - and therefore oppositional to fashion, or whether it could be considered fashionable, which

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would indicate a more complex and non-oppositional relationship between tradition and fashion.

The 20th century was one of turmoil for *kimono*; in the early 20th century great developments in *kimono* making technology led to the mass-production of cheap and easily available silk, *meisen kimono*, which were the height of fashion in the 1930s (Kon:1937). Production fell off in the 1940s, and by 1950 half of Japanese women were wearing Western dress, which they considered as practical and modern. Even if women wore *kimono*, the school uniforms were Western styled; so a generation of children grew up in Western clothing.

The post-war generation was the first one to grow up without learning to dress themselves in their native dress. The result of this was a severe shrinking of the *kimono* market. In the 1960s, the *kimono* shops, wanting to increase their customer base, opened the first *kimono* schools (Dalby:1991). These schools turned the natural dressing process into a system and promoted a formal and inexpensive style of *kimono* dressing. *Kimono* lessons were for the upper middle class, and for housewives with time to spare. They were a way of buying into cultural superiority. Shops ceased selling cheap everyday *kimono*, and it became relegated to a formal dress. The devastating effect on the *kimono* industry is shown on the chart in figure 1.

Kimono sales over 15 years
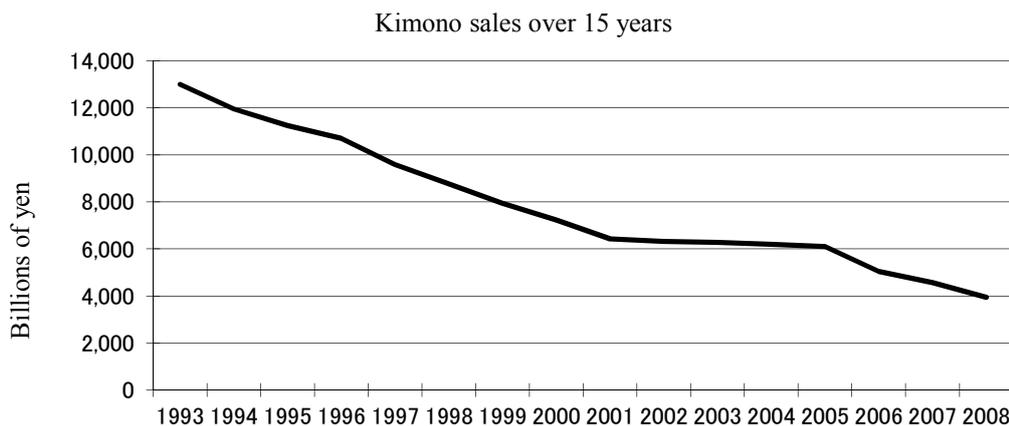
Figure 1. Falls of sales in *kimono* over 15 years. (*Source:* Yano Research Institute)

Yano Research Institute surveyed women from the ages of 20 to 50 in the Kanto and Kansai regions to find out their attitudes to *kimono*. They asked women why they did not wear *kimono* and got the following results:

I cannot wear it by myself	72.1%
I have nowhere to wear it	58.8%
It is too expensive	48.5%

In other words, women did not dislike *kimono*, but they perceived it as difficult to wear, expensive and only for formal occasions. These perceptions were probably created by the industry itself. However, since the 1990s there has been evidence of micro-trends in the world of *kimono*, and a world-wide boom in Asian chic around 2000 led to the re-evaluation of *yukata* as a fashionable option for summer wear. The *yukata* is a casual cotton summer *kimono*; originally a bath-robe, it has become a popular and cheap garment for going out, in the hot summer months. The *yukata* boom has led to a re-evaluation of the *kimono* itself. However, people are avoiding the traditional routes for the appropriation of *kimono*.

The significance of the Internet is that it enables people to by-pass the *kimono* shops (which commonly are not trusted; see below) and the similarly unpopular *kimono* schools. To think of the Internet as one technology is rather misleading, as there are several different platforms with various ways of usage. Internet shopping allows people to purchase *kimono* outside the traditional *kimono* shops which according to research by Yano Research Institute for Kansai Ministry of Trade and Industry (white paper 2009), have lost the trust of *kimono* customers. The Internet, is far more than a giant 24/7 *kimono* shopping mall where 135,000 *kimono* are on sale on Yahoo and 163,265 *kimono* are on sale on Rakuten websites daily; it is also being used as an educational tool. For example, the YouTube acts as a facility for uploading movies and a convenient way of teaching how to dress in *kimono*. In addition, the Internet is being used as a social networking tool, with people sharing their experiences and information regarding *kimono* through personal blogs as well as social networking sites, including Facebook and Mixi (a Japanese site similar to Facebook).

Kimono wearers are increasingly getting together in *kimono* wearing groups. The first one, 'Kimono de Ginza', emerged in 1999. Since then numerous groups have emerged, 'Kimono Biyori', 'Kimono Jack', 'Kimono Project', 'Nihonbashi Kimono Club', 'Kawagoe Sanpo' and others. 'Kimono de Ginza' has been described by Assman (2008) as a post-modern group, in that it is relatively unstructured and non-hierarchical, unlike the *kimono* school system. Most of these groups rely on the Internet for posting their event news. Twitter, Facebook and Mixi are the preferred ways. Mixi has many forums which are built around interest in *kimono*. Many *kimono* wearers meet in these forums and then after discussions eventually meet in real life. Thus online activity cannot really be separated from the activities of the physical groups.

Methodology

The explorations conducted here were not designed to investigate the specific content of blogs or social networking activity, but to establish the extent of it, and whether or not it was growing. Fashion is a growing area of cultural interest. Longitudinal data was collected on blogging activity and blogging about *kimono* was tracked over time between October 2008 and May 2012 to find out whether it was increasing or decreasing. Increasing blogging on *kimono* would indicate that it is increasingly popular and relevant to fashion, whereas a decrease would suggest that it was not. To further investigate this phenomenon, a certain Japanese blogging host site, 'Blog Mura' (*mura* means village), was traced over time and the number of blogs recorded. On this site, the blogs were categorized according to content enabling data collection on many different *kimono* categories.

Another type of online forum is a Facebook fandom. The second investigation was to become a fan of a *kimono* fandom (of which there are many), and then post updates, and see what kind of a response, if any, was received. On September 5, 2009, I discovered the 'kimono fandom' page on Facebook; it had been started in February 2009 by a non-Japanese. When I discovered the page, there were 400 fans and none of the postings came from Japan. There was little information and few postings on it. I started to post regular updates from Japan on to the page, to determine how big it would grow, and what kind of response would emerge.

Lastly, using the Internet as a research tool, I conducted survey research outside Japan, using the Internet as a platform, to determine the importance of the Internet for *kimono* wearers located outside Japan. The questions are found in Table 1.

Table 1. Questions used for the Internet 'kimono wearer survey'

Q1.	How did you first become interested in kimono?
Q2.	What is your experience with Japan? Have you been there? Visited there? For how long?
Q3.	Where and how did you learn to wear kimono: from a teacher, in classes, in Japan, from video, from a book, etc.
Q4.	How long have you been wearing kimono and how often do you wear it?
Q5.	Describe your kimono wardrobe: How many do you have? What types are they?
Q6.	Describe your consumption habits: Where do you buy them? Price per kimono or outlay per month?
Q7.	Describe your kimono wearing habits: How often do you wear them, and where do you typically go?

Findings and Results

Doing a search using the Safari search engine with the Japanese term for 'Kimono Blog' (着物ブローグ), data was collected on the number of blogs about *kimono*. The resulting data is shown in Table 2.

Table 2. Number of hits for 'kimono blog' (in Japanese, using the Safari search engine

Date	*Number of hits*
October 2008	2,820,000
December 2009	4,410,000
August 2010	4,750,000
May 2012	24,700,000

The data showed a great increase in the number of blogs about *kimono* over time. Even accounting for a gap of over a year and a half between the last two entries, the number of blogs increased tenfold as compared with the start of the study and fivefold between the last two dates. The number of *kimono* blogs was increasing at an increasing speed.

The research was then refined to one Japanese blogging host site, 'Blog Mura' (ブローグ村). On this site it was possible to trace the rate of increase of total fashion blogs, as well as *kimono* blogs. The data in Table 3 shows the rate of increase in various categories of *kimono* blogs, as well as the increase in the total number of fashion blogs.

Over the period under study, the total number of fashion blogs increased more than 3 fold, from 7,209 to 24,088. During the same length of time blogging about *kimono* increased at a similar rate, around 4 fold, which implies a possible relationship between the two and that *kimono* could be considered as part of the growing interest in fashion. Notable is that in 2012 the increase in *kimono* blogging was important enough for the blogging host site to create several new categories of blogs that did not previously exist. Rates of increase in the various types of blogs are different. For example, increases of tenfold in the areas of dressing (*kitsuke*), men's kimono, and Japanese *kimono* fashion (*wasou*) were recorded.

Also, everyday *kimono* blogs outnumber formal *kimono* (*furisode*) blogs by ten to one. This data implies that the people writing those blogs were interested in wearing *kimono* as everyday dress. Few people were interested in *kimono* as a form of social or cultural distinction, which would be demonstrated by a higher number of formal *kimono* blogs. This supports the hypothesis that Japanese people today are more interested in casual *kimono* rather than formal *kimono*. The large increase in the dressing (*kitsuke*) category testifies a change from wanting metaknowledge to wanting practical knowledge about how to dress. A

tenfold increase in blogs about men's *kimono* suggests that a growing number of men are interested in *kimono*.

Table 3. Number of *kimono* blogs on 'Blog Mura'

Category	October 26, 2008	December 12, 2009	January 22, 2012	May 8, 2012
Total fashion blogs	7,209	13,465	22,721	24,088
Kimono, wasou	438	655	970	1,012
Kitsuke (dressing)	27	115	230	247
Antique, recycle	20	109	198	222
Remake (Western clothing from kimono)	5	37	113	121
Dansei (men's kimono)	5	28	51	56
Wasou fashion	5	66	108	113
Kimono businesses			47	56
Kimono dress			28	33
Everyday kimono			252	289
Furisode (long-sleeved kimono)			23	28
Wasou footwear			9	9
Wasou accessories			16	19
Total Kimono Blogs	500	1,010	2,045	2,205

Secondly, as a participant observer, I started posting news and photographs from my experiences at *kimono* events on a *kimono* Facebook fandom page. I discovered a *kimono* fandom in September 2009 that was not very active. There were about 400 fans, all of them outside Japan, with occasional posts of sad looking *kimono* on coat hangers, but no up to date information about events, or photographs of ordinary Japanese people wearing *kimono*. I began to post regularly on the page from that September. The fandom began to grow by about 50 likes per week, reaching 1,000 fans on November 5th, and 2,697 on May 14th 2010. The rate of increase was steady, and the administrator asked me to take over the administration of the page in May 2010. This came with editorial rights to the page and access to the demographic data of the fans who 'liked' the page. As it is also possible to 'unlike' a page on Facebook, it can provide good diachronic data and is a good record of whether interest in the page is rising or falling. However it will inevitably fall if interesting posts are not regularly updated, so it is important to keep posting on the page. Figure 2 shows the increase in the number of Facebook *kimono* fandom page fans, over time. In the period on the graph, the number of fans more than doubled, which demonstrates that there were more new 'likes' than 'unlikes' throughout the period.

Figure 3 shows the demography of *kimono* fans who liked the page. By stated gender 20% were men and 80% were women. The biggest difference in the genders is in the 13 to 17 year old age group. However, as the age increases the difference appears to lessen, until in the 45 to 54 age group, where the number of men is over half of the number of women. I assume that these men are probably Japanese and many of them may be *kimono* craftsmen or dealers. The age group of *kimono* fans on Facebook that are most interested in *kimono* is the 18-24 age group. Whether this is because this age group uses Facebook the most or because there are more *kimono* fans in this age group is unknown. This age related peak is younger than the age peak in *kimono* wearing groups in Japan. This might indicate that an increasing number of non-Japanese *kimono*

wearers are coming from a background of manga, animations and new culture, rather than traditional Japanese culture.
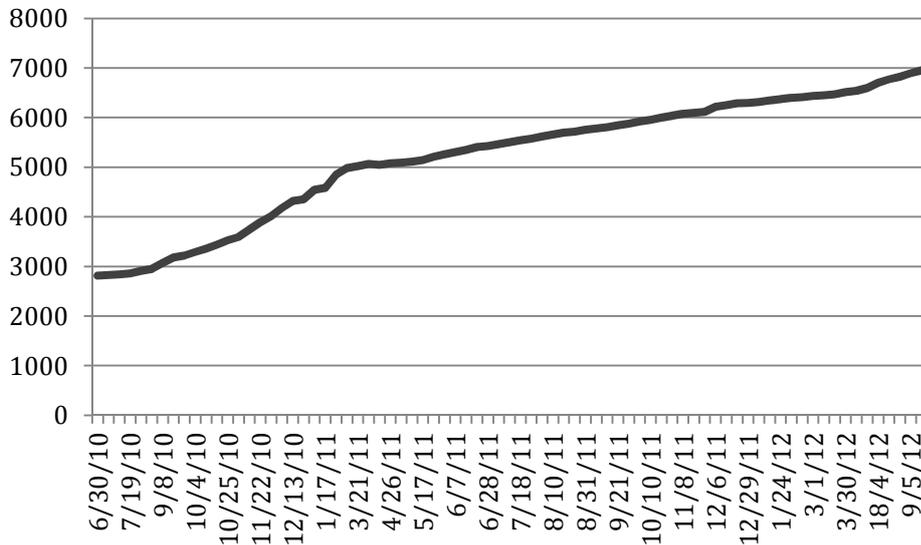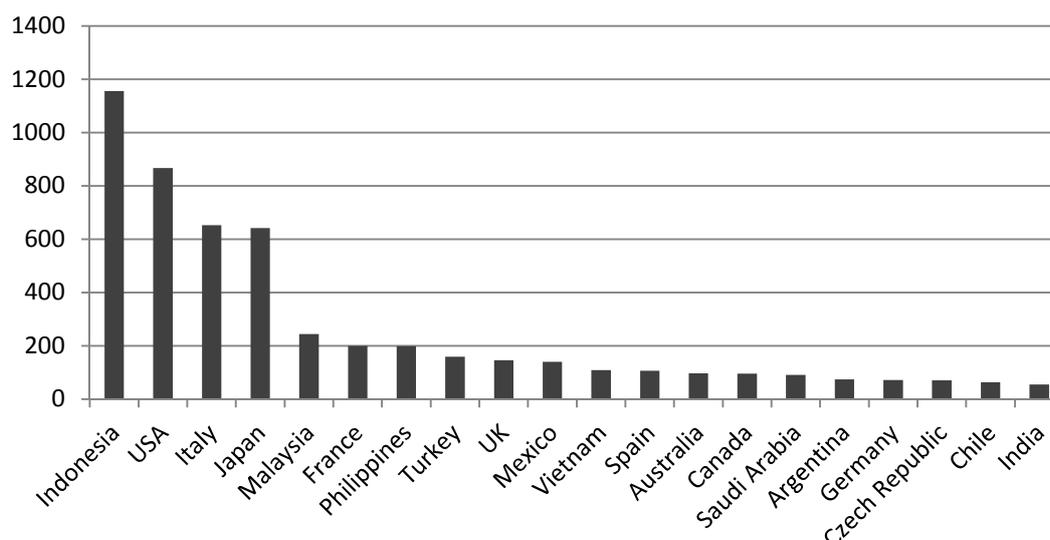

Figure 2. Increase in Facebook kimono page fans over time, by the number of 'likes'
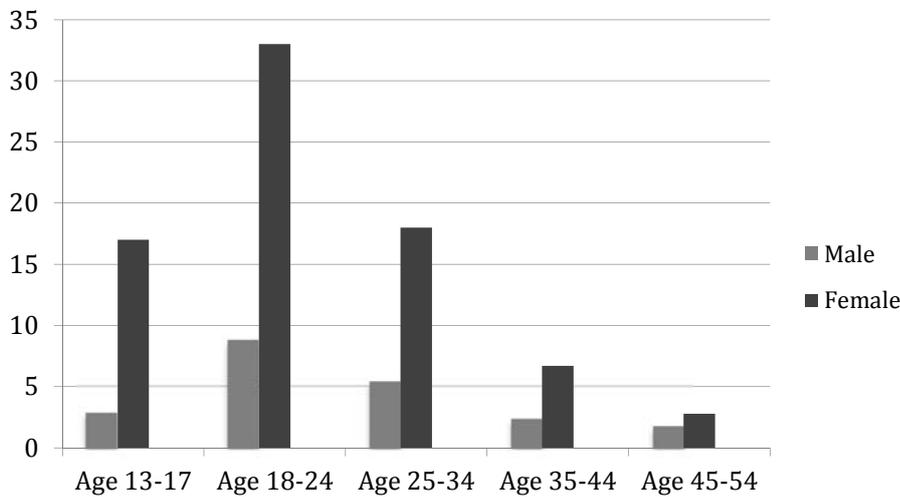
Figure 3. Demography of Facebook kimono page fans by age and stated gender

As people usually post comments in English, I had assumed the fans were mainly from the US and Europe, or were Japanese who could understand English. However, whilst they are not posting or commenting very much, there are a large number of people from other countries, who have liked and are looking at the page. Figure 4 is a graph showing the origins of fans by location. Indonesia has the largest number of fans, followed by the US, Italy and Japan.

Figure 4. Origins of Facebook *kimono* page fans by country, and the number of 'likes'

The open forum on Facebook provides a space where people can post information, or their *kimono* photographs, ask questions about *kimono*, cloth, dressing or events. It also provides a way for *kimono* fans outside Japan to see what is going on within Tokyo. The number of Japanese fans is increasing, including dyers, *obi* makers and some *kimono* businesses. This shows that makers are becoming increasingly interested in this overseas group of fans, many of whom like to wear *kimono*. This page provides a space where *kimono* makers can show their works directly to *kimono* wearers. It is possible to post links to events or exhibitions in Tokyo, and find out about a *kimono* fashion show in Ohio, for example. People share their stories, blog links, and swop information about informative websites, so although it is an unstructured space, it does not mean that what happens there is insignificant.

I also followed the discussions about whether or not *kimono* is fashion on the Facebook *kimono* fandom. Some believed that kimono is in essence a fashion while others regarded *kimono* mostly within its deep cultural significance in Japan. Some believed that everything we wear is fashion, and any clothing is fashion. Others believed that the way *kimono* is constructed enforces you to choose a style. In such exchange *kimono* fans discuss whether or not *kimono* is fashion, and whether or not clothing by itself is all fashion or the same as fashion.

As there is huge interest in *kimono* outside Japan, and the number of people who are involved in wearing *kimono* is growing, I decided to investigate the non-Japanese wearers further, conducting a pilot study. This consisted of an online survey for comparison with a Japanese survey which had already been conducted at two *kimono* wearing groups in Tokyo. The online survey was conducted using the Survey Monkey platform. The Survey Monkey tool was used for data gathering, and even in the limited, free format, I could do the same survey as used at two Japanese *kimono* wearing groups. The questions were listed in Table 1.

The results of online survey of overseas *kimono* wearers showed that many first become interested in *kimono* through Japanese culture and language or watching anime, costumes and cosplay. The results demonstrated that the informants had a good knowledge of *kimono* types, accessories, etc., but had limited

resources available for the purchase of *kimono* overseas. Many learned to wear *kimono* from the Internet only. Most were wearing *kimono* for 2-3 years, but only occasionally and for special events. Some wore *kimono* to Japanese cultural events, while others wore it to go to a restaurant, museum, concert, theater or a costume party. Most purchased the *kimono* over the Internet. A few respondents had lived in or had visited Japan and a similar number wanted or were planning to go to Japan. Other respondents mentioned other kinds of connections such as studying Japanese or meeting Japanese people in the course of their work. Just under a third of people had actually been to Japan, so the majority had not actually seen *kimono* in Japan and were dependent on various kinds of visual images for their knowledge of Japan and of *kimono*.

There was a huge variety of ways that people got interested in *kimono*, almost as many different answers as participants, making it difficult to categorize results. Some people become interested in *kimono* through an interest in geisha culture, as there have been many books published in English recently on this area, as well as the release of the film, 'Memoirs of a Geisha'. This aspect of Japanese culture is particularly difficult to explain or understand, and continues to exert a powerful fascination over the Western mind. The largest two groups were people interested in Japanese culture, split evenly between those who mention relatively new cultural preoccupations, such as anime and cosplay, and those who mention more traditional culture, such as antiques and Japanese art.

The USA has had a large military presence in Japan since World War II, and several respondents commented that either they or their parents or grandparents had been stationed in Japan, and had Japanese items in their homes which had sparked an interest in Japan and in *kimono*. Several people mention that another Japan enthusiast had got them interested, and also a few, that a trip to Japan had sparked their interest. Only one participant attributed her interest to meeting with the Japanese immigrant community where she lives and only three participants were interested in *kimono* as the result of a previous interest in fashion or textiles.

For almost half the respondents, the computer was the only resource for learning to wear *kimono*. While some people responded 'online', others named YouTube and Facebook, as online resources, and by far the most widely used resource was the site 'Immortal Geisha'. This site was set up by one of the respondents, and aims to be a resource for information about *geisha*, and includes links to many *kimono* and dressing related sites. Only four people learnt from a book alone, and the book was named by them as 'The Book of Kimono' by Norio Yamanaka. Before the Internet made videos and online tuition possible, this was the well-known English language text from which to learn *kimono* dressing. The results show an overwhelming preference for using the computer. Numerous YouTube videos demonstrate the dressing process, and it is far easier to follow a video than a series of drawings or photographs. This shows that learning to wear kimono for a non-Japanese is a very different experience from that of a Japanese. The same questionnaire given to Japanese people showed that almost all of them learnt from another person, either a *kimono* school or a relative.

The majority of *kimono* wearers who responded have been wearing *kimono* for 2-3 years. There were sixteen respondents who had worn *kimono* for more than 4 years, and 4 who had worn *kimono* for more than 8 years. This may correspond with a rise in the number of Japanese cultural events, such as anime or cosplay events or it may also reflect the increasing availability of websites which show how to dress. The frequency of *kimono* wearing, for the majority, was low. Thirty five *kimono* wearers wear it once a month, or less. This would be considered occasional *kimono* wearing in Japan. There were few *kimono* wearers who

are wearing it every week, or more than once a month. As frequency of use is a condition for developing good dressing skills, the non-Japanese will find it hard to develop their dressing skills.

Regarding *kimono* types, many people own *kimono* such as *uchikake*, wedding gowns or *hikizuri*, *maiko* dancing *kimono*, which cannot normally be worn out in society in Japan. The majority of *kimono* wearers appear to know the words for all the different types of *kimono*. This indicates that they have studied, either online or with books. This reveals a commitment to *kimono* wearing even though they may not wear the *kimono* often. There is very little interest in woven *kimono*, the group of *tsumugi, omeshi, kasuri,* different woven *kimono*, is very poorly represented in comparison with dyed *kimono*.

The vast majority of purchases of *kimono* are made online, with eBay being the most popular source; eight other sources cited were also online stores. Inevitably the number of people buying from stores in Japan is small, as few of the sample have been to Japan. Apart from the very few stores open in the US or Europe, people are limited to buying online, which is a very different kind of shopping experience from going to a shop. The limited supply of outlets means that these people are competing with each other in auctions to buy the same *kimono*. Whilst Yahoo Japan and Rakuten have a huge selection of *kimono* for sale, they are usually not in the appropriate price range for these consumers and many of the companies do not ship abroad. *Kimono* wearers outside Japan operate on very limited budgets. Two of the participants commented that they spent too much, or their spending was excessive, but none of these purchases appear excessive compared with what Japanese spend on *kimono*.

Kimono wearers outside Japan, for the most part, like to have some kind of special event at which to wear their *kimono*. An event related to Japanese culture was the most popular choice, followed by eating out, and other kinds of cultural events. Ten people wore *kimono* at home, possibly practicing to increase their wearing skills. There are a few people who wear *kimono* for casual events but the vast majority wanted a special event to wear it to.

Discussion

The Internet emerges as a key tool in the dissemination of information about *kimono*. It is an effective message board for posting news and announcements about *kimono* events. Mixi, Twitter, and increasingly Facebook, are the favored Japanese platforms for spreading news about 'Kimono Jacks', and other meetings. One could go as far as to say that the *kimono* wearing groups would not have developed without the power of the Internet. Through YouTube, blogs, forums, and also Mixi, the Internet provides a platform for education about all aspects of *kimono* including how to dress, and thus poses a challenge to the hegemonic *kitsuke gakuin, kimono* dressing school. One wearer described the benefit of being able to ask a question about dressing on Mixi and have numerous answers within a few hours.

Some people never go to events, but only communicate on the Internet. Bauman (2004) has characterized online post-modern relationships as superficial, to be ended at the click of a mouse, "hardly a substitute for the solid", and he believes that commitment is something we fear. We "skate on thin ice" and so "speed is of the essence". Bauman says of internet communities:

> "Fun they may be, these virtual communities, but they create only an illusion of intimacy,
> a pretense of community" (Bauman 2004:25).

The online *kimono* community however, should not be dismissed as unreal or fake. Many a meaningful relationship has been forged through networking and the sharing of learning, advice, experiences and information. Often online activities lead to real life meetings, and friendships. People begin by commenting on a blog or becoming a member of an online group. Then perhaps they arrange to meet or attend a group and gradually become friends. An informant described how he became better able to express himself in real relationships, through contacting people online, and getting used to conversing with them in cyberspace, first. Though *kimono* groups are not bound by a specific, small community location, by kinship bonds, or lesson fees, they are bound together by a strong desire to communicate and share about a specific interest. They are bound by choice. Computer expert Rheingold has a much more positive view of the internet than Bauman, and views it as a powerful tool.

Televisions, telephones, radios and computer networks are potent political tools because their function is not to manufacture or transport physical goods but to influence human beliefs and perceptions (Rheingold 1995:297).

For *kimono* wearers outside Japan, the Internet is even more important, and works as a *kimono* lifeline, providing for many, the only source of *kimono* and all information about *kimono*. It is also the preferred way to learn to dress, without a teacher. YouTube and the 'Immortal Geisha' forum are the two most frequently cited sources of information for those outside Japan. There are millions of *kimono* blogs in Japanese, and many in the English language too. The Internet is birthing a generation of non-Japanese *kimono* wearers, who are interested in, but unfettered by Japanese history and conventions. They perhaps feel that they have an artistic license to dress in interesting or experimental ways because they are outside a Japanese context. The key significance of this group is that all their *kimono* and their *kimono* knowledge comes from outside official channels, providing proof that *kimono* schools (*kitsuke gakuin*) are no longer a necessity. The Internet activity between these non-Japanese *kimono* wearers and Japanese *kimono* wearers is increasing, and some non-Japanese wearers are well-known in Japan for their dressing skills.

Until now technological developments have largely been in the production of the *kimono* itself, though the printing developments in the Edo period also led to new marketing techniques. There continue to be technological developments in the silk and textile industries, such as breeding silk worms with longer threads, developing colored cocoons and making softer and silkier polyester. However the present telecommunication revolution, with its impact on the dissemination of information, appears to have an even greater influence on the *kimono* world now, than do new technologies of production. It is through these channels that a resurgence of *kimono* wearing is being generated.

Conclusion

In spite of opposition from some traditionalist quarters, this grass-roots *kimono* wearing movement is growing at the time of writing. The number of new groups, their increasing membership and in particular, the increasingly young average age, would indicate that this is not just a temporary boom in *kimono*, but the start of a revival of *kimono* wearing on a vernacular, or street level. *Kimono* wearers are beginning to return *kimono* to the realm of the ordinary. Evidence from the Internet, not only of growing sales, but of increased blogging and posting about *kimono* events supports this hypothesis. It remains to be seen how the official channels for consumption and education of *kimono* will react to this movement. So far, it appears that they

have largely chosen to ignore what is happening both in the street and in cyberspace. The internet has also enabled the spread of kimono beyond its traditional home, Japan, and into new territories in other countries around the world. In these countries kimono wearers are completely dependent on the internet for all sources of kimono and information pertaining to it.

Kimono today has become a glue or a bond between people not because it is a national costume or because it is formal or high status, but because it embodies a human level, a depth and an intimacy that is not found in our expendable Western clothing. This revival of a seemingly traditional garment has been possible because of the way in which the Internet can connect people and groups together. In the face of *kimono*, fast fashion (and Japanese fashion is perhaps faster than anywhere else) begins to look like a fad. *Kimono* is fashionable but it embodies so much more. *Kimono* is wrapped and tied. In our world of loose bonds and highly impersonal technology, there are people across all ages and professional statuses who are choosing to be wrapped and tied, to *kimono* and through *kimono* to others, both online and in the physical world. In doing so they are restoring intimacy and human connections to their busy lives.

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REVIEW:
Economic liberalization reforms may explain the impressive GDP growth in Bangladesh

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Abstract

This paper seeks to untangle the link between economic liberalization reforms and GDP growth in Bangladesh. To do so, a time series analysis is done on a data set ranging from 1980 to 2009 using the Cointegration and Ordinary Least Square (OLS) methods. After a review of recent growth and development data in the Bangladesh economy, three reform variables as proxies for trade liberalization, financial reform, and capital market liberalization are analyzed against the level of per capita GDP. Empirical findings of this study support a positive relationship between long run economic growth and the proxies picked to represent liberalization reforms in Bangladesh. A granger causality Wald test indicates a strong unidirectional long-term causal flow stemming from the reform indicators to per capita GDP. The results carry the implication that Bangladesh must get rid of major economic and political impediments in order to fully reap the benefits of various reform programs.

Keywords: Bangladesh, Economic development, Economic growth, Economic reforms, Gross domestic product (GDP).

Introduction

Bangladesh has gained rapid economic growth plus significant improvements in major social development indicators, as demonstrated in data published by the IMF World Economic Outlook and World Development Indicators, World Bank (2011). In the 1970s, many impediments including desperate initial conditions, political instability, widespread corruption, and systematic governance failure hindered the country's growth performance (Mahmud, Ahmed, and Mahajan, 2008). Extensively state-controlled economic policies until 1979 had resulted in too little investment, limited export gain, a stagnated financial sector and a low level of per capita GDP. However, Bangladesh adopted a series of reform policies in the 1980s particularly in areas of trade, finance, and capital account towards a liberal economic regime. Bangladesh moved from an uncertain economic future in 1971, the year of independence, to become one of the best performers in the 'Least Developed Country' category by 2010 (Rahman and Yusuf, 2010). What can explain such a growth nexus in Bangladesh?

Rahman and Yusuf (2010) suggest that GDP growth in Bangladesh is an outcome of productivity growth as a result of capital deepening or labor inputs in the production process and input in 'Total Factor Productivity' (TFP). Others claim that in addition to capital, labor and TFP, effective reforms towards economic liberalization and financial integration explain the positive shifts (Bashar and Khan, 2007; Hossain, 2011). In the case of Bangladesh, the relationship between economic liberalization reforms and the growth performance achieved during the last three decades could be significant. This paper focuses on that relationship by first documenting the recent growth performance in the economy, and then a time series analysis using Cointegration and Ordinary Least Square (OLS) methods. Empirical tests are based on a 30 years' data set ranging from 1980 to 2009.

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Background: Bangladesh gained independence from Pakistan in 1971, as a reflection of the ethnic division and the desire for self-expression by Bengalis (Vaughn, 2010). The roots for the passion of the Bengalis included economic and political factors, and a strong secular identity with the Bengali language at its core (Pattanaik, 2005). After independence, Bangladesh was lagging behind every other nation in South Asia. During the liberation war of 1971, 20% of the economy was destroyed and following the war, the country stayed on a trajectory of low economic growth (Rahman and Yusuf, 2010).

According to a World Bank document in 1981, the economy of Bangladesh was characterized by a set of fundamental constraints which had persisted for years and in some cases for decades or more. The underdeveloped physical and social infrastructure was coupled with limited natural resources and poor institutional capabilities. At the micro level, extreme poverty (70% of the population lived under $1 a day) caused by high unemployment, underemployment and landlessness had resulted in widespread malnutrition. Most of the rural population (above 90%) lived below the subsistence level, and infant malnutrition caused extremely high child mortality (about 240 deaths for every 1,000 children) with extremely poor people living in deplorable conditions in urban slums. These problems inhibited savings and capital formation in the economy. Furthermore, in the industrial sector a severe dearth of skilled manpower and very low productivity of the labor force, especially in the manufacturing sector, limited the country's managerial and entrepreneurial capabilities. Dissemination of knowledge and improved technology was limited because of widespread illiteracy. Above all, unrestrained population growth restricted economic growth and absorbed much of the benefit of whatever growth that was achieved (World Bank, 1981).

However, Bangladesh has been transforming itself from a symbol of famine to a symbol of hope (Todaro and Smith, 2010). Comparing the weak initial conditions and the surrounding pessimism with the economic and social progresses made, Bangladesh has achieved a remarkably positive record (World Bank, 2005). Recent data show that overall life expectancy at birth has risen to 68 years (higher than in Pakistan and comparable to neighboring India), population growth rate has dropped to 1.5% (with a reduction in the fertility rate from 7 children in 1972 to 2 in 2009), literacy has more than doubled (net primary school enrollment rate of 49% in 1972 grew to 92% in 2009), child mortality has been cut by 70%, unemployment is down to 4%, and poverty incidence with the $1 a day measure has fallen to 40%.

Bangladesh is the only nation in South Asia to be on track in meeting the Millennium Development Goals (MDG) on gender parity, having already achieved the goal in primary and secondary schooling. As such, within a short period of time Bangladesh has performed relatively better than many of its neighbors, and confounded the skeptics who acclaimed the 'test case for development' as "if development could happen in Bangladesh, it could happen anywhere" (Todaro and Smith, p.91). The Nobel Laureate Dr. Amartya Sen addressed Bangladesh as a model of development (2011) and evaluated that the people who once branded Bangladesh as a bottomless basket, now consider it as a model for progress. Sen (2011) also claimed that doubts and doubters were proven to be wrong. Khan (2011) concludes that the 'test case for development' hypothesis was no more valid for Bangladesh.

Moreover, in terms of growth and future market potential, Bangladesh was coined in 2005 as a member of Goldman Sachs' 'Next 11 (N11)' country category, a group of eleven most rapidly developing countries with greater economic potential. This group comprises Bangladesh, Egypt, Indonesia, Iran, South Korea, Mexico, Nigeria, Pakistan, the Philippines, Turkey and Vietnam, countries with rapidly growing populations and a significant industrial capacity or potential. The economy of Bangladesh achieved both macroeconomic stability and robust growth from the early 1990s and the country continued to demonstrate satisfactory

performance despite the global economic recession and a series of natural calamities and external shocks (Bhattacharaya, 2004; MOF, 2010). The economy was provisionally estimated to have grown at a rate of 5.83% during FY2009-10, slightly higher than FY2008-09. It was projected to grow 6.7% in FY2011.

As for sectoral contribution, the achievements of the last two decades feature sustained growth in the agriculture sector coupled with moderate growth in industry and service areas (MOF, 2010). Also revenue earnings grew at a satisfactory rate, remittances inflow started to maintain a steady growth rate, foreign exchange reserves turned out to be safe (more than US$ 10 billion in reserve in FY2009-10), and the current account deficit changed to a surplus of US$ 3.73 billion. The short, medium and long-term policy interventions of the government to stimulate agricultural and industrial investment, such as increasing disbursement of loans in these two sectors, appear as successful. Private sector credit flow has also increased along with more import expenditures in capital equipment and industrial inputs. These facts indicate that the economy of Bangladesh has got a stronger footing in recent years and moved in a positive direction (MOF, 2011).

However, some symptoms of economic stagnation can also be observed. In the 2000s and the following years, Bangladesh experienced a gradual build-up of inflationary pressures, a rapid drawdown of foreign exchange reserves and a dramatic deficit in government's resource base. The economy also suffered from a deteriorated budgetary balance (Bhattacharaya, 2004). The balance of payments reached a dangerous point making Bangladesh vulnerable to the economic crisis in 1980s. Foreign remittances started to fall as political turmoil in Arab nations deteriorated the labor market for millions of Bangladeshi workers abroad. Bangladesh is a labour abundant country that has sent an estimated 6.7 million to more than 140 countries across the globe since 1970s (Mamun & Nath, 2010), with more than 10.95 billion U.S. dollar in remittances inflow *officially* recorded during the FY2009-2010 (MOF, 2010). Foreign remittances have made significant contribution to the GDP of Bangladesh (about 12%) and helped offset the unfavourable balance of payments. Around 30% of the country's national savings came from foreign remittances (MPI, 2010). Worldwide pressure from severe competition and other external shocks ranging from global economic recession to discriminatory treatment from the U.S. and European markets further aggravated the situation (Bhattacharaya, 2004).

However, a comprehensive program of market-oriented liberalization policy reforms might have facilitated the macroeconomic development in Bangladesh. A record-low rate of inflation until the middle of the last decade, an unprecedented build-up of external reserves after 2001, and an improved resource position of the government suggest those measures have been successful. In the macroeconomic crisis of the 1980s, the Bangladesh government implemented stabilization programs to force the economy to get back on track by the middle of 2000s, following which the economy has maintained strong economic fundamentals including satisfactory growth and a sound fiscal stance.

Economic liberalization in developing countries like Bangladesh refers to both macroeconomic stabilization and micro-structural changes. Following the IMF and World Bank's advice, Bangladesh follows reforms to liberalize her economy, by reallocation in government expenditure, opening of the economy to trade and foreign investment, adjustment of the exchange rate, deregulation in most markets and the removal of restrictions on entry, on exit, on capacity and on pricing (Bhalotra, 2002).

In the early years following the war of liberation, economic management in Bangladesh was primarily aimed at reviving a war-ravaged economy in a framework of extensive state control and with an ideology of socialism (Ahmed, 2005; Mahmud 2008a), and the government followed a socialist path of recovery by nationalizing most of the large manufacturing units. However, during the late 70s and early 80s the newly

elected regime started to reform the economy by embarking on a denationalization program; they reduced agricultural subsidies and adjusted the monetary policy to reduce inflation, and included de-regulatory measures to enhance the role of private enterprises (Islam, 1977). Major economic reform initiatives in Bangladesh in the 1980s and early 1990s resulted in the implementation of a package of Structural Adjustment Policies (SAP) sponsored by the Breton Woods institution under the support of the World Bank and the IMF, for example World Bank's Structural and Sectoral Adjustment Loans (SAL and SECLs) in 1980s. Reform programs included trade liberalization, agricultural reforms, privatization, financial sector reforms, and fiscal reforms (Bashar & Khan, 2007). These policies were implemented in three phases, the first phase (1972-1975), the second phase (1977-1986), and the third phase (1986-Onward).

Trade liberalization: Bangladesh initiated trade liberalization by the relaxation and withdrawal of import quota restrictions along with the unification of the exchange rate and devaluation of the domestic currency. Starting from mid-1980s tariff and non-tariff barriers were reduced substantially; the un-weighted average import duty rate declined from 74% in the early 90s to 24.3% in 2006. However, cuts in custom duties were offset by other protective measures like para-tariffs (World Bank 2004). Bangladesh reduced protection to make import less costly and helped the export sector to improve its performance, and reduced protection policies which had retarded the growth of the domestic economy (MOF, 2008).

Financial reform: The financial liberalization theory of McKinnon and Shaw advocating the removal of distortions from the economy imposed by regulatory authorities was the theoretical background of the financial sector reform programs in Bangladesh. The government created a comprehensive Financial Sector Reform Programme (FSRP) in early 1990s and mandated an authority to design policy aimed at liberalizing the economy from government control, bringing indirect control in monetary policy, enhancing efficiency of financial institutions especially the banking sector, and restoring order in the financial sector. To bring all of these policy measures to effect, a 'National Commission on Money, Banking and Credit' was established in 1984 with the assistance of the World Bank (Bahar, 2009). The Financial Sector Adjustment Credit (FSAC) was also contracted simultaneously with the help of World Bank (Bhattacharya & Chowdhury, 2003).

Capital market liberalization: Bangladesh opened its door to foreign entrepreneurs during 1980s in order to reap the benefit of overseas capital investment. The government built up the Board of Investment (BOI), lifted restrictions on capital and profit repatriation, and opened the industrial sector for FDI. Other government reform measures included tax exemptions for investors in the power generation industry, withdrawal of import duties from export oriented machineries, offering tax holiday schemes for investment in priority and less developed sectors, reducing restriction on entry and exit, and lowering bureaucratic barriers in getting approvals for foreign projects (Adhikary, 2011).

Fiscal reform: In the early stage of independence, the majority of the government expenditure was put in reconstruction and rehabilitation works. However, the government initiated a number of fiscal reforms in accordance with IMF's Enhanced Structural Adjustment Facility (ESAF) in early 1990s. 'Value added tax' (VAT) largely replaced the earlier version of differentiated sales tax. On the expenditure side, increased emphasis was given to human resource development and poverty alleviation programs, giving priority to education and provision of health and family planning services and social safety net programs to serve vulnerable people (Bahar, 2009; MOF, 2009).

On the question of whether liberalization is good for Bangladesh, there are mixed answers in the literature. According to Palit (2006) agriculture liberalization had a positive impact on Bangladesh's growth

and such policies rescued the stagnated agriculture sector during the latter part of 1990s. But other authors like Raihan, & Razzaque (2007) made the opposite conclusion and warned that full agricultural liberalization in Bangladesh may lead to a high welfare loss and a significant rise in poverty indices. Ahmed (2001) and Bashar & Khan (2007) conclude that trade has a positive impact on GDP growth in Bangladesh. But some authors find an indirect link between them through expansion of manufacturing growth and export (Rashid, 2000; Mamun & Nath, 2004). On the other hand, Islam (1998) found no links at all between trade liberalization, exports and economic growth in Bangladesh. Siddiki (2002) reported that financial liberalization, along with trade liberalization, enhanced economic growth in Bangladesh. Habib (2002) studied the case of external financial openness in Bangladesh but could not find any evidence it contributed to improvement of productivity and the domestic capital growth. Hossain (2011) concluded that implementation of economic liberalization reforms during the 1980s and 1990s contributed to the lift-off in GDP growth of Bangladesh.

The main purpose of the current paper is to untangle the relationship between liberalization reforms and economic growth in Bangladesh, by empirically testing to see whether the marginal impacts of reform variables are positive or negative and if they are statistically significant or not.

Methodology

The level of per capita real GDP is taken as an indicator of economic growth while three reform variables are assumed to represent liberalization reforms. The empirical model for this study is as follows:

$$LnPCY_t = \beta_0 + \beta_1 TEXIM_t + \beta_2 R_t + \beta_3 CAPFLOWY_t + U_t$$

PCY_t represents per capita GDP in year t; the variable $TEXIM_t$ represents trade openness through the total volume of export and import as a share of GDP. According to international trade theories and the Bangladesh Government, expansion of trade is an important objective of economic reforms in the country (MOF, 2010). Hence following Dowling & Hiemenz (1982) and Adhikary (2011), total exports and imports as a share of GDP were assumed to represent 'trade openness'.

R_t stands for 'real interest rate' which is assumed to represent the financial openness indicator; real interest rate as an indicator of financial liberalization was included in the model following Habib (2002). Bangladesh has a factor driven economy where the capital market is yet to be expanded and flourished. Like other developing countries banks and other financial institutions act as key intermediaries to provide necessary funds for businesses. The contribution of financial liberalization reform to the productivity of domestic capital (growth) in Bangladesh is thus a crucial factor (King & Levine, 1993; Hallwood & MacDonald, 1994).

$CAPFLOWY_t$ represents the net foreign capital inflow as a share of GDP; the net amount of foreign capital inflow in Bangladesh is thus taken as an indicator of capital account openness, and as a *proxy* for capital market liberalization reforms. The logic is that reform activities in the capital market influence foreign capital inflow, as indicated in Ahmed and Fahian Tanin (2010). These funds stimulate productivity by supplementing the scarce domestic resources, easing foreign exchange constraints, inviting modern technologies and managerial skills, and facilitating easy access to foreign markets. Therefore, they are a crucial factor in the discussion of economic reforms and per capita GDP growth in developing countries like Bangladesh (Quazi, 2000; Adhikary, 2011)

U_t is for error terms. For this study all the variables are in real terms and the errors are assumed to be independently and identically distributed. The *a priorie* expected signs of the coefficients are hypothesized as

follows: $\beta_1 > 0$; $\beta_2 > 0$ or < 0; $\beta_3 > 0$

The amounts of FDI for various years are taken as a proxy for capital market liberalization reforms in the economy. According to neo-classical growth advocates, in a capital shortage economy like Bangladesh, the marginal productivity of investment is increased if additional capital is injected in the form of long-run investment like FDI (Adhikary, 2011). Some economists postulate that more foreign capital investment increases the efficiency of investment as it provides a comparative advantage to a developing economy like Bangladesh (Romer, 1986). FDI and foreign capital in low-income countries are a source of fund that fills up the gap between existing resources and the amount needed for development. Such funds may stimulate productivity through complementing scarce domestic resources, by easing foreign exchange constraints, through inviting modern technologies and managerial skills, and also by facilitating easy access to foreign markets. Therefore, in the discussion of economic reforms and per capita GDP relationship in developing countries like Bangladesh it is also a crucial factor (Quazi, 2000; Adhikary, 2011). Figure 1 depicts the growth trends seen among the collected data.
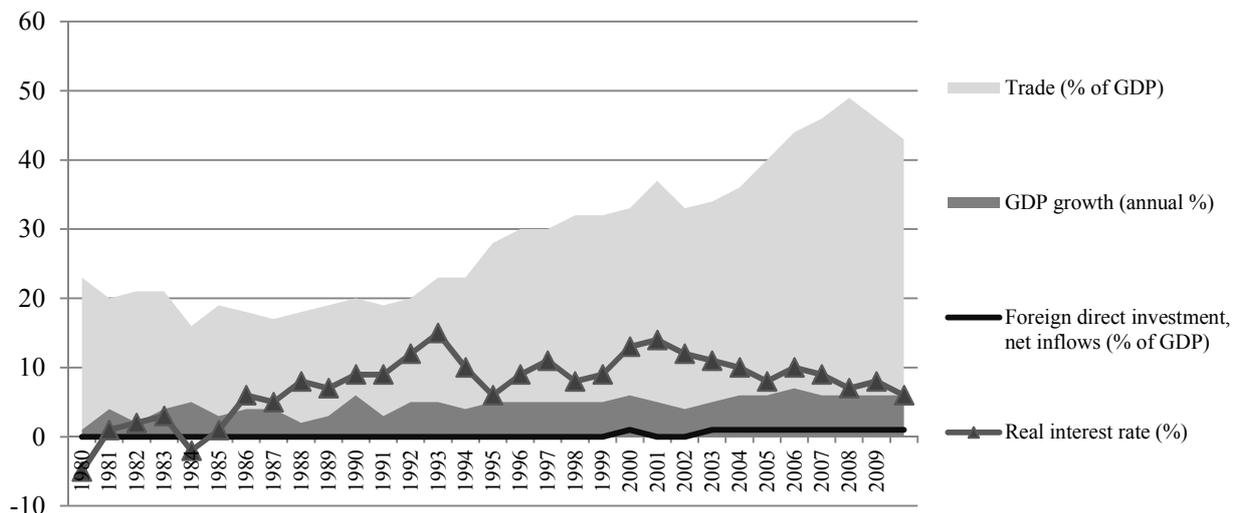
Figure 1: Trade, FDI, Interest rate and GDP growth in Bangladesh.
(Source: World Development Indicators, World Bank)

Data sources and estimation: This study covers a set of time series annual data from 1980 to 2009 to estimate the specified model. The computation of some variables relies on the previous year's value as well; however, it was not possible to get data for those variables in the beginning year of 1980; hence the actual data ranges from 1981 to 2009. The World Bank Data Bank is the main source. Other sources that were utilized are the International Financial Statistics (IFS) and the Bangladesh Bank Statistics Department.

The Ordinary Least Square (OLS) regression technique was used to estimate the specified model. Before going to the regression analysis the nature of the data distribution was examined using descriptive or summary statistics and diagnostics tests. One important assumption of the OLS is that residuals behave normally. Therefore, a normality test by the Karnel Density Estimation Technique was followed. Then the time series property (being stationary) of the data was checked with the help of the Augmented Dickey-Fuller (ADF) Unit Root Test following Dickey and Fuller (1981). The following regression was utilized for the ADF test:

$$\Delta y_t = \alpha + \beta t + \gamma y_{t-1} + \delta_1 \Delta y_{t-1} + \cdots + \delta_{p-1} \Delta y_{t-p+1} + \varepsilon_t$$

Where α is constant, β is the coefficient on a time trend and p is the lag order of the autoregressive process. Assuming α=0 and β=0 corresponds to modeling with a random walk and the case where β=0 implies modeling a random walk with a drift.

Cointegration, which is the tendency for variables to move together in the long run, was checked using the EG-ADF test following Engle and Granger (1987). In order to see the associated causality among the variables a Granger Causality Test was performed using a VAR model with the help of Stock and Watson (2007) and Green (2008). We used the following equations:

$$Y_t = \alpha_0 + \alpha_1 Y_{t-1} + \cdots + \alpha_p Y_{t-p} + b_1 X_{t-1} + \cdots + b_p X_{t-p} + u_t$$

$$X_t = c_0 + c_1 X_{t-1} + \cdots + c_p X_{t-p} + d_1 Y_{t-1} + \cdots + d_p Y_{t-p} + v_t$$

Where *Y* and *X* correspond to dependent and independent variables for the original equation respectively. We tested the null hypothesis H_0: $b_1 = b_2 = \cdots = b_p = 0$, against H_A: 'Not H_0', to check 'if X does not Granger-cause Y'. Similarly, testing H_0: $d_1 = d_2 = \cdots = d_p = 0$, against H_A: 'Not H_0', allows us to test if Y does not Granger-cause X. In each case, a *rejection* of the null hypothesis implies that there is Granger causality for the concerned variables.

Findings and Results

The descriptive statistics are shown in Table 1.The variables were found normally distributed in the normality test according to the Karnel Density Estimation Technique. The standardized normal probability plot confirmed normality in the middle range of residuals. Similarly the Quintile-normal plot ensured normality in the extreme of the data. A non-graphical test for normality is the Shapiro-Wilk test which checks the hypothesis that the distribution is normal. In this model the p-value of 0.07715 indicated that the null hypothesis that the distribution of the residuals is normal cannot be rejected (at 90%).

Table 1: Summary statistics

	LnPCY	TEXIM	R	CAPFLOWY
Mean	5.749	28.25	7.52	0.30
Std. Deviation	0.285	9.93	4.62	0.43
Kurtosis	2.546	2.19	3.60	3.24
Variance	0.081	98.62	21.36	0.18
Skewness	0.376	0.62	-0.91	1.25

The white noise Q test as well as the Breush-Goodfrey and Durbin-Watson test for serial correlation detected serial correlation in the data at 5% significance level. To correct it, we utilized Cochrane-Orchutt regression. The result shows that the Durbin-Watson original static was 1.07025 while the transformed value for the statistic was 1.699318. Both the graphical and the Breusch-Pagan test suggested no possible presence of heteroskedasticity in the model (prob>chi²=0.4340). As the residuals were homogeneous, we would not expect that the model might have wrong estimates of the standard errors for the coefficients and therefore their t-values. Even so, we followed Stock and Watson (2003) and assumed heteroskedasticiy in our model. From the two ways to deal with this problem, using heteroskedasticity robust standard errors and using weighted least squares (WLS), we followed the former (Stock and Watson, 2003).

The model was also checked for an omitted variable bias. Testing for such a bias is important as it tests the assumption that the error term and the independent variables in the model are not correlated; $E(e/X)=0$. The p-value (p=0.5356) was higher than the usual threshold with no omitted variable bias in our model.

We also tested the model specification by the Link Test. By this we can check whether we need more variables in our model by running a new regression. The p-value (0.759) was not significant to reject the null hypothesis and we concluded that our model was correctly specified.

Another important assumption for our model is that independent variables are not perfectly multicolinear; in other words, one regressor should not be a linear function of another. The variance inflation factor (VIF) test detected no multicolinearity in our model (Table 2).

Table 2: VIF test for Multicolinearity

Variable	VIF	1/VIF
TEXIM	5.16	0.193753
CAPFLOWY	4.66	0.214811
R	1.24	0.804397
Mean VIF	3.69	

Stationary test: The Augmented Dickey Fuller (ADF) test showed that all the variables were stationary at their first differences (Table 3). The test statistics for all the regressors with and without trend were significant at 1% level clearly rejecting the null hypothesis of having a unit root. Hence, variables *TEXIM, R, and CAPFLOWY* decisively are confirmed as stationary with an order of I (1). The outcome variable *LnPCY* is also found to be stationary at its first difference level with both trend and no trend and depicts I (1) order of integration.

Table 3: Augmented Dickey Fuller Unit Root test (for being stationary)

	Level		First difference	
	Without trend	With trend	Without trend	With trend
LnPCY	1.542	-1.407	-4.199***	-4.845***
TEXIM	0.572	-2.865	-5.582***	-5.940***
R	-3.222	-2.742	-5.891***	-5.935***
CAPFLOWY	-1.139	-2.547	-5.142***	-5.020***

Cointegration test: The EG-ADF test indicated no cointegration in the data, which implies no long run equilibrium relationship among variables. The Mackinnon approximate p-value for z (t) was 0.6625 and the test statistic appeared to be -1.226 where the critical values are -3.750, -3.000, and -2.630 for 1%, 5%, and 10% significant level, respectively. Therefore, we need not follow a Vector Error Correction Model (VECM).

Granger causality: The null hypothesis in the Granger Causality Wald test for this model (*var1* does not Granger-cause *var2*) cannot be accepted for the three regressors namely *TEXIM, R, and CAPFLOWY* (p-values: 0.000, 0.011, and 0.002 respectively). *TEXIM, R, and CAPFLOWY* may granger cause *LnPCY,* however, the test statistic (p-value=0.087, 0.464, 0.146 respectively) for the outcome variable (*LnPCY)* shows that the statistics are not significant at 5% level; so the null hypothesis is not rejected meaning it does not granger cause the explanatory variables. In this model we conclude that a one- way causality runs from 'Total Export and Import', 'Real Interest Rate' and 'Net Capital Flow' to 'Per Capita GDP'.

Structural equations: Some authors represent regression results using tables. But it is also possible to show them in an equation form (Quazi, 2005), as depicted here:

$$LnPCY = 4.99 + 0.02235 TEXIM^{***} + 0.01389 R^{***} + 0.04732 CAPFLOWY$$

$$(0.102) \qquad (0.00501) \qquad (0.00366) \qquad (0.0914)$$

[Standard errors in parentheses, *** coefficients significant at 1% level of significance]

Discussion

We attempted to investigate the impact of economic liberalization reforms on per capita GDP of Bangladesh with the help of Cointegration and OLS regression techniques. The model was estimated for a series of yearly data from 1980 to 2009 for three variables assumed to represent the reforms. Our findings reveal positive linkages between long run economic growth in Bangladesh and the three selected variables that are associated with liberalization reforms.

The implications of these findings are simple. First, a positive relationship between trade reform and per capita GDP verifies the credibility of Bangladesh's robust growth in recent years, thanks to the 'export policy' of 1997-2002, designed to maximize export growth and narrow down the gap between import payment and export earnings (Figure 2). Throughout the 2000s, the export growth in Bangladesh was continuously positive and a double digit growth rate was posted until FY2010-11, except for FY2009-10 (MOF, 2010; BBS, 2010).

The export earnings of some major sectors including woven-RMG, knit-RMG, frozen foods, and leather goods have significantly improved in the last two decades. This implies that industry leaders were able to undertake timely measures for production of exportable goods at a competitive price, thanks to an increase in the volume but not the price of export products from Bangladesh. Nevertheless, exports of Bangladesh continue to be dominated by a few commodities in a narrow market and therefore it may be necessary to remove more impediments in order to maintain a sustainable external sector.
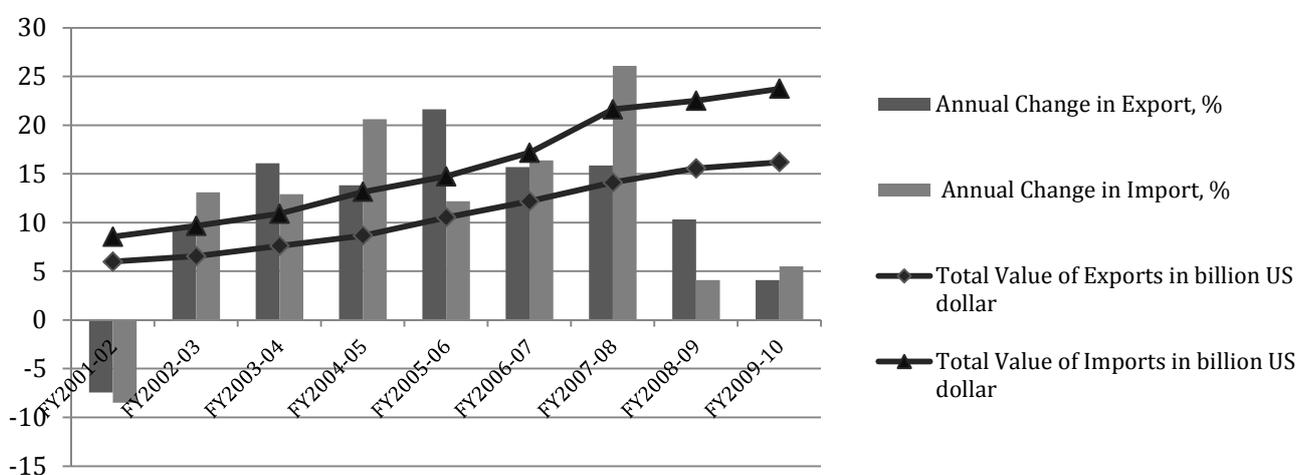
Figure 2*: Export and import trends in Bangladesh from 2001 to 201*0.

(Source: Bangladesh Bank, Bangladesh Ministry of Finance, Export Promotion Bureau.)

The results of our study also suggest that policy reforms in trade and financial sector, but not in the capital market reform, significantly affect per capita GDP growth. We may conclude that trade reforms and financial liberalization measures in Bangladesh have been effective in promoting economic growth. The Granger causality test provides evidence for a strong unidirectional long-term causal flow stemming from the selected reform indicators to per capita GDP. This finding implies that liberalization reform policies are important in predicting future per capita GDP but per capita GDP may not necessarily demonstrate the level of economic liberalization reforms.

As for the limitations of this paper, one may criticize the appropriateness of the variables selected for regression analyses. Choosing 'total exports plus total imports as a share of GDP' to represent trade openness may be questioned. How can an increase in import contribute to GDP, while in the Keynesian absorption model it may negatively influence the GDP growth? Also the appropriateness of choosing 'real interest rate' as an indicator of openness for financial liberalisation may be questioned. The 'real spread margin' (lending rate minus deposit rate minus rate of inflation) could depict how banks as financial intermediaries might have contributed to GDP growth under financial liberalisation. Even with the real spread margin, the relations among financial deregulation, spread margin and GDP growth would still be complex. Finally, the appropriateness of selecting 'net capital flow as a share of GDP' to represent capital market liberalisation can be questioned. Why the capital market liberalisation can encourage FDI? Capital market liberalisation may encourage securities / portfolio investment, but not always FDI. However, we followed with our assumptions as explained in the methodology section.

The positive influence of financial liberalization reforms toward GDP is less certain. An indirect relation appears to exist between the liberalized financial sector and economic growth in Bangladesh. For instance, economic investment has not been constrained by the high cost of finance (Rahaman & Yusuf, 2010). The investment / GDP ratio in Bangladesh rose to 24.41% in 2011 from 9.48% in 1970s (MOF, 2011), because Bangladesh was able to maintain a particularly reasonable lending interest rate compared to its neighbors in recent years.

On the other hand, the country's finance industry has experienced rapid growth since the end of 1980s. Improvements have been observed in basic sector indicators like the ratio of non-performing to total loans or market capitalization to GDP ratio. According to Islam & Begum (2005), there is a close link between financial development and economic growth in Bangladesh which is attributable to the trend of financial deepening and the ratio of private sector credit to GDP (Ahmed & Islam, 2004).

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ORIGINAL RESEARCH:
Motivations for migration among *Minangkabau* women in Indonesia

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Abstract

Minangkabau people in Indonesia are widely claimed as the largest matrilineal society in the world. They had always encouraged their males to go on sojourn outside their homeland in search of economic activity and experience. Their kinship system had provided *Minang* women with special rights to take care of their joint household (*rumah gadang*) and their ancestral land. In the second half of the twentieth century, however, increasing number of *Minang* females began to leave their villages and districts to study, work and sojourn in distant areas away from their homeland. We shall discuss this phenomenon among the *Minangkabau* people of Indonesia, seeking the reasons that motivated females to sojourn as well as migrate like their men. To help comprehend the complex processes at work in motivating *Minang* women to sojourn, we rely on narrated reports of female *Minang* migrants in the greater Jakarta region that includes the capital city of Jakarta and the adjoining city of Tangerrang. The study was thus performed through in-depth interviews with *Minang* females in the two cities, and the narratives were used to discover the motivations that provided the impetus to their migration.

Keywords: Female migration, Indonesia, Internal migration, *Minangkabau* women, Motivations for migration.

Introduction

Globalization has triggered mass mobility to capital cities in all countries. The analysis of behaviors of male and female migrants, however, needs different approaches in regard with the types of migration, security, inequalities of treatments and opportunities that female migrants encounter in their destinations. Within Indonesia, Jakarta and many provincial cities are no exception to such phenomena. During Suharto's leadership, the government used the 'Five Year Development Plans' (REPELITA) to develop all sectors within the country. Jakarta and its adjoining areas received both national and international investments for development. The rapid development of Jakarta attracted people to move into Jakarta.

Jakarta and the new satellite city Tangerang have been attractive to migrating women. According to the population census in 2000 in *Daerah Khusus Ibukota,* the official name for Jakarta (DKI Province), the total number of *Minangkabau* people was 264,639. The census data in DKI shows that the number of *Minang* males in rural and urban areas of DKI was 139,490, while the total number of *Minang* females was 125,149 (BPS DKI Jakarta, 2000). The *Minangkabau* population formed the second largest group after *Bataknese* (300,562 people) in the greater Jakarta metropolitan area (BPS DKI Jakarta, 2000). In Tangerang, the total number of *Minang* males in urban and rural areas was 88,367 and the population of *Minang* females was 80,135 (BPS Jawa Barat, 2000). Yet, the difference between the total population of male and female *Minang* migrants in Jakarta and Tangerang was not very significant.

Migration for *Minangkabau* people is called *marantau* or in Indonesian word *merantau* (to migrate). The root of this word is *rantau*. For *Minangkabau* people, *rantau* means any area outside one's *nagari* or district. For a very long time mobility of *Minang* people was not only inter-district and inter-provincial but they had

also gone to neighboring countries. The tradition of *merantau* was generally prevalent among young men for two reasons of higher education and trade (see Josselin De Jong, 1952; Kato 2005; Naim, 1979; Chadwick, 1991; Asnan, 2007). Graves (1981:19) notes that families with long established traditions of *merantau* could easily locate a kinsman in any major town almost anywhere in West Sumatra (and, since the 19th century, almost in any major city in Indonesia).

West Sumatra is widely claimed as home to the world's largest matrilineal society (Korff 2000; Kato 2005). The land is called *Ranah Minang* or *Minangkabau* land and its capital city is Padang. Its people are called *Minangkabau* but are often referred as *Minang* or *Padang*. For people outside West Sumatra, the word *Padang* is often used for people originally from West Sumatra. Generally, *Minangkabau* people refer to themselves by the name of the place of their origin or their clan. The involvement of *Minang* women in migration had been recognized but their movement was not considered as their individual decisions (Murad, 1980; Kato, 2005; Chadwick, 1991; Graves, 1987; Naim, 1979; Reenen, 1996). Generally, they were presumed to have followed *urang gaek* or *urang tuo* (parents) or to join *sanak* (means siblings or those who could be close or distant relatives). This could also mean *ikuik* to accompany one's *mamak* (means mother's brother or a relative), *etek* (means mother's sisters or aunts), and a sister or a brother who have had settled in an area.

The major aim of this research was to explore and elaborate the motivations of *Minang* women to leave their home of origin and sojourn in the greater Jakarta region. This paper first provides a background to *Minangkabau* migration with special reference to the new phenomenon of female migration. It also provides the theoretical aspects that define the orientation of the paper. The fieldwork and data are discussed next. The *Minang* women's perceptions of their migration to Jakarta and Tangerang will be emphasized to show that the educational attainment levels, skills and the economic activities of the women in *rantau* have had bearings on their motivation to migrate. Their ties with their natal villages, especially by way of remitting money to their families in West Sumatra is shown as encouraging them to sojourn than return home.

Theoretical considerations: People's movements from rural to urban areas or cities have been increasing in developing countries. Varieties of interpretations and approaches towards migration have been advanced in the last two decades. The demand for labor force is one of the reasons for the increase in migration; however, it is not the only factor that pulls people to migrate from their home of origin. Skeldon (1997: 2) remarks that "migration itself encompasses more than a simple unilinear movement between rural and urban sectors and needs to be conceptualized as a complex system of short term, long term, short distance and long distance movements that can be better subsumed under the term mobility." Another theory is that migration can take place as a result of overpopulation in sending areas (Goldscheider, 1996: 273). Goldscheider (1996: 278) adds that "migration may free individuals from some of the constraints and obligations of traditional rural social structure and from the ascriptive role of place and family of birth". This process may characterize long-term, permanent moves more than seasonal and local migrations.

Lee (1996) discusses the motivation of people's movements and the "development of streams and counter streams and their characteristics". Motivation is described as based on either individual or household decisions. Lee (1996) explains that migration flows are also viewed through the volume of migration, and the characteristics of migrants in relation to positive and negative elements in sending and receiving areas.

Numerous studies have shown that people move out of their home of origin for economic reasons. Their decision may not be made by the individual alone but is a family based decision instead, and helps specify the motivation for migration, and whether the push factors are more dominant than the pull factors. Davin (1999:

76) describes that the family in China's rural households played an important role in the process of migration in 1999. The family decided as to who migrates. Having relatives and friends in the target area can provide them with temporary settlement and information about jobs, and the "do's and the don'ts" in the new environment. Davin's (1999: 74) study shows that chain migration was practiced in some rural areas as the pioneers could help with job information and settlement.

Migration cannot be separated from push and pull factors. It is interesting to examine, however, whether pull factors are more dominant than push factors. People may move only to certain places for their migratory target. Winter (2009:13) points out that people move to certain places where there are people they know who can assist them with a shelter and information. This kind of mobility leads to chain migration (see Haas, 2010). In this type of migration sets of interpersonal ties connect migrants, former migrants and non-migrants in origin and destination areas through bonds of kinship, friendship and shared feelings of belonging to a community. Winter (2009: 13) describes that the chain migration model has two advantages; one is about job information and the other is safety and comfortable support upon arrival.

In addition to the above theories, women's migration may take place as they want to be free from responsibilities as members of their community. Bah et al. (2003) studied six areas on rural-urban linkages in Mali, Nigeria and Tanzania. They show how migration affects people's lives. The study explains the main reason to migrate as being economic, but overlapping with the desire to widen one's experience and for the younger generation to escape from obligations and control from elders (Bah et.al. 2003:19). Moreover, young single women's movements in those areas increase as they can find jobs as domestic workers in urban areas or at international resorts. Bah et al (2003: 20) point out that "women's migration is also increasingly socially acceptable, provided they contribute to their parental household's finances through remittance".

Migration studies on *Minang* people have focused largely on men's movement. We know little about *Minang* women's migration such as their motivations, the processes, the patterns and the consequences of their movements. The limited existing literature on *Minang* female migration suggests that migration is commonly undertaken by males. It is known in *Minang* language as *pai merantau* meaning 'going outside of one's home of origin'. Women's migration has not been a concern for all researchers as it is commonly viewed as related to their husbands or parents. It means that their decisions and motivations were regarded as unimportant in the process of their migration. Neither was their roles elaborated in the receiving areas and their home of origin.

In his study, Kato (2005) noted that the percentage of *Minang* women's migration had significantly increased. Although in the beginning, women migrated to join their husbands, the percentage of women's migration with their children slowly increased. It started from 5 to 6 percent, and then more than doubled to about 13% (Kato, 2005: 151). During the Dutch period, the number of women who migrated alone was 3% but it increased to 12% between 1942 and 1961. Then the number doubled to 26% in 1961 (Kato, 2005: 151). He does not give specific reasons why there were more women on *rantau*. Kato (2005) suggests that single women probably went to pursue higher education and continued to stay in *rantau*; however, older women with divorced status left with their children. He adds that it is very obvious that the migrants preferred to migrate to Jakarta and Pekan Baru.

Given the findings of the studies above, it is clear that culturally men were encouraged to migrate but women were expected to take care of the ancestral land and *rumah gadang*. *Minang* women's movement was confined to their own territory including her home and farm, and her ancestral land. In addition, Graves (1981: 20) describes that a woman was not permitted to leave her mother's home and thus could not accompany her

husband abroad. As mentioned earlier, women who migrated were presumed to follow their *urang gaek* or *urang tuo* (parents) or to join their *sanak* (literally siblings, but also probably close or distant relatives). This could also mean accompanying a *mamak* (mother's brothers or other relatives), an *etek* (mother's sisters or aunts), a sister or brother.

The traditional matrilineal society in West Sumatra has no class system but only status groups. People in traditional *Minangkabau* villages are categorized as nobles and non-nobles. Graves (1981: 5) describes that there is "constant competition among individuals and their families to attain recognition and statuses." Such positions may be conferred as well as being derived from lineage, power and prestige. Therefore, families try to keep and acquire prosperity, power, family prestige and social position for lineage members. In addition, communal land, houses and properties or *harta pusaka tinggi* are inherited by women from the lineage ancestors but protected carefully by the male guardian called *mamak*. The efforts and responsibility of the family increase its base wealth as well as the private family income called *harta pencarian*. Graves (1981) states that wealth gained from lifetime accumulation can develop the power and status within the entire family. This is one of the reasons *Minang* women who go on *merantau* only show the materials that they have gained to show their status transition rather than class change.

However, *Minang* women's migration patterns and decision making process need to be elucidated. This paper investigates the process of *Minang* Women's migration and their motivations. The stories of *Minang* women who migrated to Jakarta and Tangerang are used to understand their motivations.

Methodology

An extensive field research was conducted to collect data from informants and institutions by direct interviews. Fieldwork was conducted in three periods in late September to late November 2009, from April to May 2010 and February to March 2011. Video recording was used to record the areas of research, jobs and activities of the *Minangkabau* women in Jakarta and Tangerang. During the interviews, notes were taken in order not to cause anxiety among respondents. The criteria for the selection of informants included females from West Sumatra aged 15-70 who were approached with snowball sampling. All of them had lived in *rantau* in the area of Jakarta and Tangerang. Women who regarded Jakarta or Tangerang as their second or third destination after staying for some time in other cities such as Medan, Pekan Baru, Batam and Surabaya were also included in this study. The narratives of 30 informants have been used in this study.

This research focused on *Minang* women who were in Jakarta and Tangerang. As Jakarta became the center of Indonesian development, it also became the destination for all migrants (Hugo, 1979; Romdiati and Noveria, 2006). Tangerang is a new urban city which is the capital of Banten province (became a province in 2000), located on the border of South Jakarta. Since the 1980s, Tangerang has become an industrial city and the second largest city after Jakarta in terms of its migrant numbers (Effendi et al, 2010). Tangerang was the second choice for migration as its new urban area was located next to the capital city, Jakarta, and was the third largest city after Bekasi. Tangerang's fast growth is related to its closeness to Jakarta. It is located about 30 kilometers west of Jakarta. Its infrastructure and facilities are much better as it is a new urban city. Tangerang offers cheaper houses with better quality and less competition. People prefer to commute from Tangerang to Jakarta for work.

Findings and Discussion

We describe the motivations of *Minang* women to leave West Sumatra to go to the greater Jakarta region. The thirty informants whose narratives are used in this paper shared a collective knowledge about Jakarta and Tangerang. They came from different villages and were of different ages when they decided to migrate. The number of female migrants was higher than men. We have examined women's migration processes through their narratives under the subsections: the networked migration, running away from personal problems and the impact of education and skills.

The networked migration: When *Minang* women migrate, most of them face different challenges than men as they have grown up in a society that gives a central role for women due to the matrilineal *adat*. Some of the migrants were aware of the tough competition at Jakarta but the modern and luxurious life in Jakarta masked all the challenges. Others who were not knowledgeable about Jakarta left their villages as they were promised jobs and better incomes. The decision to *merantau* was a personal one as they believed that Jakarta provided better opportunities.

Minang women have a vivid picture of *rantau* and what they could do there. Migration for them was to ensure that they would have a better life. They valued their existence in *rantau* and their bond with their families in *rantau* and in home of origin. The sense of sisterhood and togetherness among Minang women in *rantau* has reinforced gendered networks and responsibilities among *Minang* women in *rantau*. These networks are more intense among females from the same village.

For *Minang* people, PRRI (*Pemerintah Revolusioner Republik Indonesia* – Revolutionary Government of the Republic of Indonesia) is not a happy memory. Some *Minang* people migrated to some place outside West Sumatra to avoid being persecuted by the Indonesian Army as well as by local revolutionaries (Bahar and Tadjoeddin, 2004: 163). The rebellion in West Sumatra caused chaos and made people afraid for their safety. The soldiers from Jakarta occupied some areas in West Sumatra. People were under threat from these soldiers. An informant, named Etek Zarah described, "Girls were hidden by their parents because soldiers could rape them."

From the narratives of the young *Minang* women, it is clear that their motivation was to look for a job and they followed the migration paths of the pioneers that they knew. Their migration was not primarily for economic reasons. The pull factors obviously were not only the opportunities that were available in Jakarta but also the existence of people they knew and trusted. Their social networks played an important role in their migration. The social networks provided them a place to live and help with other daily needs until they got a job and became independent.

Running away from personal problems: Some women moved to Jakarta after they encountered problems in their lives. The problems they faced became the push factors for them to leave. Though it was difficult for their parents and relatives to let them go to *rantau*, they eventually left. The existence of relatives and friends ameliorated the worries of being on *rantau*.

Some were interested to know about new ideas and modern life styles. They got more freedom to experience new lifestyles and ideas. Modern lifestyles such as parties, clubbing and other groups of friends became part of their interests. They gained more freedom by joining non-*Minang* social groups. This feeling was noticed by Blackwood from a woman in Taram. Blackwood (2000: 141) refers to a young woman's statement that in Jakarta she could get more freedom because she could act as a metropolitan woman. By joining the new communities in Jakarta, she could fulfill her interests in obtaining a wider knowledge that

presumably would contradict *Minangkabau* people's *adat* and norms. According to *Minangkabau adat*, the responsibility of the first daughter is to take care of her matrilineal family.

Minang women in this study have provided a different perspective about their lives in *rantau*, particularly those who worked very hard to survive in *rantau*. Marni, for instance, was one of the tough Minang woman and famous for her salon services that were enjoyed by many women in Sonny's housing complex. Marni was a young woman from Silungkang who left her village because she did not like the man that her parents arranged for her to marry. As a result, her parents asked her to leave. She protested the idea of marrying *anak bako* (the son of her father's sister). She explained, "My father did not know that the man liked gambling and often got drunk". It is common in *Minangkabau* culture to arrange marriages among *anak bako* which is called *pulang ke bako* (return to *bako* by marrying the son or the daughter of the father's sister) or marry *anak mamak* (marry the son or daughter of the mother's brother). In Jakarta, she had three kids and a husband who worked as a taxi driver. This made her search for a job that would help improve the financial conditions of her family, and her hard life in *rantau* is reflective of the many other *Minang* women in *rantau*.

The impact of education and skills: The narratives reveal that *Minang* women migrants in *rantau* came to Jakarta with various educational attainments and skills. There was a visible relationship between *Minang* women's educational attainment and the kinds of economic activities that they were involved in.

Economic activity in here is defined broadly. It includes permanent and temporary jobs and any activity that earns cash or reward. Rewards include the receiving of pocket money, housing, food, and other gifts such as clothes, tickets to visit home or kin. The narratives reveal that education generally became the push factor to migrate. Migration obviously is not only for women who wanted to continue their study but also includes those who could not go for higher education and women who had finished their university education. The discussion in this subsection focuses on the activities of women who had received higher education.

For young Minang women with college and university qualifications, the dream to come Jakarta is to get a better job and higher salary. It is evident from the narratives with young *Minang* women that *rantau* offers jobs and good salaries. The challenge of living and working in *rantau* enables them to face hard competition and overcome them. They have confidence in their ability to survive and be successful in *rantau*. Some of them had to convince their parents to allow them to go because their parents wanted them to be near home. The research data show, however, that for some women, their economic activities in *rantau* were not related to their educational background.

The narratives showed that none of the *Minang* women ever had planned to be a domestic worker in other households. Among the *Minang* women, none of them worked as a housekeeper or maid. Arif as the head of *Ikatan Keluarga Minang* (Minang Families Affiliation) in Binong housing complex, Tangerang said, "there are about 500 Minang households here. Most Minang households in this complex are categorized as middle class. Most of the women are traders, teachers and civil servants'" When I asked him whether there are any *Minang* females who worked in factories as laborers, Arif answered:

> "There were *Minang* men who worked in factories but they did not do the lowest job. In the factory, where I worked before, there were *Minang* men and women who worked as mechanics, administrators, supervisors or sales persons. They had graduated from universities. Yes, there was one young *Minang* woman who lived in this neighborhood for a short time. She worked as a laborer in a towel factory. However, I guess it was an emergency job for her. Then she quit. I do not know where she moved."

This may signify an interesting fact that *Minang* would never stay long as lower paid workers. The interviews at Tanah Abang provided different perspectives about *Minang* migrants living in Jakarta. As a large wholesale market area in Jakarta it had a range of economic activities. Walking along the corridors of shops, one could hear people in the shops talking in *Minangkabau* language to other shopkeepers. Parts of the market became a *Minang* neighborhood, where shoppers used *Minangkabau* language when they bargained. Most of them had shops not very far from people who had come from the same village or were their relatives. Some of them, usually the new family members, got loans from their relatives who had already established their business either in Tanah Abang or Senen.

Minang women who had high school education managed to obtain a skill that enabled them to pursue their dreams. They could earn enough money and they could avoid doing low paid jobs. In fact, limited education did not pose difficulties for *Minang* women to get a job in *rantau*. Some women could still earn enough money for living.

Husna's migration experiences show that her first migration to Batam was not successful. Then she moved to Kalimantan. However, she could not make a living in Kalimantan. She decided to return to West Sumatra. Then on the way to West Sumatra, she stayed for a while in Jakarta. In Jakarta, she saw an opportunity to sell traditional food. She started as a street-vendor and walked around the city to sell *Lamang Tapai*. Husna cooked *Lamang Tapai* with her husband at home. The increased income from her small home industry enabled her to buy a motor bike with a mortgage loan. She drove around in the motorbike selling *Lamang Tapai*. The motorbike helped her to expand her business because she could reach distant areas from her house by riding her motorbike. Besides, selling *Lamang Tapai* around Southern Jakarta and Bintaro, she also received large orders for parties. Having a hand phone, moreover, enabled her to receive orders from people beyond her routine routes. Her bad migration experiences in the previous cities became the pebbles for her success.

A common tendency for many *Minang* women who had only high school education was to work for their relatives. In this context, 'helping' or working for relatives in their shops or working for people from their village is common. Besides the salary, they also received lunch and transportation allowances.

Life outcomes of women who had university degrees are significantly better compared to those with only high school education. Women who had university degrees could easily get a job that suited their expectations. The majority of those women felt happy with jobs that paid them well. Moreover, they also advanced to higher positions. Their promotion brought them more prestige and power.

Yanti who went to Jakarta with her friend had dreamt of working in Jakarta from her university days in Padang. Her first job was being a secretary but in 1993, she got a better job in a larger company as a secretary. In that office, she had to do translation that meant she had more responsibilities. Yanti's story shows that her educational achievement helped her to get a better job that was related to her education. In order to develop her skills in translation, she took some courses on legal translation and contract law. This meant she earned more money. Yanti explained, "I had to work harder not only because of my position as a translator but my husband was unemployed. He lost his job when the financial crisis in 1998 hit his office."

It was not easy for her husband to find a job and thus Yanti become the breadwinner of her family. This swift change in gender role became possible because they lived in a metropolitan city. Yanti had to work every day and often came home late. Her husband had to do the housework and go shopping and cook food. Jakarta with its urban and multi ethnic communities enabled him not to feel ashamed of his role.

Another example of the struggle of *Minang* woman in *rantau* is the life story of Parnis. She managed to finish her junior high school. She went to Jakarta after she got married with her *anak mamak* (a son of her uncle). In the beginning, she helped her husband sell bags in Tanah Abang. But it was not his business. Parnis said that she experienced the ups and downs of surviving in *rantau*. She also knew how her relatives in *rantau* worked hard to earn money and became successful.

The hardship in *rantau* turned into a sense of pride and happiness when they returned home with a smart look wearing the latest fashionable clothes. *Minang* women handled their hardships in *rantau* while pursuing their career. From the narratives examined, it became clear that university education contributed to the success of pursuing a career in Jakarta and Tangerang. Once the women felt comfortable with the job, they could decide to live in *rantau* permanently. This was observed for some women in our study.

Conclusion

Minang women left their home of origin as there was lack of jobs in the *nagari* (district) and in West Sumatra. They migrated as Jakarta and Tangerang provided the pull factors. The information and networks of earlier migrants also opened the paths for the women's journey to the capital city. The social capital of the migrants provided safety and also a sense of security to their parents. Effendi et.al (2010: 155) claim that friends and family members who had already migrated to urban areas gave villagers the information they needed to find jobs in the cities and adjust to urban life.

From the narratives it became clear that most *Minang* women in *rantau* were motivated by individual interests. They left the village with the permission of their parents and relatives. However, it is not hardship in the home of origin that underpins *Minang* women's decision to go *rantau* in Jakarta. The political uncertainties and lack of opportunities to get jobs were the driving factors. The range of opportunities that were available in Jakarta and Tangerang were channeled through their social networks. Thus, a move to *rantau* was to seek a better life.

Migration allowed the women to build their confidence and knowledge so that they were able to contribute to the prosperity of their family. Their success in *rantau* helped the welfare of their family as they could help their parents to get health care and support their younger brothers and sisters to obtain higher education or channel information so that they could get better jobs. In addition to that, they also helped their nephews and nieces to have better education if their parents were not able to support them. This outcome may be similar to other migrant women elsewhere as in the case of Filipinas, Sri Lankans and even other Indonesian women migrating out to work as domestic workers. However, in the case of *Minang* women migrating to Jakarta and Tangerang, the help extended to their kin family members by bringing them over to *rantau* for education and skill based occupations, rather than undertaking unskilled jobs. In this process of migration *Minang* women gained higher status and power instead of moving down in their socio-economic status.

The narratives reveal that *Minang* women's migration was generally influenced by their male relatives such as *mamak*, elder brother's migration or their *etek* (aunts). Most of the *Minang* migrant women made a decision of their own to migrate. Evidence shows that the presence of people they knew in *rantau* helped the women to feel secure in seeking temporary settlement. These social networks formed channels of opportunities for them to find a job and housing. The presence of their relatives in *rantau* was one of the pull

factors for *Minang* women to migrate. As Naim (1979: 283) notes "*merantau* has become an institution and part of social life and character of *Minangkabau* people".

For some *Minang* women who only had friends in *rantau* to provide temporary settlement for them, this became the stepping-stone to survive. The social networks provided them settlement and other useful information. The experiences of the migrants in this study showed that most of them used their relative's networks.

For migrants who never went to Jakarta, their anxieties about *rantau* could be ameliorated by having social networks. Some obviously migrated to Jakarta and Tangerang because they were attracted to the glamorous lights of the megacity. Like other Indonesians, *Minang* women obviously migrated as they wanted to have a better life. That means they hoped for a better job, salary and enjoying modern life. Although there were women who left to get away from their personal problems, such as love, death of their spouse, arranged marriage, they were supported by their relatives in *rantau*.

It became clear during the fieldwork that Minang migrant women did not have complete freedom in *rantau*. The social controls of the village and the community remained strong at certain levels. The stories narrated by respondents illustrated how Minang men usually had the role of a *mamak* and were supposed to protect and take care of their nieces and nephews and extend their responsibility to all females even outside their homeland. They felt uncomfortable when there were Minang women who broke Minang women's ideal image. Considering the existence of Minang people around Jakarta and Tangerang, especially men who continue to play their '*mamak*' roles, it is clear that Minang women's activities in *rantau* were monitored by Minang people who 'cared' about them. The presence of a 'protector' uncle or *mamak* among these migrants enabled them to become guardians of *adat* in *rantau*. This showed that Minang women were not culturally free and could not do things that might embarrass their extended family in Jakarta.

Most of the informants expressed the usual responses when they were asked why they left their village, such as, "What am I going to do? It is better to go to *rantau"; "I was* willing to change my life"; "I also wanted to do like others"; or "I also want to be like others". 'To be like others' meant 'to achieve success'. Success in *rantau* generally refers to the achievement of earning money, having material goods and a higher status. It is interesting to note that material goods for *Minang* people generally attracted the attention of other members in the village. Villagers estimate a migrants' material success by noting whether their parents' house in the home of origin has been renovated or enlarged. In addition to that, they take note of the nice clothes, gold ornaments and the car they drive when they visit someone's house.

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ORIGINAL RESEARCH:
Factors associated with low educational motivation among ethnic minority students in Vietnam

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Abstract

This paper discusses the issue of academic underachievement among ethnic minority students at secondary level in Lam Dong Province, Vietnam through an examination of the factors relating to low educational motivation and its consequences for academic performance. The findings revealed that ethnic minority students faced numerous challenges in gaining and/or maintaining adequate motivation for education. They did not enjoy sufficient conducive conditions for formal schooling, and their living environment was not appropriate for good educational performance. Other factors included limited parental engagement, low level of peer support, and above all low occupational outcomes that reduced the motivation to view education as a social ladder. As a result, they undervalued education, hardly accepting that education could result in positive outcomes in their life, and therefore they lacked motivational attitudes and aspirations for high educational performance.

Keywords: Academic performance, Educational motivation, Ethnic minority students, Vietnam.

Introduction

The issue of academic underachievement among ethnic minority students has attracted the attention of many researchers worldwide. It is widely accepted that factors affecting the educational attainment of ethnic minority students are diverse. In order to explore causes and offer explanations for the phenomenon, researchers have investigated various factors including academic ability, family structures, individual and familial aspirations, cultural differences, socio-economic background, language difficulties, self-esteem, prejudice, and lack of resources as explanations (Tomlinson, 1991).

Motivation for high educational achievement has emerged as one of the prominent factors affecting education performance of any child at any level and of any ethnicity. Wentzel and Wigfield (2009) highlighted the significant role of motivation in educational attainment of a child as the central feature of the success of a child at school. Findings from a meta-analysis of 109 studies conducted by Robbins, Lauver, Davis, Langley and Carlstrom (2004) also revealed that achievement motivation was the second best predictor of school performance among the nine broad sets of psychosocial and study skill factors tested in the research.

Motivation is defined as "an internal state that arouses, directs, and maintains behavior" (Woolfolk, 2001, p. 366). Motivation is usually described as consisting of two different categories namely intrinsic and extrinsic. Intrinsic motivation refers to the internal factors in individuals that inspire them to engage in certain activities for their own sake (Deci & Ryan, 1985). Thus, the tasks are performed for the performers' joy, interest or satisfaction. Extrinsic motivation, on the other hand, refers to the external reasons for performing the tasks. Extrinsic motivation occurs when performers believe that the tasks will lead to some distinct outcomes or consequences (Deci, 1971).

Traditional theorists look into emotive drives and needs together with rewards and punishments as the basis of school motivation. However, in the past decades, social cognitive theories have become dominant. Theoretical perspectives of motivation currently focus on self-belief, self-efficacy, achievement expectancies,

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attributions, and a sense of control over an individual's efforts, persistence and performance (Wentzel & Wigfield, 2009). Wigfield, Eccles, Schiefele, Roeser and Davis-Kean (2006) point out that the current theories on achievement motivation continue to highlight the child's beliefs, values, and goals as the prominent determinants influencing the motivation for achievement. The central constructs of the theories include self-efficacy, goals, interests, intrinsic motivation, and achievement values.

Self-determination theory (Deci and Ryan, 1985; Ryan and Deci, 2000) argues that people are motivated based on three fundamental psychological needs namely competence, relatedness, and autonomy. When fully satisfied, individuals are intrinsically motivated. If any of the needs are not satisfied, the engagement is not intrinsically but extrinsically motivated. Students will be more motivated in their learning if they have a supportive learning environment. They gain intrinsic motivation from their tasks or learning subjects, from their teachers' perception, from peer support or from social interactions. They can increase their motivation through internalization, the process of adopting and integrating the values, choice, attitudes, and standard into the learners' own identity (Ryan and Connell, 1989; Deci and Ryan, 2002; Reeve, Deci and Ryan, 2004).

Achievement goal theory, according to Covington (2000), views motivation as a drive, a need, or an internal state that lead individuals towards action. Goal theory focuses on the reasons why people make the choices to be engaged in certain outcomes or behaviors and avoid others, rather than focusing on what individuals try to achieve (Urdan & Maehr, 1995; Maehr and Zusho, 2009). The theory assumes that motivation is a process, and focuses on the learners' beliefs, perceptions, and strategies (Dweck and Leggett, 1988). Achievement goal theory suggests that students long for good academic performance having a desire to understand the course contents, to prove that they are knowledgeable about the tasks, and to show that they are smarter or have higher academic capacity than others (Ames, 1992; Harackiewicz, Barron, Pintrich, Elliot, and Thrash, 2002, Maehr and Zusho, 2009).

According to Murdock (2009), "motivation does not reside within people, but is a product of the person in context" (p. 434). Murdock believes that regarding the differences in educational achievement of students from different ethnic origins, researchers should use achievement motivation theories as a tool to understand the phenomenon, and should include investigations on the differences of levels of motivation variables and study the motivational processes among different racial and ethnic groups. Therefore to understand the school motivation of a particular racial or ethnic group, the context where the students of that particular racial or ethnic group shape and develop their school motivation should be taken into consideration. Murdock also adds that researchers should consider facets of societal dimensions of racial and ethnic status such as cultural values, cultural stereotypes, discrimination and economic conditions as they may explain some of the differences in the levels of academic engagement in school activities.

Based on a review of 140 studies on educational motivation of African Americans to explore the link between ethnic minority status and motivation, Graham (1994) found that African Americans had high educational expectations, perceived their beliefs in personal control, and enjoyed positive self-regard. The findings failed to support the assumptions that ethnic minority students lacked a motive for success, lacked confidence in internal or personal control of outcomes, and had negative self-views about their competence.

According to Chavous et al. (2003) ethnic minority children who experience strong ethnic identification and less social inequity feel that education is personally meaningful and relevant. These experiences become a motivational factor for students' engagement in education. Chavous et al. believe that there is a link between educational motivation and academic achievement. The youths who are aware of educational values, purposes, and meanings will have higher levels of school engagement, performance and persistence.

Portes andWilson (1976), in a study investigating the differences of educational attainment between black and white American students, found that black students who had higher self-esteem, higher educational aspirations and greater encouragement would have higher educational attainment than their white counterparts with other factors such as socioeconomic level, mental ability and parental status being similar.

In a study examining how cultural and structural factors influence ethnic differences in academic performance, Kim (2002) indicates that educational aspirations play a role in predicting children's academic performance. Aldous (2006) argues that a child regardless of ethnicity and background factors will get better academic attainments if his parents place higher expectations on him and if he has higher educational aspirations. Chavous et al. (2003) indicate a positive relationship between ethnic minority students' educational aspirations and their group identity. Centrality and ethnic group pride have some effect on future educational attainments of students such as high school graduation, and college attendance (Chavous et al., 2003). Chavous et al. also assert that the youths with educational purposes and capability of learning who recognize the value of education show better school engagement and better academic performance.

Ethnic injustice is found to be associated with the academic performance of ethnic minority children. Those experiencing ethnic injustice have higher levels of discounting and devaluing education which result in lower academic outcomes (Schmader, Major, and Gramzow, 2001). In a longitudinal research by Wong, Eccles and Sameroff (2003) to check the impact of discrimination on academic and psychological functioning, ethnic minority children who experienced discrimination from teachers and peers had lower self-concepts of academic ability, valued academic achievement less, had more mental difficulties, and lost the interest in education.

The World Bank (2009) reported that stereotyping and misconceptions about ethnic minority people were found to be negatively related to the educational attainment of ethnic minority students in the context of Vietnam. According to the World Bank (2009), stereotyping may lead to negative consequences on ethnic minorities, especially their self-esteem and self-confidence resulting in limited participation in the society.

A joint research of Vietnam's Ministry of Education and Training, UNICEF and UNESCO (2008) discovered that low self-esteem and confidence were among the numerous difficulties that prevented ethnic minority girls' transition from primary to secondary education. Ethnic minority girls were too shy, timid and embarrassed to communicate in the educational environment. The joint research found that the perception of the value of education was another factor hindering girls of ethnic minorities in accessing higher education, and it was associated with cultural practices, cost of schooling, and expectations of educational outcomes. When the schooling is costly and the outcomes are not realistic, people may question the value of education in terms of immediate survival and economic outcomes.

Background: The latest national census by General Statistics Office in 2009 shows the population of Vietnam at 86,024,600 with ethnic minorities accounting for around 14.5% of it. Among 54 officially recognized ethnic groups in Vietnam, ethnic Kinh is viewed as the majority and others are classified as ethnic minorities. The 54 ethnic minority groups classification has been widely accepted and used in schools and propagated by media since 1979 (Pham Ngoc Chien, 2005). The ethnic classification in Vietnam was undertaken largely on the basis of its usage in the Soviet Union and China (World Bank, 2009). In Vietnam's Draft Ethnic Law, determining the ethnic group was based on three criteria: language, material life and culture, and ethnic consciousness. In case there was no distinct language, an ethnic group could be identified if it had its own culture and ethnic awareness. Two indispensable elements of ethnic composition were culture, and ethnic consciousness. The classification no longer includes territory and economic life as identifying factors

for ethnic composition though they used to be considered in identifying the ethnic composition in Vietnam and in the Soviet Bloc (Pham Ngoc Chien, 2005).

The ethnic Kinh in Vietnam is assumed to have more advantages in accessing infrastructure, financial and health services, education and modern technology. They are supposed to have more political and economic power than other ethnic groups (Imai and Gaiha, 2007). The ethnic minorities, with their residential territory mostly located in remote, isolated, and rural areas, face more difficulties and challenges in accessing basic necessities of life such as electricity, roads, education, financial services and healthcare (World Bank, 2009). Ethnic minorities in Vietnam enjoy lower socio-economic advantages and living standards because they live in less productive areas characterized by difficult terrain with less access to good infrastructure, market economy and finance. They have fewer off-farm job opportunities and lower educational achievement (Wall and Gunewardena, 2000).

Lam Dong is a southern mountainous province in the Central Highlands of Vietnam. The number of ethnic minority groups living in the province in 2009 was 39 with 256,974 people accounting for 21.7% of the population. Out of the ethnic minority population, 71.7% were residential ethnic minorities or had their origins in the Central Highlands (Lam Dong Statistical Office, 2009). The targeted ethnic groups assessed for this study were the three largest indigenous ethnic groups in the province namely Coho, Ma and Chu-ru. They accounted for 68.7% of the ethnic minority population of the province and shared many identical characteristics such as residential areas, economic conditions, and some traditional custom practices.

Ethnic minority students in Vietnam are represented in greater number at lower levels of education but decrease rapidly at higher levels. In addition, they experience higher illiteracy rates, lower educational attainments, and higher school dropout as well as grade repeating rates. Motivation is one of the significant reasons leading to lower educational performance of ethnic minority children (Ormrod, 2006). As educational motivation plays such a significant role in the academic success of students, this paper explores the factors influencing educational motivation and thereby preventing ethnic minority students in Lam Dong Province from gaining higher educational attainments.

Methodology

A qualitative research method with semi-structured in-depth interviews, informal conversations, group discussions and observations was applied for the research. These qualitative techniques allowed the research issues to be explored in their natural settings and contexts considering social roles, images, identities and other cultural elements (Kalof, Dan and Dietz, 2008). The research was carried out in 2010 in the provincial capital city and three other districts of Lam Dong Province, Vietnam.

Purposeful sampling with maximum variation techniques was used to select the respondents at the sites. Purposeful sampling allows researchers to access information-rich cases for in-depth studying (Patton, 1990), and helps researchers in searching for informants with specific knowledge on the investigated topics (Lodico, Spaulding & Voegtle, 2006). Using the maximum variation sampling technique, the research was able to include a wide selection of informants with different perspectives and a wide range of characteristics.

The participants comprised of ethnic minority students at lower and upper secondary levels and ethnic minority children who had given up their education at secondary levels within the last three years and still were at the age of schooling. Other research informants included some ethnic minority students at tertiary education, ethnic minority parents, teachers, local administrators, and community leaders.

Before conducting the interviews, discussions and observations, those in charge of an authority such as school principals, family heads, homeroom teachers, and other participants were asked for consent and permission to conduct the field research in their schools or with their children, at the school campuses or in participants' houses. They were also informed about the purposes of the research and their rights to withdraw from the research anytime they wanted.

The overall aims of the research were to investigate the perceptions of ethnic minority children and their parents towards education and explore the causes leading to lower educational attainment among ethnic minority children. A total of thirty-nine individual interviews and group discussions were conducted. Additional informal discussions and observations were used to support and confirm the results gained from interviews and discussions. Interview questions, discussion topics and observations were developed based on the identified themes from the review of literature. During the interviews, probe questions were raised based on the response of the informants to expand the understanding of the issues. The themes of interviews, discussions, and observations focused on the difficulties and challenges that ethnic minority students faced in accessing education. Their responses to these difficulties, their perceptions towards education, and their suggested solutions for better academic achievement arose in the course of their answers. Interviews and group discussions were recorded based on the consent of the research participants. Where recording was not possible, field notes were taken.

A list of potential participants was created at the sites with the help of the people who knew the participants. Following the list, the researcher met the participants on the school campuses or at participants' houses to conduct interviews in the presence of local teachers or university students who also belonged to local ethnic minorities or lived in the communes. As ethnic minority people's social lives are normally limited within their living communes or their ethnic communities, they may hesitate to express their perceptions to strangers. The assistance of local teachers or ethnic minority university students who share the same ethnic groups and are familiar with the informants helped the informants to have more confidence and trust in expressing their own opinions.

After the interviews had been conducted, all the data were transcribed and coded. Transcriptions were closely examined to elicit underlying themes and for a comparison of similarities and differences, and research items relevant to ethnic minority students' motivation and its impact on educational achievement of ethnic minority students were picked up.

Findings and Discussion

Lack of belief in the value of education: According to Chavous et al. (2003), students having positive attitudes towards education believe that education is meaningful, relevant and related to their future success. Such positive attitudes will help them to engage and persist more in education, have higher completion rates, and pursue further education. The majority of ethnic minority households in this study lived in poverty and had to struggle for the basic needs of their daily life. They considered the benefits and value of education in terms of jobs and income needed to escape from hunger and poverty. However, ethnic minority people perceived education as failing to meet their expectations. They hardly believed that education could be of any value. A male teacher with ten years of teaching experience at a secondary school and close relationships with ethnic minority students said:

"Ethnic minority students do not believe in the value of education. They do not believe that education will bring benefits to their lives. Some students said to me that they wanted to study but graduation would not bring any change. They must return to farming while others who dropped out of school early have already got married and have better lives."

Lam Dong is a rural province in which 46.9% of the gross economic output in 2010 came from agriculture and 62.3% of the total working population in 2010 worked in agriculture, forestry and fishing (Lam Dong Statistical Office, 2012). As off-farm jobs are limited, to have a job an individual needs other skills and conditions than academic skills and certificates. Several ethnic minority parents revealed in group discussions that they needed social status, close connections with authorities, or the financial ability to obtain jobs for their children. Some parents thought that investment in their children's further schooling at tertiary level would be a loss:

"If they go to college or university to study, they need to stay far from home; the cost will be higher and we cannot afford it. Some families here took bank loans or sold their farmland to support their children's tertiary education. After graduation, they could not find jobs and could not pay back the bank loans. They had to return to the farming jobs, but they did not have their farmland anymore."

Ethnic minorities commonly live in remote and mountainous areas, participate less in social activities, and have limited access to positions in the local government. Thus, they inevitably have less social status and limited connections. These bring them more difficulties and challenges in looking for jobs.

Inadequate career orientation: Career limitations and difficulties also exerted influences on ethnic minority children's career goals and their educational plans. Data from interviews indicated that children of ethnic minorities did not have clear plans for their future careers or education. Their choices of future careers did not require a high level of education. They showed a preference to low skilled careers such as driving, motorbike repairing or gardening.

Some local teachers said that ethnic minority students commonly did not have clear ideas for their future. They normally managed to finish high school level, stayed home with their parents, participated in the family's farm work, and then got married. Although some students did have dreams of future careers, they thought that it was quite impossible for them to pursue those dreams. What they expected was simply to know how to read and write the national language.

Some children of low-income families undervalued education because of their economic difficulties. Children from well-off families did not consider education to have higher value either, because according to them education was not necessary; if their families had big farmlands, they would have comfortable lives without education.

Schools do have career orientation programs for students but they are not well organized. Students do not know what to do if they cannot afford tertiary education. Students feel confused in selecting areas of studies or institutions for their vocational or tertiary education. A local teacher expressed his concern about the career guidance at schools saying that the career guidance should do more to help students in the region by giving them get clear ideas about their future careers.

Lack of confidence and belief in the function of the educational system: The school system is believed to have either a negative or a positive influence on students' attitudes towards their education. A good

educational system can stimulate its students to be more engaged in their schooling. Vietnam's national educational system is seen as an examination-oriented competition. An ethnic minority informant explained:

> "To do well at school is not an easy job and we almost have no time to practice. The programs are not updated. They do not create the feeling of excitement and motivation to acquire knowledge but only to cram knowledge into students' heads. We learn so much knowledge but we do not know what this knowledge is for and how to apply it in reality."

The quality of education in Vietnam is considered backward and fails to meet the needs of society. Education has lost the confidence of society. The quality of the college degree, masters or doctorate is being questioned. Some local governments officially refuse to recruit students graduating from several modes of the educational system including in-service training or continuing education. A teacher informant explained why her students did not believe in the function of the educational system:

> "The pressure of getting high achievement in education is very high. Teachers are forced to give their students good marks to show high performance and to meet the pre-planned targets. The problems of false teaching, false learning and false degrees have become more and more prevalent. Students do not know what to do with their knowledge gained at school after graduating."

Low parental engagement and low aspiration towards children's schooling: Family backgrounds have strong influences on children's motivation for schooling especially when parents have positive attitudes and high aspirations for their children's education (Coleman et al., 1966; White, 1982; Eldering, 1997). Children coming from families that put high value on education will have higher motivation for education. Parents who are more assimilated in the society, better integrated into the labor market, better educated and higher capable in the national language are more positive about their children's education (Eldering, 1997). Aldous (2006) shares the same arguments when indicating that parental occupation is a positive factor affecting children's educational attainments. Furthermore, children perform better in their education if they have aspirations towards education and get support from their parents.

Most of the parent informants interviewed agreed that education is necessary for their children. They hoped that education could help their children to be literate and have off-farm jobs in the future. They said that they felt sad and despair when their children got poor educational attainments or were reported to violate school regulations. They added that removing their children from school was their last choice. Usually, conditions beyond their ability or their children's wishes terminated schooling of their children. Although they realized that education was important and necessary for their children, they did not know what to do to help their children to have better educational attainments. Some even neglected their children's education. They thought that educating children was the schools' duty and teachers' work. What they had to do or could do was to send their children to school and pay the school fees. They normally did not check their children's learning and could not help their children in home assignments.

Some parents never attended the regular teacher-parent meetings. In some cases when the teachers went to convince the parents to let their children to continue their education, the answers were:

> "Never come here again. He (the student) does not want to go to school. It is useless. He does not want to study. Let him stay at home. We have a big farmland."

Some parents encouraged their children to drop out of school to help families in the farm work. These parents believed it was good if students dropped out of school and did something to help the families:

"Going further to tertiary education costs a lot of money. We cannot afford it. They should stay home to find jobs. If they continue their study, they still cannot find jobs after graduation. However, during this time if they stay home they can make much money."

There were several reasons for the low engagement of ethnic minority parents in their children's schooling. Poverty prevented some households from affording the school fees and other school expenses. Also ethnic minority people lived in remote and isolated areas and the isolation made them value education as less important. Low off-farm job opportunities made education seem as not having direct benefits. Furthermore, the average level of education of the ethnic minority adults was low; most of them did not finish elementary level of education, so they themselves undervalued education and thought basic literacy was sufficient.

Peer teasing and inducement: A close and positive relationship with peers can create a great source of motivation. A negative one or discrimination by the majority to the minority students, on the other hand, can discourage ethnic minority students from active engagement in educational activities. Ogbu's theory on strong ethnic identity and educational attainments claims that ethnic minorities may have oppositional attitudes towards what is considered as belonging to dominant groups. When the culture is different, children's schooling may be influenced. Students may not perform well academically because they do not want their ethnic peers to identify them with dominant ethnic group members (Ogbu, 2004, 2008). Fordham & Ogbu (1986) believe that such identification has a negative impact blocking them from gaining high academic success, because children with good educational attainments are considered as "acting white" and less loyal to their peers. These stereotypes of thinking can have negative results in school and lessen children's aspirations for good educational achievement (Delgado-Gaitan, 2007).

Ethnic minorities in Vietnam have been seen as backward, less developed and less civilized than the majority by the majority-centered worldview (World Bank, 2009). These misconceptions and stereotyping has led to negative attitudes of the majority students towards their ethnic minority peers. There are reports of students being teased or insulted for their different appearance, for their lack of fluency in Vietnamese, for their lower educational attainments, or for their more physical maturation.

An ethnic minority student of upper secondary school admitted that ethnic minority girls in her class were teased by classmates because they were more physically mature. Ethnic minority students live far from the commune centers so they normally enter school at older ages. They normally attend the first class at seven or eight years old. When reaching lower and upper secondary schools, they are more physically developed than others in their classes. This makes them feel embarrassed and less confident.

There was not any evidence of peer pressure during the fieldwork. There was not a single case reported by students that they were forced by their friends to lower their own education achievement or to give up schooling. However, cases of inducement from out-of-school students to within-school students were reported. As they did not put high value in education, within-school children were less eager for education, and easily followed their out-of-school friends to join some other activities rather than attending schools. Children could help their families in the farm work after giving up school. Furthermore, they could work on land, spray insecticide or water the coffee plantations for others and earn around VND 100,000 a day (1 USD was equal to 19,494 VND in August 2010). As a result, they had money to buy new clothes or footwear, play billiards or

go to coffee shops. Those who were in school but had low educational performance thought that dropping out of school would be more beneficial and enjoyable.

Limited teacher–student relationships: Teachers' stereotyped views, negative attitudes and low expectations are some of the factors affecting the ethnic minority students' educational attainment. Teachers' negative attitudes may lead to less favorable treatment and less communication with their students. This makes the students have lower academic motivation and self-esteem. Consequences, they underachieve in their educational attainment (Foster, 1992). Several local teachers admitted that some teachers showed biased behavior towards ethnic minority students. This was expressed in class interactions. Teachers paid less attention to ethnic minority students. Some even abandoned ethnic minority students. They required the students to sit silently in the class without giving them any attention. The abandoned students gradually felt disgusted with school, hardly participated in the class activities, got poor educational performance, felt being discriminated and eventually dropped out. The problems between students and teachers existed due to the physical and social distance among teachers and students, differences in cultural sensitivity, lack of extra-curricular activities, and lack of encouragement and praise from teachers.

In interviews, students revealed that they did not have cordial relationships with their teachers. They could not share their ideas and their feelings with their teachers. They rarely interacted with their teachers outside the classrooms. There were not many social activities for students and teachers to join. In class, teachers often criticized and scolded whenever students were late for school, did not prepare for lessons, disturbed other students during the lessons, and had poor examination scores.

Further discussion: Education has a well-established link with life outcomes, and can enhance life satisfaction and well-being (Chavous et al., 2003). However, each individual may have different perceptions of education, may value education differently, may place different emphasis on educational goals, belief and interests, and may differently invest time and energy to gain high educational achievement. The question of how to motivate students to concentrate on education, work purposefully and learn for the sake of their own benefits has been raised by Bentley (1998). According to him, students may believe that school cannot prepare them for their lives. Bentley (1998) argues that education fails in its main purpose of preparing students to face the challenges in their life. Education just teaches knowledge to the students but does not teach them how to learn and fails to equip students with what they need for their future.

Motivation is among the most influential determinants affecting students' schooling performance (Hidi & Harackiewicz, 2000) and the heart of teaching and learning process (Maehr & Meyer, 1997). Ormrod (2006) highlights the influences of educational motivation on the way students behave towards their learning.

As noted by Vygotskian, the academic failure or success of any child or any ethnic minority group is not caused by the characteristics existing in the child or in the ethnic minority group, but is based on historical and social conditions. Moreover, educational success cannot be considered as the outcome of educational sector alone. Educational success is a process that requires the contributions of multiple activity settings in which children are involved. When a child or a group of children fail in academic achievement, this failure can be considered as a systemic failure. It is not the failure of any individual or a group of individuals. It is the failure of the society in creating the appropriate conditions for effective learning (Trueba, 1988). Thus, the problems of low school motivation and low educational attainment of ethnic minority students in Lam Dong Province, Vietnam, were not the fault of students themselves but may represent the systemic failure arising from many factors related to families, the educational system and the society.

Conclusion

The research findings showed that numerous factors had an influence on the academic motivation of ethnic minority students. The first and foremost explanation for inadequate academic motivation of ethnic minority students was the lack of a belief in the value of education. Ethnic minority people perceived education as failing to meet their expectations, that education was hardly meaningful, relevant and related to their future success. Secondly, career orientation did not provide students with sufficient information for a future career or education after finishing secondary education.

Another cause for low educational motivation of students was the lack of confidence and belief in the function of the educational system. The national educational system was seen as an examination-oriented competition based on theories but not practical. Students felt they did not know what to do with such knowledge and how to apply this knowledge in reality. They lost their confidence and belief in the function of the educational system.

Many cases in the interviews and discussions showed that ethnic minority students rarely interacted with teachers and were less likely to express their ideas in classes. Some were reported to sit silently in class without doing anything. They did not disturb others, but also did nothing much either, such as taking notes, listening to teacher, or giving responses when being called upon. Moreover, ethnic minority children seemed to be quite satisfied with their mediocre performance at school. They felt bored with educational programs and for them knowing how to read and write was sufficient and education did not bring any benefit or value.

Low engagement and low esteem of ethnic minority parents towards their children's schooling was therefore another reason affecting the educational motivation of ethnic minority students as parents' positive attitudes and high aspirations on their children' schooling were found to be closely associated with students' academic performance. Living in poverty, in remote and isolated areas, and in low paying off-farm jobs with low levels of education could explain the low engagement of ethnic minority parents in their children's schooling.

Peer teasing and inducement also contributed to the low educational motivation of ethnic minority students. Ethnic minority students reported to be teased or insulted for their different appearance, for their lack of fluency in Vietnamese, for their lower educational attainments, or for their more physical maturation.

A limited teacher–student relationship was another possible explanation for low academic motivation of ethnic minority students in this study. The limited relationship was due to the physical and social distance between teachers and students, differences in cultural sensitivity, lack of extra-curricular activities, and lack of encouragement and praise from teachers. Factors affecting educational motivation of ethnic minority students in Lam Dong Province, Vietnam are explained in detail in the following sections.

To summarize, the educational underachievement of ethnic minority children at secondary levels of Lam Dong Province was associated with many factors among which the lack of motivation for educational achievement was one of the primary factors. Undervaluing education and lacking educational belief, goals and interests in education were some of the reasons for poor educational performance that might have been the result of limited outcomes of education, parental perceptions and their lack of engagement in their children's education, and the attitudes of teachers and majority students towards ethnic minority students. Consequently, ethnic minority students get bored with classes easily, are less motivated for higher achievement, participate in school activities passively, hesitate to review and prepare for schoolwork, and are more likely to give up school when feeling ashamed because of low educational attainments or repeating classes.

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ORIGINAL RESEARCH:
Logistics development at Dalian port to revitalize Northeast China

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Abstract

The development of logistics in Dalian port is analyzed from the perspective of its impact on revitalizing Northeast China, using both quantitative and qualitative methods. The logistics development targets, achievements and the main problems of Dalian port in the revitalizing period so far, are discussed. The discussion focuses on the investment, port areas, transportation development, logistics information systems, development of logistics enterprise, and the development problems of Dalian port since the implementation of the revitalization plan in 2003. The analysis includes an examination of the growth rate over time and reflects on the possible causes of the observed fluctuation in data. The study makes suggestions for the future development of Dalian port based on an objective assessment of the achievements so far and the problems that existed in the port city at the beginning of the revitalization period.

Keywords: Dalian port, Logistics development, Northeast China, Revitalization plans.

Introduction

Dalian port gradually became the leading hub port for Northeast China after it was founded in 1899, and since 1984 has been a significant node for connecting the domestic and foreign markets and resources in Northeast China. Northeast China, including Liaoning, Jilin and Heilongjiang provinces and the eastern part of Inner Mongolia, provide the economic input for Dalian port. Almost 95%, 67% and 70% of the material and goods from Heilongjiang, Jilin Province and eastern Inner Mongolia, respectively, are transported by sea via Dalian port (Yang, 2010). The main cargo transported via Dalian port includes petroleum (47.4% of gross throughput), grains and crops (16.1%), and general merchandise (16%). The annual throughput of metallic and nonmetallic ore, iron and steel, coal, and chemical fertilizer has reached 2.5 million tons.

As a very convenient gateway to the Asia Pacific region, Dalian port is an ideal port for transportation of cargo to the Far East, Southeast Asia, North America and Europe. The only 'free trade zone' and free trade area in Northeast China are also located in this port. As Sun (2005) stated, with its unique regional advantages and natural deep water conditions, Dalian port is enabled to undertake 70% of the import-export goods and 90% of the container transportation of Northeast China.

The cargo throughput of Dalian Port in 1997 was only 70 million tons, but it reached 171 million tons in 2005 (Chen, 2007) and 249 million tons in 2008. In 2007, there were nearly 300 ports in more than 160 countries that were linked to Dalian port (Ao and Song, 2007). By 2011, 84 of the world's top 500 enterprises had invested in 179 projects in Dalian. By the end of 2011, Dalian port possessed 38 port-based enterprises and 225 berths, including sixty-one 10,000-ton berths. The total length of the berths is 30 kilometers with an annual throughput of 155 million tons and a maximum berthing capacity of 300,000 tons. In 2011, the throughput reached 267 million tons (The People's Government of Liaoning Province, China, 2012). In addition, Dalian port is taking over 90% of the container transportation of the region. Because of the important status of Dalian port in international logistics in East Asia, doing research on its recent development is necessary.

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Methodology

This study includes a review of data and information regarding the development of logistics in Dalian as well as an analysis of its role and impact on the economic revitalization of Northeast China. Most of the data used in the study is secondary data collected from the yearbooks published by the Statistical Bureaus of Liaoning Province, Dalian City, Shanghai City, Guangdong Province and Shenzhen City. Besides, data has been collected from China Ports Yearbook published by China Ports Magazine Company.

The collected data cover the period from 2003 to 2012, with the year 2003 being at the start of the revitalization policies in Northeast China. The China State Council (CSC) and National Development and Reform Commission (NDRC) have adopted 'Revitalizing Northeast China' as a national strategy since 2003. In 2005, a 'Plan of Revitalizing Northeast China' (PRNC) was promulgated by CSC which stressed speeding up the establishment of Dalian International Shipping Center. The construction of port facilities was strengthened to further increase foreign investment in Dalian port. The policy of support focused on large ports, container terminals, and industries adjacent to Dalian port. In 2007, CSC ratified the PRNC as the most important official plan for development in the region.

The main purpose of the development plan was to accelerate the revitalization in Northeast China and promote the regional economy. Based on the plan, Northeast China has faced new development opportunities and challenges. This study is focusing on the accomplishments as well as challenges and issues faced in the course of implementing this development plan. The collected data were charted to show the level of progress through the years 2003 to 2012, and further analyzed to determine the probable causes and reasons.

Analytical methods were used for discussion of the data in various logistics dimensions whereby descriptive data are fed into the analytical model based on the logistics development plan in Dalian port following the implementation of PRNC. The discussion benefits from the observations and results of the four field research sessions conducted by the researcher at Dalian port in the period between 2010 and 2012. The study not only focuses on the absolute number but also the growth rate in order to examine the development situation of Dalian port.

Findings and Results

The gross fixed assets investment from 2003 to 2012 in Dalian Port adds up to 82.84 billion RMB (Figure 1). With financial support, Dalian port has developed at an unprecedented rate in the last 10 years; the establishment of an international shipping center in the area of 'one island and three bays' has already started. The investments focus on the establishment of Dayaowan Container Terminal (DCT). Figure 1 demonstrates three development phases that are recognized by the trend of the fixed assets investment in the last 10 years: the early phase from 2003 to 2005, the stable phase from 2006 to 2008, and the adjustment phase from 2009 to 2012.

In the early phase the investments to the fixed assets of Dalian port were increasing continually. The large investment was the key support of the infrastructure construction of the port, highway and railway terminal. In 2003 and 2004, the main development items for Dalian port were the construction of the ore terminal and oil wharf in Nianyu Bay, both with 300 thousand-ton berths. The new port facilities increased the throughput capacity of berths to 33 million tons. The land reclamation project in Dalian Free Trade Zone

(DFTZ) was also completed. The investment in 2004 and 2005 effectively prompted the establishment of Dayaowan port and the highway network project in Dalian. The construction of the Railway Ferry Terminal of Yan-Da Ferry Railway, which is from Dalian Port to Yantai Port (in Shandong Province), was launched in 2004. The main development items in 2005 included 41 shipping projects and the 2 berth constructions. The railway ferry terminal of Yan-Da Railway was completed in this year. The Dalian highway network project, including Tuyang highway, Dayaowan highway, and the connecting line between Shenyang-Dalian highway and Dandong-Dalian highway, was launched in 2005, with a total length of 85 kilometers.

Fixed Assets Investment
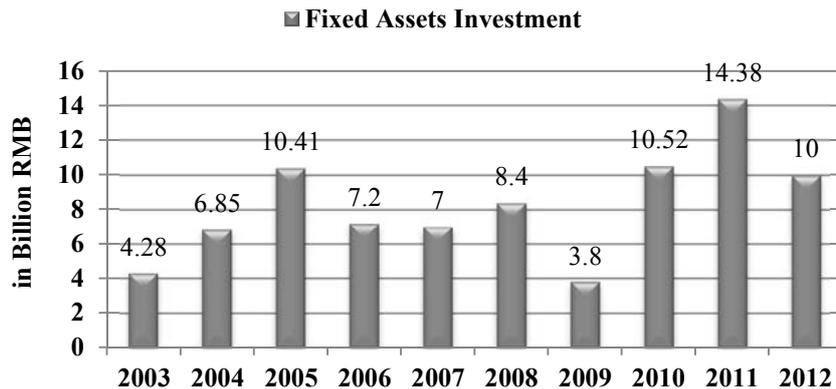
Figure 1: Investment in Dalian port, 2003-2012. (Source: made by author based on data from Statistical Communique of Dalian National Economic and Social Development 2003-2011)

The trend of the investments to the fixed assets of Dalian from 2006 to 2008 was stable. Though the investments during those three years were less than that of the previous three years, the projects of the logistics infrastructures in Dalian port were progressing smoothly. In 2006, 48 shipping projects began to be constructed in Dalian as well as 23 new berths with a throughput capacity of 50 million tons per year. The main part of the Dalian highway network was completed in this year. In 2007, 12 new berths with a throughput capacity of 14 million tons per year were brought into service. Dalian port signed an agreement of strategic cooperation with Yingkou and Jinzhou Port in 2008. The integration of port resources made a breakthrough in Liaoning province. Twelve new berths with a throughput capacity of 13.29 million tons per year were brought into service.

Influenced by the Lehman Shock, the fluctuation of the investment in 2009-2012 was wide in range. Though the economic situation was very critical, Dalian port still kept developing in those years. The investment was affected by frequent explosion accidents in the affiliated oil wharfs and factories of China National Petroleum Company (CNPC) Dalian branch in Nianyuwan bay and Dalian city in 2010 and 2011. Moreover, the damage of the breakwater of a P-Xylene (PX) Plant, a chemical plant, led to a parade and demonstration by citizens of Dalian in August, 2011. The accident also caused anxiety about the hidden dangers of the PX plant.

In 2009, the projects of the No. 22 oil wharf at Nianyuwan port and the main part of the roads to relieve port congestion at Changxing Island and Dayaowan port were completed. Some new port projects in Dayaowan Port Area, including 4 berths of the container terminal, a new 300 thousand-ton oil wharf and specialized ore terminal and the projects of new port areas in Zhuanghe and Lushun, were all accepted and put into service simultaneously. As a result, the throughput capacity for the whole Dalian port increased by 30 million tons per year.

The investment for Dalian port shook off the shadow of the Lehman Shock in 2010. In 2011, the investment for fixed assets of Dalian port kept increasing and new infrastructure projects were launched. By the end of the year, 16 inland depots were built in Dalian and 25 BCTs, with at least 60 runs per week, were opened to service. The shipment of Sea-Railway intermodal in Dalian Port in the year reached 380,000 TEU, which implied an increase of 5% compared with that in 2011.

Development of the logistics system in Dalian: Dalian port has been transformed into a 'third generation port' which focuses on intermodal transportation, and a centre for distribution of resources. The cooperation and integration between Dalian Port and other port groups of Jinzhou, Yingkou and Dandong formed a new group of ports which are centered on Dalian port. The development of the logistics network in Dalian Port has formed strong support for the revitalization in Northeast China (Figure 2). According to data at the end of 2011, Dalian Port owned 196 berths, 78 of which were 10-thousand-ton class berths. The port facilities follow advanced standards and play a crucial role in the transportation of domestic and foreign resources. There are six shipping centers in Dalian port. There are some specialized port areas in the 'one peninsula and three bays' area, which focus on the construction of Dayaowa Port Area, Dalian Bay Port Area, Nianyu Bay Port Area, Ore Port Zone, and Beiliang Port Zone, etc. Specialized deep water port areas have been set up for containers, petroleum and liquid chemicals, ironstone, break-bulk, commercial automobiles, groceries, passenger, Ro/Ro vessels, and international mail ship.

Figure 2: Logistics Network of Dalian Port. (Source: made by author based on the Report on the Development of Dalian Logistics Industry 2010)

The main port areas in Dalian include Bei Liang Grain Transshipment Center Port, located at the southwest bank of Dagushan Peninsula, with an annual transshipment capacity of 12 million tons; Nianyu Bay Port Area, located at the southeast bank of Dagushan Peninsula and comprised of 2 crude oil docks and 5 product oil docks, with an annual handling capacity of 50.71 million tons; Dayaowan Port Area, which is the largest container transportation and transshipment base in Northeast and North China, located at the north bank of Dagushan Peninsula, with an annual throughput of 2 million TEUs; and Dagushan Ore Transshipment Center, located at the south bank of Dagushan Peninsula. The dock is the largest unloading berth available in China with the most advanced facilities, and can anchor all bulk ore vessels from all over

the world. Dalian Bay General Groceries Functional Zone, located at Dalian Bay Port Area, has an annual throughput capacity of 14 million tons. The passenger and Ro/Ro Cargo port areas are focused on international cruise service transforming into international shipping and business service centers as well as a port information service center. The Lushun-Yantai-Dalian Train Ferry Terminal is located at the Yangtouwa port area of Lushun and is an important hub ferry terminal of the train and truck transportation between Northeast China and North China.

Maritime Transportation: Dalian port has developed cooperative relations with more than 300 ports in over 160 countries and has opened 80 oceanic container lines. The gross throughput of Dalian port went up 24.02 tons during the years 2003 to 2012 (Figure 3), 12.53 tons of which were handled in the 11th 'Five-Year Plan' period. The investment of fixed assets has strengthened the capacity of maritime transportation of Dalian port.
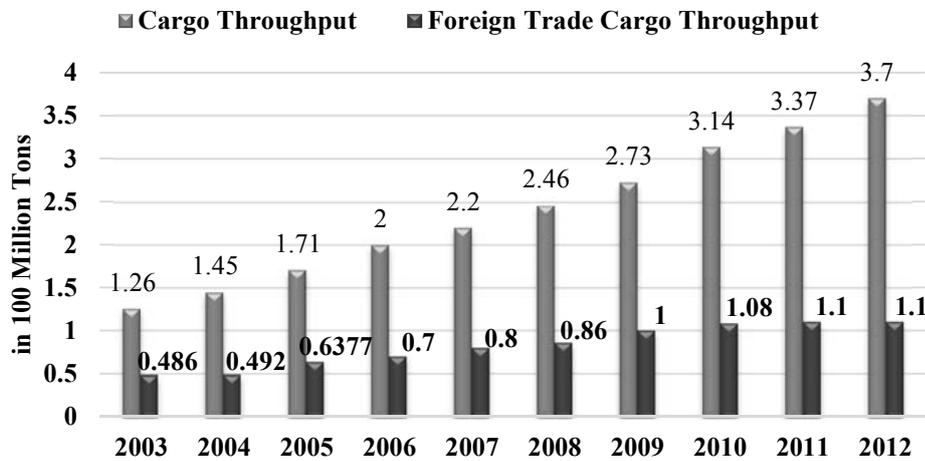
Figure 3: Cargo throughput and foreign trade throughput of Dalian port, 2003-2012. (Source: made by author based on Statistical Communique of Dalian National Economic and Social Development 2003-2012)
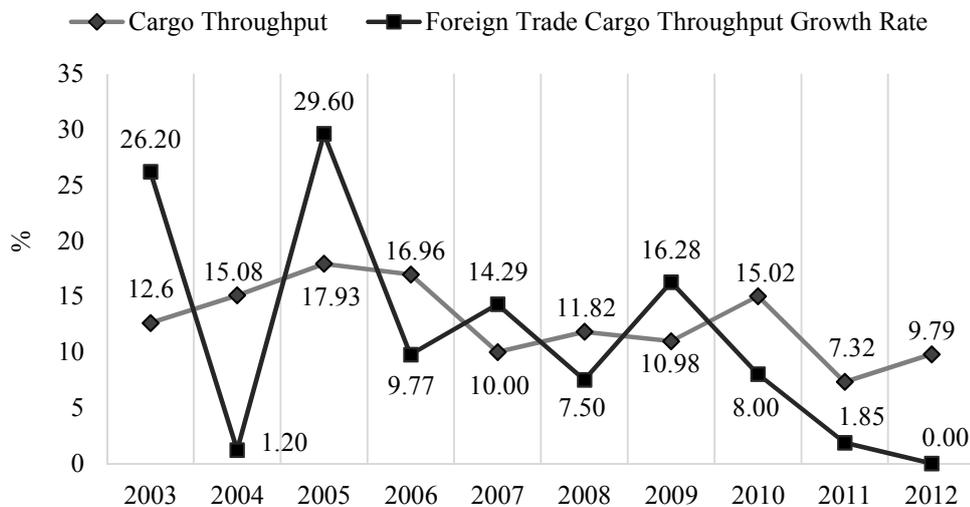
Figure 4: Growth rate of cargo throughput and foreign trade throughput in Dalian port, 2003-2012. (Source: made by author based on Statistical Communique of Dalian National Economic and Social Development 2003-2012)

Both the throughput growth of cargo and foreign cargo of Dalian port were affected directly by the Lehman Shock in 2008, and although the rates increased in 2010 and 2011, they were both affected again by the frequent explosions in CNPC Dalian branch in 2010 and 2011. Obviously, the safety of the hub port has been a serious problem for its future cargo transportation.

The total container throughput of Dalian port has gone up to 42.4202 million TEU, 21.387 million of which were handled in the 11th 'Five-Year Plan' period; the container throughput kept increasing from 2003 to 2012. Affected by the Lehman Shock, the growth rate was only 1.1% in 2009. But Dalian port shook off the negative influence rapidly in 2010. The local government put out a policy for offering subsidies to the shipping companies, railway transportation and the owners of the cargo in order to attract container vessels to berth alongside Dalian port. The policy maintained the growth of the container throughput from 2010 to 2012. By the end of 2010, Dalian Port owned 273 shipping vessels and the gross shipping capacity reached 6.5 million tons. The gross shipping cargo in Dalian Port from 2003 to 2011 reached 62.335 million tons, 39.93 million tons of which were in the '11th Five-Year Plan' period. The gross freight transport cargo by shipping in Dalian port increased from 2003 to 2011 reaching 30.95 million tons/Km, 20.49 million tons/Km of which were in the '11th Five-Year Plan' period.
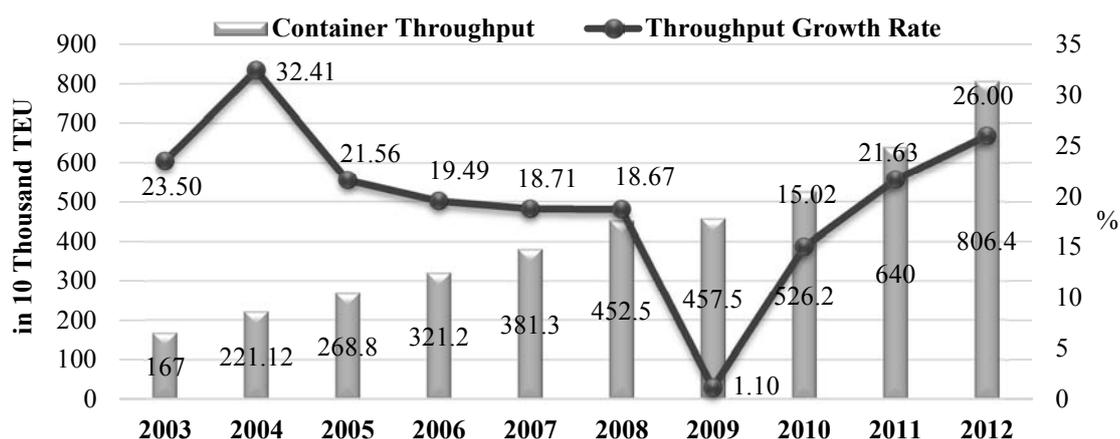
Figure 5: Containers throughput of Dalian port, 2003-2012. (Source: made by author based on Statistical Communique of Dalian National Economic and Social Development 2003-2012)
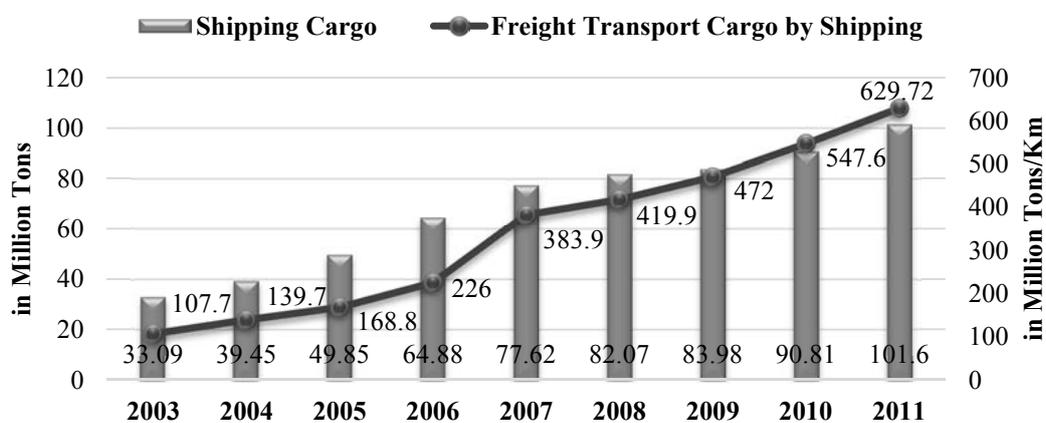
Figure 6: Shipping cargo and freight transport cargo by shipping at Dalian port, 2003-2011. (Source: made by author based on Dalian Statistics Year book, 2003-2012)

The cargo transport growth rates sharply increased in 2007 (Figure 7) because some infrastructure projects in Dalian Port were completed and put into service in this year. Under the influence of the Lehman Shock, the growth of both indices in 2009 was less than other years. The indices kept increasing after the shock because of the policy of subsidies.
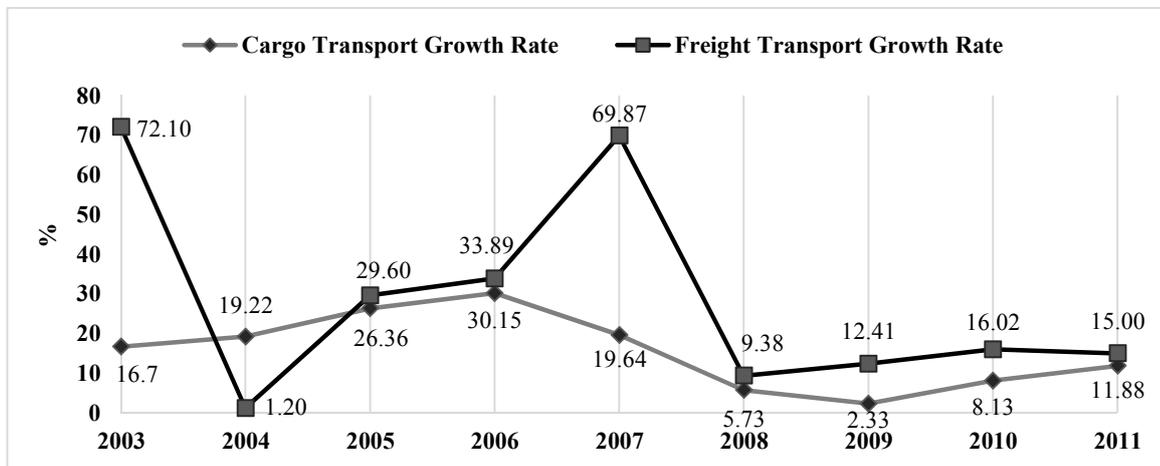
Figure 7: Growth rates of shipping cargo and freight transport cargo by shipping at Dalian port, 2003-2011. (Source: made by author based on Dalian Statistics Year book, 2003-2012)

Air Shipping: The cargo and mail throughput in Dalian International Airport (DIA) from 2003 to 2012 reached to 1279.6 thousand tons, 662.9 thousand tons of which were in the '11th Five-Year Plan' period (Figure 8). The fluctuation of growth from 2003 mainly focused on the construction project of DIA and the Lehman Shock.
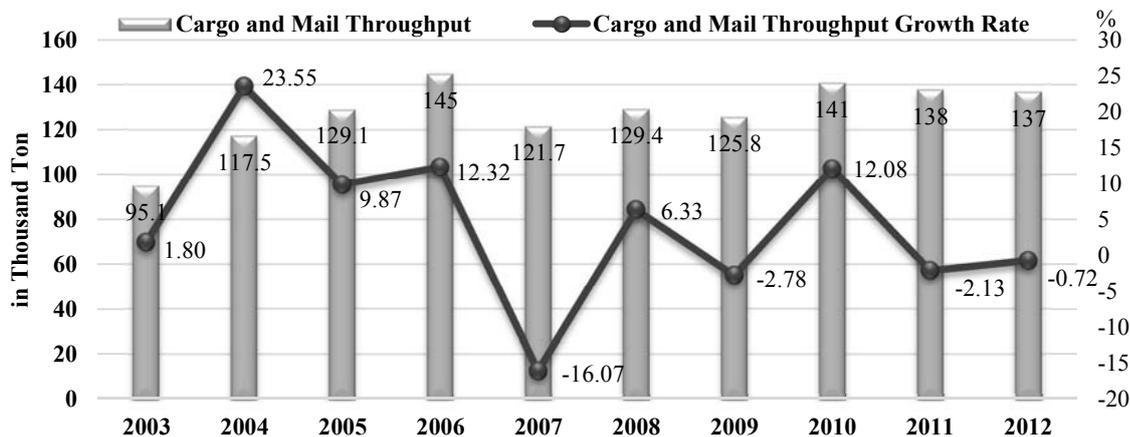
Figure 8: Cargo and Mail Throughput of Dalian International Airport, 2003-2012. (Source: made by author based on Statistical Communique of Dalian National Economic and Social Development 2003-2012)

The flights of DIA kept increasing from 2003 to 2012 (Figure 9). The growth trend indicates a rapid growth of flights in DIA in the first two years of the revitalization because the implementation of the plan brought more business opportunities to Dalian port. The growth from 2005 to 2009 was slow but steady. The Lehman Shock also affected the flights via DIA. The growth rate of flights was decreasing sharply in 2010 and 2011 because of the frequent explosion accidents by CNPC Dalian branch and the hidden danger of the PX Plant. Confidence over the safety in Dalian was recovered in 2012.
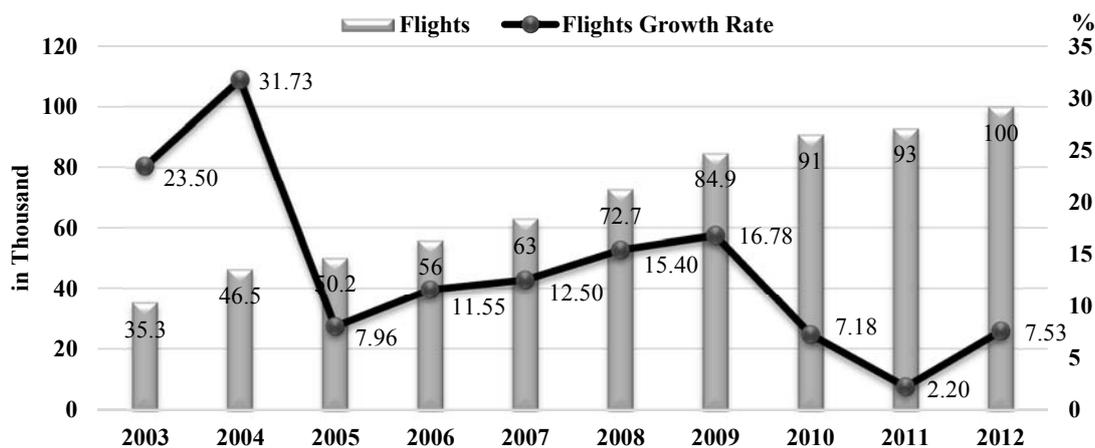
Figure 9: Flights of Dalian International Airport, 2003-2012. (Source: made by author based on Statistical Communique of Dalian National Economic and Social Development 2003-2012)

Affected by the Lehman Shock, the international lines kept decreasing in 2009 and 2010 (Figure 10). However, driven by the policies of expanding domestic demand by the China Central Government, the domestic lines still increased after the Lehman Shock. The international lines increased in 2011 because of the recovery of the global economy but decreased in 2012 due to the weakening relationship between China and Japan; China stopped some air lines to Japan in this year.
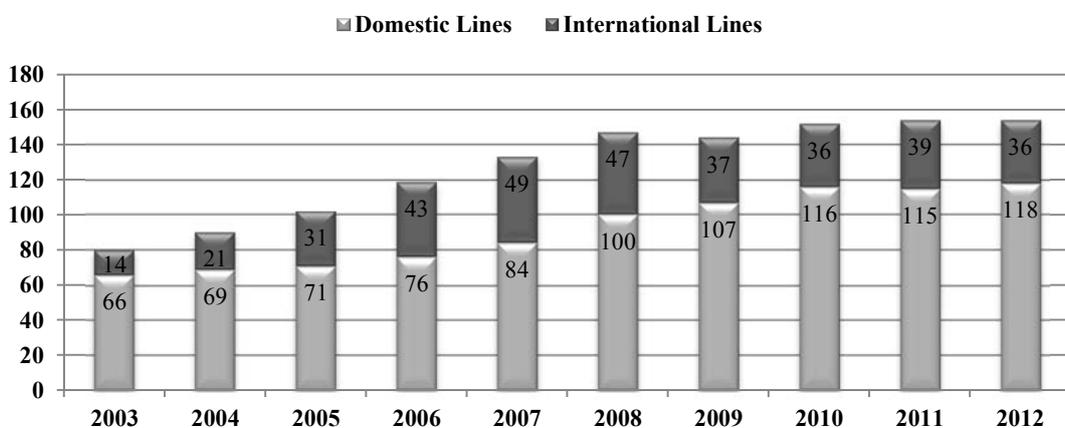
Figure 10: Domestic & International Lines of Dalian International Airport, 2003-2012. (Source: made by author based on Dalian Statistics Year book 2004-2011 and Statistical Communique of Dalian National Economic and Social Development 2003-2012)

Highway Transportation: There are 512 town-class roads in Dalian City, with a total length of 6,000 Km. Gross cargo transferred by highway in Dalian from 2003 to 2010 reached 1709.41 thousand tons, 984.51 thousand tons of which were in the 11th 'Five-Year Plan' period (Figure 11). The gross freight transport cargo by highway in Dalian from 2003 to 2011 reached 117.64 million tons/Km, 71.54 million/Km of which was in the 11th 'Five-Year Plan' period. The trend of the cargo transported by highway indicates it kept increasing steadily from 2003 to 2008 (Figure 12), but decreased in 2009 due to the Lehman Shock and the increase in the cost of highway transportation. The transportation by highway in Dalian City went up slowly due to the high charge of using the highways. The trend of the freight cargo transported by highway indicates that it kept increasing from 2003 to 2011, and it had a sharp increase in 2009 because Dalian port signed an agreement of strategic cooperation with Yingkou and Jinzhou ports in 2008.
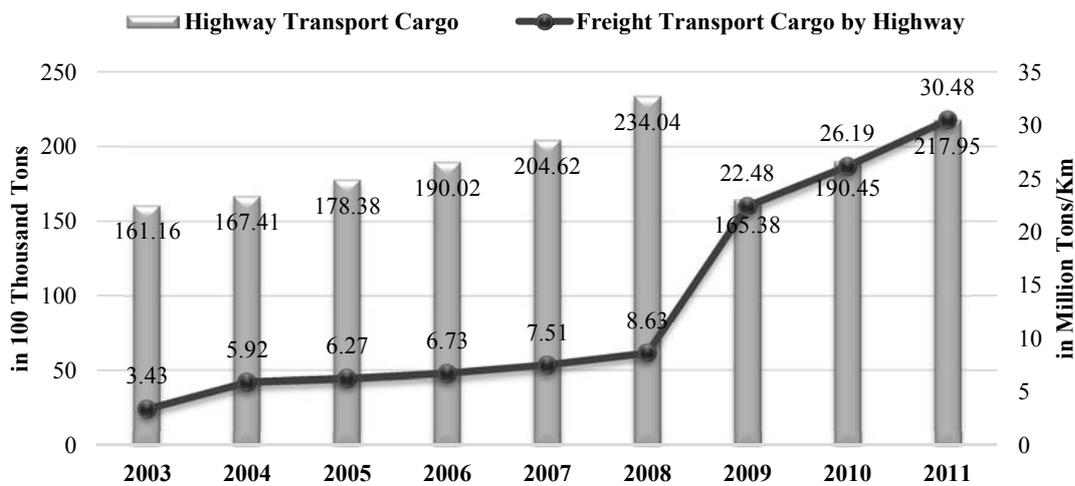
Figure 11: Highway Transport Cargo and Freight Transport Cargo of Dalian Port, 2003-2011.
(Source: made by author based on Dalian Statistics Year book, 2004-2011)
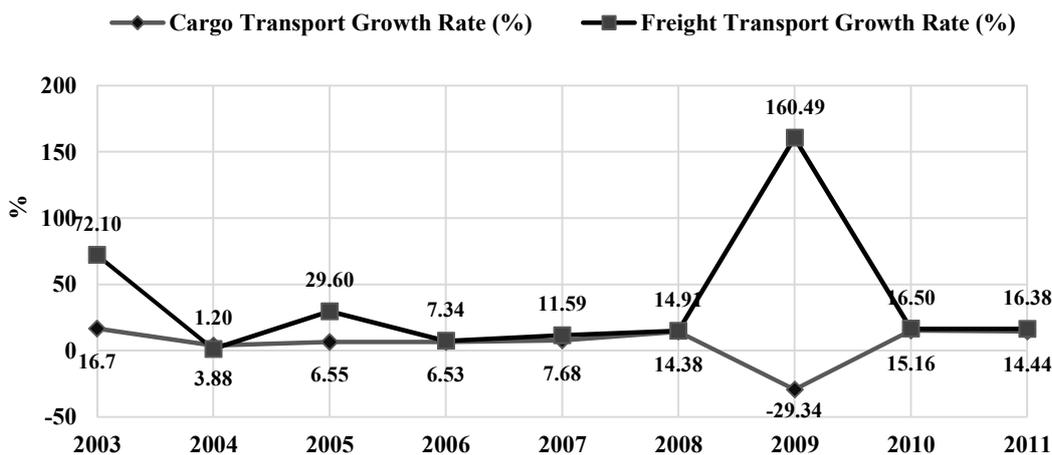
Figure 12: Growth Rate of Highway Transport Cargo and Freight Transport Cargo of Dalian Port, 2003-2011.
(Source: made by author based on Dalian Statistics Year book, 2004-2011)

Railway Transportation: By the end of 2010, there were 55 train stations in Dalian City and 17 operating railways; the length of the railways in Dalian **a**rea reached 1,385 Km. The gross cargo transferred by railway in Dalian from 2003 to 2011 reached 219.4 thousand tons, 116.9 thousand tons of which w**ere** in the 11th 'Five-Year Plan' period. The gross freight transport cargo by railway in Dalian from 2003 to 2011 reached 159.83 million tons/Km, 90.96 million tons/Km of which were in the 11th 'Five-Year Plan' period (Figure 13).

The freight transport by railway was increasing in most of the revitalization period except in 2009 due to the influence of the Lehman Shock. Though the frequent explosion accidents by CNPC Dalian branch and the hidden danger of the PX Plant affected the growth of railway cargo transportation in 2011, the general trend indicates that freight transport by railway has become a crucial transportation method in Dalian port.
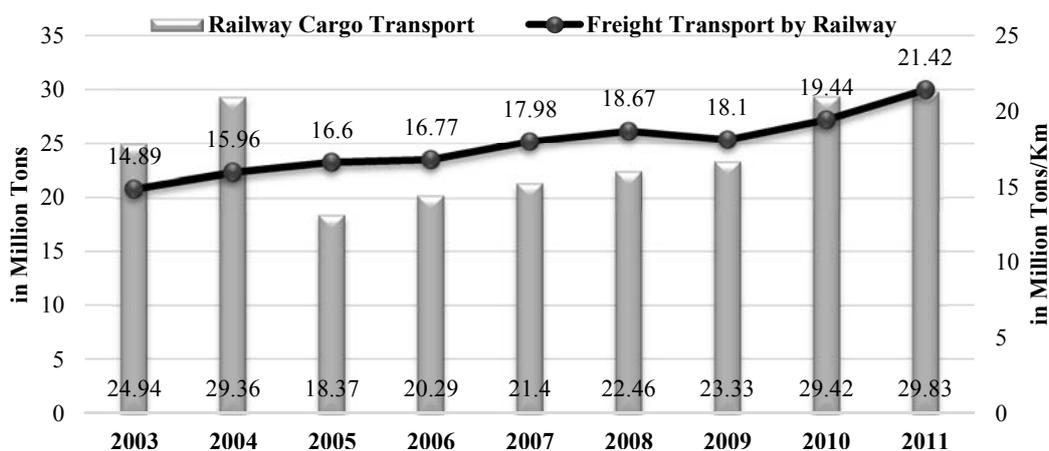
Figure 13: Railway Transport Cargo and Freight Transport Cargo of Dalian Port, 2003-2011. (Source: made by author based on Dalian Statistics Year book, 2004-2012)

The index shows a decrease in 2005 (Figure 14) because the output of products such as coal, crude oil, iron and grain, mainly transported by railway, decreased in this year throughout China. The energy and grain base in Northeast China also suffered from the impact. The cargo transported by railway kept increasing from 2005 to 2010. The sharp increase in 2010 was caused by the increased cost of highway transportation in 2009.
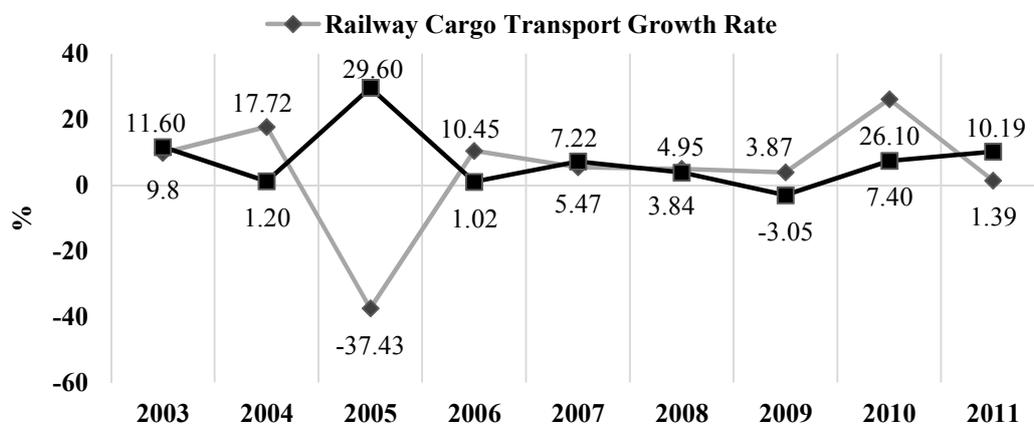
Figure 14: Growth Rate Railway Transport Cargo and Freight Transport Cargo of Dalian Port, 2003-2011. (Source: made by author based on Dalian Statistics Year book, 2004-2012)

Intermodal Transportation: Intermodal transportation is the core of logistics development in Dalian port, as combined transportation is prospering worldwide. To establish a modern transportation system, Dalian port invested in the Circle Lines of Bohai Sea and some inland depots (also called dry port) in the hinterland of Northeast China with the cooperation of the railway department in the 11th 'Five-Year Plan' period. Northeast China and the Bohai Economy Zone are connected as a whole by these projects, and so a new logistics network has been set up in North China. The intermodal transportation system consists of shipping, railway, and train ferry, and increases the container throughput and transshipment of Dalian Port, whose containers transported by intermodal transportation reached 100 million in the 11th 'Five-Year Plan' period. The costs of logistics have decreased and transportation in the region has become more efficient.

Warehouses: Warehouses provide support for logistics and play a pivotal role in the development of port cities. As an important part of logistics in Dalian port, warehouses have developed substantially in the 11th 'Five-Year Plan' period. The warehouses in Dalian port are classified into 8 types, for storing grain, mechanical, electrical, and chemical industry, refrigeration, ore and textile. The main functions of the warehouses include transfer, storage, distribution and bonded storage.

According to data, by the end of 2010, there were 277 warehouse and storage enterprises in Dalian port, and the area of all the warehouses was 9.112 million m^2 with a storage capacity of 9.76 million tons. The throughput of the warehouses in 2009 was 44.2 million tons and the revenue reached 2.58 billion RMB. Many warehouse enterprises which focus on storage have been upgraded to become comprehensive logistics services enterprises.

Development of the Logistics Information System: Information-based logistics is one of the marked characteristics and an inevitable trend for the development of modern logistics in the electronic business era. An efficient logistics information system for Dalian port was set up in 2009; the system includes the Intermodal Transportation Service System of Northeast China, Liaoning Electronic Port System, Dalian Harbor IT Service Center, Express Port Community Interface (EPCI), Automatic Identification System (AIS), Electronic Declaration and Control System, Express Quarantine Service System, and Dynamic Tracing System for Railway and Shipping. More than 120 kinds of electronic messages were applied to the system by the end of 2010. The systems are used by logistics departments, customs, trade and finance systems and electronic government. The systems serve as information platforms for port supervisors, shipping companies and forwarder enterprises in all process of port logistics. The information systems have strengthened the port management and streamlined the customs clearance. They have also has improved the quality of port service. The information about port, shipping, railway and supervision of Dalian Port now can be shared with other logistics cities in Northeast China.

Some logistics enterprises in Dalian Port also developed information-based logistics systems in order to promote their business efficiency. 'Digital System for Dalian Port' developed by PDA obtained financial support from the Chinese National Development and Reform Commission and passed the national acceptance check. The 'Freight Management System' developed by China Shipping Logistics Company is an information system that focuses on the logistics business in Dalian port. At the same time, COSCO developed a comprehensive warehouse management system. According to data, there are more than 3,500 logistics enterprises in Dalian Port (Table 1), more than 200 of which are large and medium enterprises.

Table 1: Classification of Logistics Enterprises in Dalian Port

Classification	Number of Enterprises	Share of Total (%)
Logistics	1,561	44.6
Forward Shipping	710	20.3
Highway Transportation	700	20
Warehouse	264	7.6
Shipping	117	3.3
Express	57	1.6
Port	56	1.6
Information Development	35	1
Total	3,500	100

Source: Created by the author based on the Report on the Development of Dalian Logistics Industry 2010

Some logistics enterprises in Dalian port have started using information technologies such as Global Positioning System (GPS), Geographic Information System (GIS) and Radio Frequency Identification (RFID) to make the logistics business more efficient.

Foreign and Joint Enterprises: Foreign logistics enterprises are important to the logistics development in Dalian port. In the '11th Five-Year Plan' period, some prestigious international logistics enterprises have entered Dalian port (Table 2). Furthermore, some Chinese enterprises established joint logistics ventures with international logistics enterprises (Table 3). There were 115 foreign logistics enterprises and 53 joint logistics enterprises from Hong Kong, Taiwan and Macau in Dalian port by the end of year 2010. The strategies, management styles, logistics technologies and enterprise culture of these companies brought new business conceptions to the development of logistics enterprises in Dalian Port.

Table 2: Main foreign logistics enterprises in Dalian port

Enterprise	Nationality
Maersk Line Shipping Container Co., Ltd., Dalian Branch	Denmark
Nippon Yusen Kaisha (China), Dalian Branch	Japan
Hanjin Shipping (China), Dalian Branch	Korean
Orient Overseas Container Line Logistics, Ltd. (China), Dalian Branch	Hong Kong
Dalian Sankyu International Logistics Co., Ltd.	Japan
Dalian Kintetsu Logistics Co., Ltd.	Japan
CMA-CGM China, Dalian Branch	France
TNT Dalian Branch	Netherlands

Source: Created by the author based on the Report on the Development of Dalian Logistics Industry 2010

Private logistics enterprises account for 90% of total logistics enterprises in Dalian port. A great many private logistics enterprises have emerged in recent years as powerful groups of the industry. Many of them have been restructured into Third Party Logistics (TPL) enterprises. Some of them have applied the solutions of logistics not only into the supply chain management and the optimization of customers, but also the whole logistics business processes.

Table 3: Main joint logistics enterprises in Dalian port

Enterprise	Nationality of investors
Nittsu Sinotrans Logistic Dalian, Ltd.	Japan
Dalian Alps Teda Logistics Co., Ltd.	Japan
Dalian YIDU-JIFA Cold Logistics Co., Ltd.	United States
Dalian Jilong Logistics Co., Ltd.	Sweden
Dalian Rieck Henco Int'l Transportation Co., Ltd.	Germany & Hong Kong
Dalian Schnellecke Logistics Co., Ltd.	Germany
Dalian Singamas International Container Co., Ltd.	United States

Source: Created by the author based on the Report on the Development of Dalian Logistics Industry 2010

Discussion

Dalian plays an important role in the economic development in Liaoning province, where the port is located. From 29 ports along the coastal economic zone in Liaoning Province, 14 are located in Dalian area, and

Dalian owns 48% of total ports in the province (Li, 2010). In the 11th 'Five-Year Plan' period (2006-2010), 36.92 billion Yuan (RMB) was invested in the fixed assets of Dalian port. The throughput of the cargo imported and exported via Dalian port in the period reached 1.25 billion tons. The revenue of logistics in Dalian port grew vigorously in the same period such that in 2010, the gross revenue of Dalian logistics reached 1,450 billion RMB; the added value of Dalian logistics was 47.29 billion RMB, which accounted for 9.5% of the annual GDP in Dalian. Overall, the rapid development of logistics in Dalian port has promoted the economy of the region. These achievements strongly support the revitalization of Northeast China.

However, there are still problems in development of Dalian port. Though logistics in Dalian port has developed steadily in the last 10 years, there are serious issues in its future development, such as logistics structure imbalance. There is a lack of the sense of service in both logistics enterprises and local governmental agencies. Obstructions in fair competition and win-win cooperation are problems that need to be solved. Also there are problems in tax policies, transportation management, administrative efficiency and the human resource management of logistics. Problems of arbitrary and unreasonable charges, tax policies, land policies and transportation that affect the development of enterprises have not been solved for a long time. Also, the socialization of logistics is not in accordance with the economic development in Dalian port. In addition, logistics technologies have not been applied extensively in the development of logistics in the region; compared with the international advanced shipping market, Dalian port still lags far behind.

High annual GDP has been the development target in all China. In 2005, Dalian planned for a 13% growth target in the average annual GDP in the '11th Five-Year Plan' period, much higher than the national target of an average annual 7.5% growth in GDP in the same period. Dalian port introduced petrochemical programs in order to accomplish the target, but problems with the security management system of CNPC Dalian branch caused many explosion accidents and created serious problems (Table 4). The resources of the port are over developed in Dalian area due to the construction project's benefit for the growth of GDP.

Table 4: CNPC Dalian Branch Petrochemical Accidents (2010-2011)

Date	Accident	Cause of the Accident	Impact
2010.7.16	An explosion in the crude oil pipeline destroyed a 100 thousand crude oil tank of CNPC Dalian International Storage Company at Dalian New Port.	Too much oxygen in the pipeline caused by ZC-PCD with strong oxidizer, which was being injected into pipelines after the crude oil unloaded.	Polluted seawater over 430 square km^2. Most of the coastal sea life was polluted by the oil.
2010.10.24	Residue crude oil at the bottom of the destroyed tank (on 7.16) caught fire when it was torn down.	Residue crude oil	Air Pollution
2011.7.16	A 10 million class atmospheric-vacuum distillation unit of CNPC Petrochemical Dalian branch caught fire.	Leakage of the three-distillation heat exchanger.	Air Pollution
2011.8.29	No. 875 diesel tank of CNPC Petrochemical Dalian branch storing 800 ton diesel caught fire.	A static fire of the pipeline between the two diesel tanks that took place during the operation	Air Pollution
2011.11.22	No. 31 and 32 crude oil tanks of CNPC Petrochemical Dalian branch, storing 100 thousand tons crude oil, caught fire.	The seal curtains of the tanks were struck by lightning.	Air Pollution

Source: created by the author based on data from http://news.xinhuanet.com/fortune/2011-11/24/c_111192315.htm

Petrochemical industries should not be developed near the living areas. Dalian area is rich in coastal resources for establishing ports. The current petrochemical and chemical plants should be relocated to safe areas, and CNPC should strengthen the security management of crude oil storage and observe a safe distance between the oil plants and living areas as a key factor for establishing new petrochemical plants. From the standpoint of sustainable development, the resources of the bays and coastal areas in Dalian area can be divided to three types: coastal areas that may be developed for logistics and economic development in the next 50 years; coastal areas that may be reserved for at least 50 years in order to leave potential areas for future generations with advanced concepts and technologies; and coastal areas that may be protected from any development for ecological equilibrium and environmental protection in the area.

A main problem of logistics in Dalian port is that transport corridors between the port areas and urban traffic system are not developed well and the resources of traffic in Dalian are not integrated well, which make the network run with low efficiency. An insufficient demand for TPL may be the primary reason that the logistics has developed slowly in the whole Northeast China. This is because the latent demands of logistics in the region have not been transformed into market demands. The heavily socialized system of logistics has not kept abreast with economic development in the region. Therefore, the supply capacity of specialized logistics is not enough for the development of international trade. A considerable number of small scale logistics enterprises exist in Dalian Port, while the presence of too many small logistics enterprises is not conducive to the development of logistics.

One major difficulty in establishing a regional international and market-based logistics system is the weakness of the administrative system at all levels of government. Compared with the Chinese Southeast coastal area, the reform in Northeast China is relatively backward. To promote the development of logistics integration and establish an open and effective logistics system, government interferences need to be minimized, relying instead on both the market and enterprises. The development of logistics in the region needs guidance and coordination from the market; governmental services and policies cannot meet the development needs of contemporary global logistics.

To help solve these problems, there is a need to enhance the education and training of human resources in international logistics on both logistics management and logistics engineering in order to offer qualified personnel to both governmental departments and enterprises. At present, the amount and structure of logistics human resources in Dalian port does not fit with the needs of transformation and upgrading of the logistics in the port. Though many logistics graduates are engaged in logistics in Dalian port in recent years, qualified personnel for logistics development is still insufficient. Highly qualified people are needed in Dalian to help design the logistics network, optimize the logistics process and deal with the shipping business.

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ORIGINAL RESEARCH:
Mining text data to analyze students' portfolios on team-teaching for language education

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Abstract

The purpose of this research was to examine the potential benefits of text mining in the field of language education and its effectiveness in extracting meaningful information from student portfolios in order to provide useful feedback to students and the educational community. The analysis was focused on an examination of the similarities and differences in awareness on teamwork concepts between Japanese and non-Japanese students in an international university located in Japan, especially in terms of their recognition of merits and demerits of team teaching and their attitude towards problem solving. Correspondence analysis was used along with a series of text mining tools. The results of the analysis are discussed in regards with possible future applications of data mining in language education.

Keywords: Correspondence analysis, Data mining, Japanese language, Language education, Team-teaching, Text mining.

Introduction

Using of portfolio is a well-known educational tool for keeping record of individuals' learning efforts and processes. However, it is difficult to gain meaningful information from such textual data especially in cases where the amount of data to be examined is massive. To overcome such a problem, application of text mining may prove to be useful because it enables us to extract quantitative indices from textual data that can later be analyzed statistically. The information obtained may provide meaningful information back to the educational community, as well as to the students and the instructors.

Therefore, I decided to focus on one of the important questions regarding student preferences in teamwork. To achieve this goal, I created online questionnaires and requested students to review their group performances from the perspective of communication. The data I collected were written by two groups of students, Japanese and non-Japanese, and consisted of the following three types of answers to three questions in a questionnaire:

1. The positive aspects of team-teaching (G),
2. The negative or/and problematic aspects of team-teaching (B),
3. The efforts that students made to solve the problems and the difficulty that they encountered during team-teaching (P).

By collecting the described data, I attempted to answer the following questions concerning the experiences of the students with team-teaching:

1. What do Japanese and non-Japanese students think are the merits and demerits of team-teaching?
2. What efforts and improvements did they make to lessen the demerits of team-teaching?
3. Are there any similarities and differences between Japanese and non-Japanese students, in recognition of the merits and demerits and in their attitude toward problem-solving?
4. Can text mining on student portfolios be a useful tool to extract meaningful information from such unstructured textual files, and in this case, can it provide feedback to students and instructors as well as educational institution as a whole?

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Methodology

The subjects for the analysis were students who had enrolled in the course titled 'Teaching Japanese as a Second Language' at Ritsumeikan Asia Pacific University (APU) located in Beppu city, Oita, Japan. One hundred and two students had registered for this class between the fall semester of 2010 and the spring semester of 2012. These students were required to submit two questionnaires per semester, and during this period, the total number of questionnaires collected was 254, with a response rate of 78.4% (Table 1).

Of the total respondents, 62.4% were Japanese and 37.4% were international students who had an advanced knowledge of Japanese and were mainly from Asian countries (e.g., Korea, China, Thailand and Vietnam). The average number of Japanese characters per questionnaire was 406 for the Japanese students and 305 for other nationalities. While the average numbers differed based on the question, i.e. G (merits), B (demerits) or P (improvements), it can be said that non-Japanese students in general wrote about 25% less than Japanese students (Table 1).

Table 1: The average number of Japanese characters written for each questionnaire

Students	Number	Average number of Japanese characters			Average number of characters per questionnaire	Total number of characters of the data
		Text G	Text B	Text P		
Japanese	159 (62.6%)	173	106	126	406	64,544
Non-Japanese	95 (37.4%)	135 (78%)	80 (75%)	90 (71%)	305 (75%)	28,962
Total	254					93,506

I used text mining to explore the data. By applying the text mining method, I could divide the text within the sentences into parts-of-speech, such as verbs, adjectives, nouns, and adverbs. Once this was completed, numerical indices could be extracted from the text and used for statistical analyses.

The software 'Tiny Text Miner' (hereafter TTM) was used to analyze Japanese textual data, an open-source software that can be easily downloaded from the Internet. Additionally, 'Mecab', a parts-of-speech and morphological analyzer, also open-source, was used for processing the text data. After applying 'TTM/Mecab' to the data, the following 6 output files were obtained:

ttm_1: Word frequency distribution

ttm_2: Word frequency distribution（maximum one occurrence per sentence）

ttm_3: Cross tabulation of the occurrences of words against grouping variables

ttm_4: Cross tabulation of the occurrences of words against grouping variables (maximum one occurrence per sentence)

ttm_5: Cross tabulation of words against words

ttm_6: Cross tabulation of words against texts

The second tool was 'correspondence analysis' (hereafter CR analysis), a statistical visualization method for examining the associations in a two-way or multi-way contingency table. According to Statsoft, in "How to analyze simple two-way and multi-way table, correspondence analysis":

"The goal of a typical analysis is to represent the entries in the table of relative frequencies in terms of the distances between individual rows, and/or columns in a low-dimensional space."

The CR analysis was done using a module within 'R', another open-source software for various statistical computations. The next section will provide detailed procedures on how I applied TTM and CR analysis to each file (G, B and P data) along with the results obtained from the analyses.

Findings and Results

To collect data for the research, I had created online questionnaires using a software for conducting surveys. Students were asked to respond to the following three questions after each team-teaching session was over:

(1) What do you think are the merits of team-teaching? (G)

(2) What do you think are the demerits of, and/or the problems of your team-teaching? (B)

(3) What did you do to lessen the difficulty and/or to solve the problems? (P)

An example of the textual data collected after each survey is given in Table 2.

Table 2: A sample text excerpted from the online survey

	A	B	C	D	E	F	G	H
1	J	誰かが意見を述べると、必ず誰かがそれに対しての意見を言っていた						
2	J	お互いが打ち解けられて、仲良く意見を交換できたところ。初めての						
3	J	打ち合わせの時、無駄話をせずに、効率よく話せたと思う。						
4	J	グループワークで最も良い点は協力による相乗効果だと思います。私						
5	J	1番は、1人1人が本当に協力し合えた模擬授業であったことです。時間						
6	J	全員が積極的にグループワークに参加していた点です。2人づつでペ						
7	J	みんな一様に自分の意見をもってミーティングに参加していました。						
8	J	チーム全員が非常に協力的で、話し合いも意見を出し合いながら、全						
9	J	自分の担当パートを決めることで、みんな責任を持たないといけなく						
10	J	グループでよかった点として5つあげることができます。それは各ペ						
11	J	良かった点は、3つあります。一つは、授業中に役割分担をしてパー						
12	J	早いうちからメンバーそれぞれに役わりをあてて取り組んでいたので						
13	J	それぞれの役割に別れて分担して作業をやった分効率よくは出来たと						

The TTM was applied and the results were recorded, from which the most frequently used words were extracted. First, I prepared three types of input data (G, B, P) by saving each file separately in a 'csv format' (comma separated values). Then, I processed each file using TTM and used the following output format:

Output format: ttm_3

Parts of speech for output: nouns (hereafter N), adjectives (hereafter A) and verbs (V)

Optional files: none

After processing, a list of verbs, adjective and nouns was obtained. Among the three lists, file G had the highest number of words extracted (Table 3).

Table 3: Number of the words extracted from each file

File name	Total number of words extracted
File G (Merits)	1540
File B (Demerits)	842
File P (Improvements)	1334

As an example, the word frequency distribution for file B is provided in Table 4:

Table 4: Excerpt from the word frequency distribution for file B

	A 語 "Word"	B 品詞 "Parts of speech"	C 品詞細分類 "Detailed classification"	D Foreign	E Japanese
2	する "do"	動詞 V	自立 "independent"	50	102
3	思う "think"	動詞 V	自立	42	41
4	時間 "time"	名詞 N	副詞可能 "could be a	30	52
5	できる "be able to do"	動詞 V	自立	18	61
6	ある "there be (for things)"	動詞 V	自立	22	47
7	ない "not"	形容詞 A	自立	22	33
8	なる "become"	動詞 V	自立	16	34
9	難しい "difficult"	形容詞 A	自立	17	32
10	人 "person/ people"	名詞 N	一般 "regular"	15	33
11	問題点 "problem"	複合名詞 CN	複合名詞	17	28
12	授業 "simulation class"	名詞 N	サ変接続 "can be us	9	35
13	ミーティング "meeting"	名詞 N	一般	9	29
14	グループワーク "group work"	複合名詞 CN	複合名詞	13	25
15	グループ "group"	名詞 N	一般	12	25
16	全員 "all members"	名詞 N	一般	5	31
17	メンバー "members"	名詞 N	一般	13	21
18	問題 "probnlem"	名詞 N	ナイ形容詞語幹 "car	13	18
19	集まる "come together"	動詞 V	自立	10	20
20	いる "there be (for people)"	動詞 V	自立	12	18
21	意見 "opinion"	名詞 N	サ変接続	8	21
22	みんな "all members"	名詞 N	代名詞 "pronoun"	10	17

In the next stage, lists were made from synonyms and unnecessary words. Based on a dictionary of synonyms, a synonym list was made for each G, B and P file, based on 'A Japanese Lexicon (CD-ROM)' (*Nihongo Goi Taikei*). The list of synonyms for file G is shown in Table 5.

Table 5: A list of synonyms for file G

		Word	Synonym 1	S2	S3	S4	S5	S6	S7	S8	S9	S10	S11	S12
1	J	文法	敬語	尊敬	謙譲	他動詞	自動詞	使役	受身	受け身	もらう	あげる	くれる	説明
	E	grammar	polite expression	honorific	humble	transitive verb	intransitive verb	causative	passive	passive	receive	give	give (to me)	explanation
2	J	皆	人	メンバー	メンバ	皆さん	みんな	グループ	全員	チーム	クラス	~たち	~達	仲間
	E	everyone	people	member	member	everyone	everyone	group	all members	team	class	we	we	fellow
3	J	意見	考え	発言	アドバイス	コメント	アイディア	アイデア	案	策	提案	発想		
	E	opinion	thought	statement	advice	comment	idea	idea	draft	policy	suggestion	idea		
4	J	ミーティング	話合い	話し合い	話	打ち合わせ	相談	話し合う	言い合う	meeting	集まる			
	E	meeting	discussion	discussion	talk	meeting	consultation	discussing	discuss	meeting	getting together			
5	J	協力	協調	助け合える	助け合う	助け合える	サポート	フォロー	手伝い	お手伝い	助ける	ヘルプ	手伝う	
	E	cooperation	coordination	can help each other	help each other	can help each other	support	follow	help	help	help	help	help	
6	J	自分	私	個人	各自	一人	ひとり	自身						
	E	myself	I	individual	each one	one person	one person	myself						
7	J	役割	部分	分担	担当	パート	セクション	分ける						
	E	role	part	role sharing	responsibility	part	section	sharing						
8	J	出す	だす	出る	でる	出し合う	言う							
	E	contribute	contribute	come out	come out	contribute jointly	talk							
9	J	グループワーク	チムワーク	作業	仕事	ワーク								
	E	group work	team work	working	work	work								
10	J	発表	本番	プレゼンテーション	プレゼン									
	E	presentation	presentation	presentation	presentation									
11	J	積極	自発	熱意	やる気									
	E	positive	spontaneous	enthusiasm	motivation									
12	J	理解	把握	わかる	分かる									
	E	understanding	grasp	understand	understand									
13	J	授業	模擬授業	模擬										
	E	lesson	trial lesson	trial lesson										
14	J	内容	課題	構成										
	E	content	task	organization										
15	J	効率	効率的	スムーズ										
	E	efficiency	efficient	smooth										
16	J	よい	良い	いい										
	E	good	good	good										
17	J	進める	進む	進め方										
	E	proceeding	proceed	how to proceed										
18	J	思う	考える											
	E	I think	think											
19	J	準備	予定											
	E	preparation	schedule											
20	J	練習	活動											
	E	practice	activity											

As shown in the first raw from the top in Table 5, words such as *bunpo* (grammar), *keigo* (polite expression), *sonkei* (honirific), *kenjou* (humble expression) and others are grouped together as synonyms, for they all belong to grammatical concepts taught in the class. Similarly, words like *mina, minasan, minna* (everyone), *hito* (people), *memba, membaa* (member), *guruupu* (group) and others in the second raw were also put together in the same group. Additionally, variants of a word were grouped together. For example, a noun in *hiragana* was grouped with its *Kanji* variant.

Also a list of unnecessary words was made. In table 4, verbs *suru* (to do), *dekiru* (to be able to), *aru* (to be, to exist; inanimate), *iru* (to be, to exist; animate), *nai* (not), *naru* (to become) are not necessary for the analysis since they are not meaningful words compared to, for example, a verb like *atsumaru* (to come together). After processing, the unnecessary words in the list were deleted from the output. Similarly, demonstratives such as *sore* (that one) and question words such as *dare* (who) were also not necessary and therefore deleted.

Finally, TTM was applied with the lists of synonyms and unnecessary words. The format adopted for this last process by TTM was as follows:

Output format: ttm_4

Parts of speech for output: nouns, adjectives and verbs

Optional files: synonyms and unnecessary files

After processing each file G, B and P as input, three outputs were obtained; one was the output from file G (merits of team-teaching). An excerpt of the output after processing the text file G by TTM is shown in Table 6. It is a cross tabulation of the occurrence of the top 20 words that appeared most frequently against the grouping variable, Japanese and non-Japanese students. One adjective *yoi* (good), 3 verbs *omou* (think), *dasu* (expressing opinions), and *susumeru* (advance), and 16 nouns, such as *minna* (all), *iken* (opinion), *jibun* (self), *guruupu waaku* (group work), *jugyou* (simulation class), and *miitingu* (meeting), were extracted.

Table 6: The top 20 words that appeared most frequently in file G

Word	English translation	Foreign	Japanese
皆	all	87	132
よい	good	60	98
意見	opinion	54	91
自分	self	48	85
思う	think	48	78
役割	role	40	77
出す	express	30	70
グループワーク	G work	31	68
授業	class	27	62
ミーティング	meeting	28	60
文法	grammar	30	57
協力	cooperation	19	45
進める	advance	13	47
理解	understanding	18	41
練習	practice	12	46
積極	active	21	36
発表	presentation	15	38
効率	efficiency	6	45
内容	content	14	36
準備	preparation	11	32

Next was the output from file B (demerits of the team-teaching). Similarly, the text file B was processed by TTM; an output is shown in Table 7. The top 20 words that appeared most frequently and were extracted from the file included 2 adjectives, *nai* (not) and *muzukashii* (difficult), 1 verb *omou* (to think), and 17 nouns such as *minna* (all), *miitingu* (meeting), *jikan* (time), *jugyou* (class), and *mondaiten* (problem).

Table 7: The top 20 words that appeared most frequently in file B

Word	English translation	Foreign	Japanese
皆	all of them	63	113
ない	not	56	115
ミーティング	meeting	32	72
時間	time	38	62
思う	think	42	41
授業	class (=simulation class)	20	59
問題点	problem	29	47
意見	opinion	20	45
自分	self	16	44
発表	presentation	13	39
文法	grammar	17	34
難しい	difficult	18	32
役割	role	12	36
参加	participation	13	31
作業	work	13	25
練習	practice	10	24
準備	preparation	15	16
内容	content	8	19
予定	schedule	5	20
連絡	contact	6	19

Finally, there was the output from file P (attitudes toward solving problems); the text file P was processed by TTM in a similar manner. The top 20 words that appeared most frequently for file P are provided in Table 8, and include 7 verbs such as *atsumaru* (get together), *hanashiau* (discuss), *kimeru* (to decide), *iku* (to go), and *toru* (to take), and 13 nouns such as *minna* (all), *jibun* (self), *yakuwari* (role), *miitingu* (meeting), and *iken* (opinion).

Table 8: The top 20 words that appeared most frequently in file P

Word	English translation	Foreign	Japanese
皆	all of them	56	116
自分	self	34	69
役割	role	32	54
ミーティング	meeting	21	61
意見	opinion	24	45
文法	grammar	24	37
時間	time	20	41
問題	problem	17	36
練習	practice	23	28
連絡	contact	11	38
集まる	get together	7	35
話し合う	discuss	7	30
確認	confirmation	8	28
決める	decide	14	21
行く	go	5	29
とる	take	5	29
内容	content	9	24
準備	preparation	14	19
聞く	ask	12	20
考える	think	9	19

In the next stage, the results of correspondence (CR) analyses were examined. An analysis of all the two-way tables 6, 7 and 8 by the CR analysis software, provided the following results. Figure 1 shows the scatter plot of data in Table 9, for the row coordinates and in Table 10, for the column coordinates. Please note that the result is plotted in a single dimension scatter plot. This is because the cumulative contribution ratio of the analysis was 100% as shown below, which means that 100% of the inertia can be explained in a single dimension.

Eigenvalues: [1] 0.017 0.000   Cumulative contribution ratios: [1] 100 0

A clear distinction is observed in the recognition of the merits of team-teaching between non-Japanese and Japanese students (Table 10). Also Japanese students are likely to value the process in a simulation class. This is expressed by a group of words as *naiyou* (content), *happyou* (presentation), *rikai* (understanding), *kyouryoku* (cooperation), *jugyou* (class) and *dasu* (expressing an opinion), which are based on similar scores of the Japanese student coordinates scores (Figure 1). That is, the process of working cooperatively, understanding contents better, and making good presentations seems valuable to them. They evaluate these as merits.

In contrast, non-Japanese students are likely to recognize the merits of team-teaching on the fact that all the members of the group expressed their opinions and participated actively. This is expressed in words such as *minna* (all), *yoi* (good), *omou* (to think), *iken* (opinion) and *sekkyoku* (active), which have coordinate values close to that of the non-Japanese students (Fig. 1).

Table 9: Row coordinates

Word (J)	Word (E)	Coordin. Dim.1
皆	all	−1.1037811
よい	good	−0.817476
意見	opinion	−0.6975974
自分	self	−0.5094098
思う	think	−0.8371839
役割	role	−0.1984446
出す	express	0.4862042
グループワーク	G work	0.271537
授業	class	0.4310995
ミーティング	meeting	0.1889727
文法	grammar	−0.2466253
協力	cooperation	0.5372909
進める	advance	1.8485155
理解	understanding	0.4030801
練習	practice	2.0082348
積極	active	−0.6323251
発表	presentation	0.7638073
効率	efficiency	3.4672619
内容	content	0.8131589
準備	preparation	1.208546

Table 10: Column coordinates

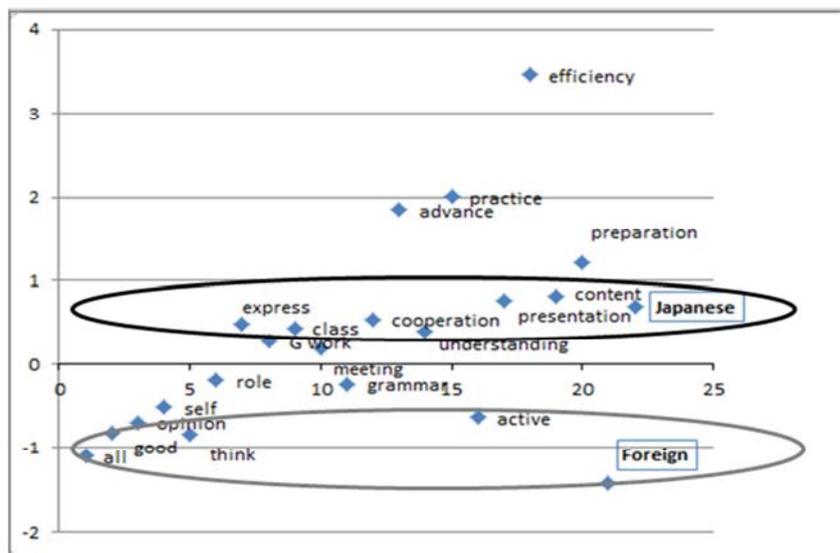| Tags (J)	Tags (E)	Coordin. Dim.1
留学生	Foreign	−1.4257208
日本人学生	Japanese	0.7013996

Figure 1: Scatter plot for Table 9 and 10.

The scatter plot in Figure 2 helps analyze the demerits, with the data of Table 11 as the row coordinates, and data of Table 12 as the column coordinates. Please note that Figure 2 is also single dimensional. The reason for this is the same as that for Figure1. Since the cumulative distribution ratio for the data in Tables 11 and 12 was 100% as shown below, 100% of the inertia can be explained in a single dimension.

Eigenvalues: [1] 0.021 0.000   Cumulative contribution ratios: [1] 100 0

It demonstrates that the Japanese students have unique features in recognizing the demerits (Table 11). Japanese students are likely to feel that meeting one another and expressing opinions is difficult and problematic. This is expressed by a group of words such as *sanka* (participation), *iken* (opinion) and *miitingu* (meeting), which have coordinate values close to that of the Japanese students. They also think that *naiyou* (content), especially *renshuu* (practice or activity) are difficult.

Table 11: Row coordinates

Word (J)	Word (E)	Coordin. Dim.1
皆	all	−0.36793
ない	not	0.082832
ミーティング	meeting	0.375651
時間	time	−0.69407
思う	think	−2.55847
授業	class (=simulation class)	1.182334
問題点	problem	−0.71743
意見	opinion	0.375651
自分	self	0.982584
発表	presentation	1.229151
文法	grammar	−0.00368
難しい	difficult	−0.39819
役割	role	1.229151
参加	participation	0.556696
作業	work	−0.13345
練習	practice	0.576474
準備	preparation	−2.23074
内容	content	0.544243
予定	schedule	1.968851
連絡	contact	1.377091

Table 12: Column coordinates

Tags (J)	Tags (E)	Coordin. Dim.1
留学生	Foreign	−1.41501
日本人	Japaese	0.706711

Non-Japanese students, on the other hand, are likely to recognize the duration of work as a problem. Such an interpretation is based on a group of words such as *jikan* (time) and *mondai* (problem), which have coordinate values relatively close to the non-Japanese students' coordinates (Figure 2). Both Japanese and non-Japanese students think that grammar explanation is difficult; this is expressed by words such as *muzukashii* (difficult), *bunpou* (grammar), and *sagyou* (work), and are plotted in the middle of the two student coordinates (Figure 2).
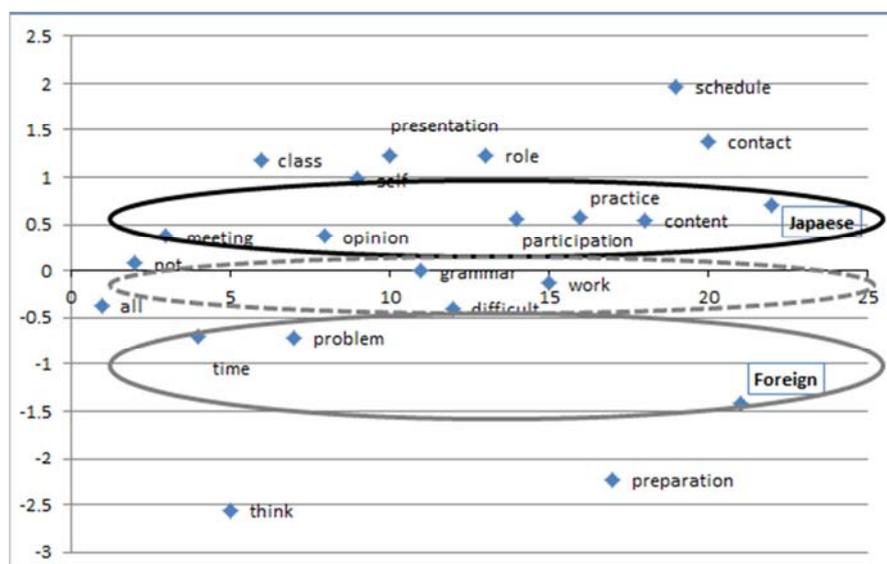
Figure 2: Scatter plot for Table 11 and 12.

Finally, improvement was interpreted through the scatter plot in Figure 3 with Table 13, for the row coordinates and Table 14, for the column coordinates. Note that Figure 3 is also single dimensional. This is because the cumulative contribution ratio of the data in Tables 13 and 14 as shown below was 100%. Therefore, the result is plotted in a single dimension.

Eigenvalues: [1] 0.029 0.000   Cumulative contribution ratios: [1] 100 0

It demonstrates a clear distinction between non-Japanese and Japanese students in their approach and attitude towards solving problems (Table 13). As pointed out before, Japanese students recognized meeting and participation as a serious problem. They seemed to focus on this point and tried to provide solutions for it. The interpretation is based on a group of words such as *miitingu* (meeting) and *naiyou* (content) that is the closest to the Japanese students' coordinates in Fig. 3. Although such words as *renraku* (contact), *atsumaru* (to get together), *hanashiau* (to discuss) and *kakunin* (confirmation) are not as close as the previous two words, they are still relatively close to the Japanese students. Thus, it can be interpreted that Japanese students in general felt that contacting, meeting and discussing were the best solution to the problem.

Non-Japanese students seem to have taken a different approach to solving problems. As pointed out before, they recognized the duration of the actual work time as a problem. To solve this, they seem to have tried to prepare themselves better. Such an interpretation is based on words like *junbi* (preparation) and *renshuu* (practice), which are close to the non-Japanese students coordinate value.

Both Japanese and non-Japanese students felt difficulties with the grammar explanation, which is a part of the content. To ease the difficulty, they seemed to have taken the same approach of asking (questions),

(expressing) opinions and deciding together with the members. Such an interpretation is based on words such as *kiku* (to ask/listen), *kimeru* (to decide), and *iken* (opinion), *minna* (all), and *jibun* (self) being plotted in between Japanese and non-Japanese students' coordinates.

Table 13: Row coordinates

Word (E)	Word (J)	Coordin. Dim.1
皆	all	−0.182997
自分	self	−0.2405733
役割	role	−0.7760331
ミーティング	meeting	0.7029411
意見	opinion	−0.4666229
文法	grammar	−1.0482464
時間	time	−0.2121627
問題	problem	−0.1214555
練習	practice	−1.7818688
連絡	contact	1.1059488
集まる	get together	1.8432097
話し合う	discuss	1.5560413
確認	confirmation	1.134861
決める	decide	−1.1318547
行く	go	2.0932151
とる	take	2.0932151
内容	content	0.4909077
準備	preparation	−1.4409523
聞く	ask	−0.8130978
考える	think	−0.1300473

Table 14: Column coordinates

Tags (J)	Tags (E)	Coordi. Dim.1
留学生	Foreign	−1.48764
日本人学生	Japanese	0.672206
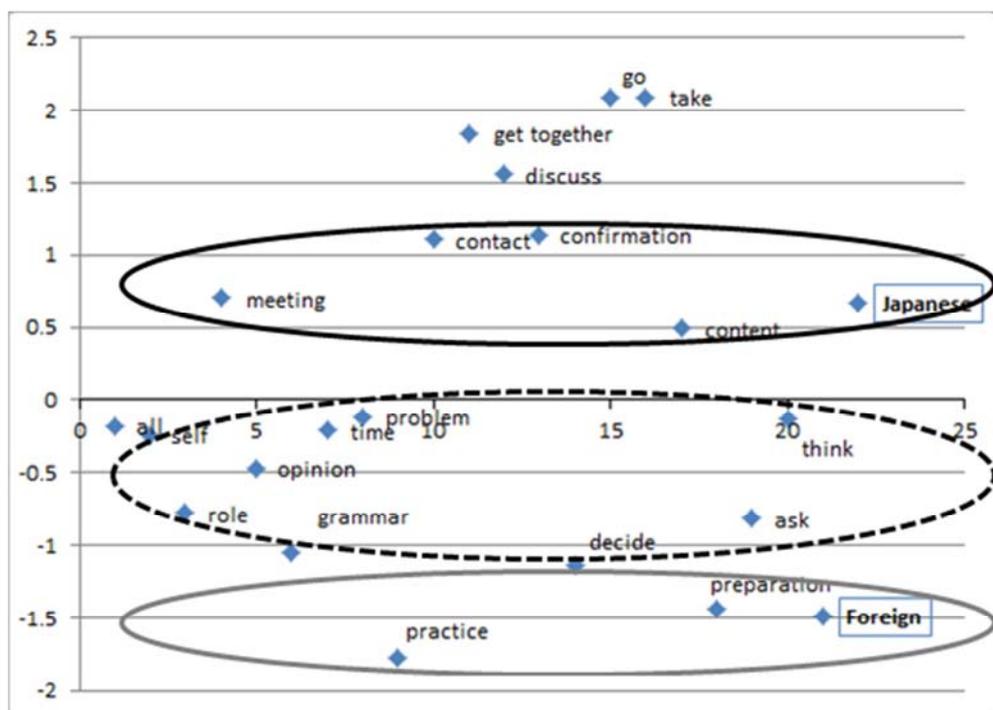
Figure 3: Scatter plot for Table 13 and 14

Conclusion

This study attempted to answer the following three questions:

1. What do Japanese and non-Japanese students think are the merits and demerits of team-teaching? What efforts and improvements did they make to lessen the demerits of team-teaching?

2. Are there any similarities and differences between Japanese and non-Japanese students in their recognition of the merits and demerits and in their approach and/or attitude towards problem-solving?

3. Can text mining of student portfolios be a useful tool for extracting meaningful information from unstructured textual files and provide feedback to students and instructors as well as educational institutions as a whole?

The first two questions have already been answered in the part on discussion and therefore will not be repeated here. As for the third question, a complete answer at this stage cannot be presented because this research has only been conducted as a primary trial. Nevertheless, the experiences gained through this trial may direct us to the needed improvements in the future. The advantages to this methodology include its quick feedback and low cost. The biggest merit of this method is speed. All the tools used in this trial are on the Internet (e.g., the survey, text mining tools, and the statistical tool R) and massive data sets can be processed with these tools in just a few minutes. Thus the information extracted from the text can be fed back very quickly to students as well as to the educational community.

In the cost perspective, all the software used for the research is open-source and hence no expenses are necessary. Therefore, for beginners who would like to experiment with this type of research, the use of such open-source software is quite economical.

The disadvantages of this methodology include its requirement of handling skills and skills for interpretation. Installation of the software is not difficult, but it takes time to get familiar with the TTM and the CR analysis, and to handle the data efficiently. Although a 'trial and error' method by individual researchers can improve their skills, a project consisting of experts of different academic fields should provide better results. The skills to interpret the scatter plots may be the most important that needs to be improved.

One limitation of this study is that the text has been analyzed in terms of the most interesting grouping variable, that is, Japanese versus non-Japanese students. However, other variables could be used for this research, such as male vs. female, freshmen vs. seniors, and good performers vs. ordinary ones. The more experiences we get in text mining analysis, the higher our skills will become, and this can be done next.

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COMMENTARY:
Miyazaki's new animated film and its antiwar pacifism: The Wind Rises (*Kaze Tachinu*)

Daisuke Akimoto[1]

Abstract

The latest Ghibli animation film, 'The Wind Rises' (*Kaze Tachinu*) released on 20 July 2013, illustrates a 'difficult time to live' during which the Japanese people suffered from the Great Kanto earthquake that killed 10,000 people, worldwide economic depression that resulted in high unemployment rates, and the following Second World War. Miyazaki stated that the film does not attempt to 'denounce' war or to beautify the Japanese Zero Fighter plane, but to portray a Japanese young man who chased his dream and cherished his love despite the difficult age he lived in. Although Miyazaki might have intended to make an apolitical animation, his viewpoint on Japan's involvement in the Pacific War is that "it was wrong from the beginning" but also "useless to blame Jiro for it". However, Japan's 'war responsibility' as an important historical lesson should not be forgotten. 'The Wind Rises' has a clear message for the Japanese constitutional revision debate, especially the revision of Article 9.

Keywords: Antiwar pacifism, Film review, Miyazaki animation, War responsibility.

This is a review [2] of the Japanese animation film directed by Hayao Miyazaki from Studio Ghibli, released in 2013, in 126 minutes. It has been about two years since the release of the previous animation film by Studio Ghibli, 'From the Red Poppy Hill' (*Kokuriko zaka kara*) which nostalgically depicted the "good old days of Japan" (Askew, 2013). By contrast, the latest Ghibli animation film, 'The Wind Rises' (*Kaze Tachinu*) released on 20 July 2013, illustrates a "difficult time to live" (*ikiru noni tsurai jidai*) during which the Japanese people suffered from the Great Kanto earthquake that killed 10,000 people, worldwide economic depression that resulted in high unemployment rates, and the following Second World War (Miyazaki, 2011a). As Miyazaki himself noted, however, this film does not attempt to 'denounce' (*kyudansuru*) war or to beautify the Japanese Zero Fighter plane, but to portray a Japanese young man who chased his dream and cherished his love despite the difficult age he lived in (Miyazaki, 2011b).

The film is based on a romantic fiction, 'The Wind Rises' (*Kaze Tachinu*) (1938), written by Tatsuo Hori (Hori, 2013) as well as on the real life of Jiro Horikoshi (1903-1982) who designed Japan's Mitsubishi A6M Zero Fighter. Miyazaki produced an animated cartoon based on the story, which was serialized in Model Graphix from April 2009 to January 2010 (Mainichi Shimbun, 13 December 2012). The animation is basically about a love story between Jiro Horikoshi, who chases his dream of creating an aircraft, and Naoko Satomi, a beautiful young lady who loves painting and suffers from tuberculosis, an incurable disease at that time.

Some movies convey narratives and "aspects of Japan's wartime and pre-war history" (Iles, 2008), and the film 'The Wind Rises' can be categorized as one of the storytellers of war. To 'memorize war' (*senso o kiokusuru*) could be fictionalized; and this memory might be different from nation to nation, and people to people (Fujiwara, 2001: 53-56). From a Korean perspective, for example, the film can be regarded as a nationalistic 'right wing movie' (*uyoku eiga*) which beautifies the age of Imperial Japan (J-cast, 2013). Either way, however, the intention of this film is to make audience remember the Pacific War.

Although Miyazaki explained that the film does not intend to criticize war, the descriptions of his antiwar pacifism can be seen, albeit casually, in the work. From the outset of its official trailer, the first sentence of the caption narrates: "There was a war in Japan (*katsute, nihonde senso ga atta*)". It also emphasizes that: "Then, Japan plunged into war (*soshite, nihon wa senso e totsunyu shiteitta*)" (Youtube.com 2013). Although Miyazaki might have intended to make an apolitical animation, his viewpoint on Japan's involvement in the Pacific War is clear. Miyazaki stated that "it was wrong from the beginning to go to war" and that "But it's useless… to blame Jiro for it" (The Economist, 2013).

Likewise, Jiro, as the main character, simply loves to design a beautiful airplane rather than create a military aircraft. To be more precise, after he designed the military aircraft and then tried to lighten the weight, he jokingly said that it would be better if the plane was not equipped with machine guns. More explicitly, Castorp, a mysterious German personage who stays at the same accommodation with Jiro and Naoko, tells Jiro that Japan forgets the memory of war such as the Manchurian incident (1931) and Japan's secession from the League of Nations (1933). Castorp warns that Japan would 'rupture' (*haretsusuru*) if the country forgets its 'war responsibility' as an important historical lesson. Clearly, Miyazaki made Castorp emphasize the significance of the war memory so that Japan does not repeat the same mistake. It can be argued that this scene with some memorable lines by Castorp symbolizes Miyazaki's antiwar pacifism.

Furthermore, Jiro prefers fish rather than meat despite his friend's suggestion to eat more meat. In Japanese culture, this also indicates that Jiro's characteristic is not a masculine or militaristic type. Although Caproni, an Italian master of airplane design, contributes to the creation of military aircrafts like Jiro, Caproni encourages Jiro to do his best to make his 'dreams' come true. Interestingly, besides the striking lines regarding Japan's war responsibility, it was somehow emphasized that Castorp's favorite food is watercress implying that he might be a vegetarian. It can be argued that the characteristics of these figures symbolize the antiwar stance of Miyazaki animation.

Indeed, as Toshio Suzuki, the producer at Studio Ghibli, commented, in spite of Miyazaki's preference for military airplanes, this film contains an "antiwar message" just like other Studio Ghibli works, such as 'Porco Rosso' (*Kurenai no Buta*) (1992) and 'Howl's Moving Castle' (*Hauru no Ugokushiro*) (2004) (Tokyo Shimbun, 9 May 2013). Indeed, the main character of 'Porco Rosso' consistently shows his "non-killing" philosophy even in the battle scenes. Suzuki, moreover, argues that there exists no "combat scenes" of war in *Kaze Tachinu* (Ibid). Although Jiro as a kid in the beginning of the film was involved in fighting (*kenka*), right after the fighting, Jiro's mother told him not to fight and the parenting might have influenced Jiro's way of thinking regarding fighting. In this sense, although animated violence can be seen in the film, it has some educational implication for 'non-fighting'.

Based on the antiwar philosophy, 'The Wind Rises' has a clear message for the Japanese constitutional revision debate, especially the revision of Article 9 (peace clause). When discussing Ghibli's animation, Producer Suzuki explicitly opposed constitutional revision and argued that Japan should appeal to the world based on Article 9 of its 'Pacifist Constitution' (Ibid). Likewise, on 19 July 2013, the day before the release of The Wind Rises, Director Miyazaki, expressed a strong message which argued over Japan's 'war responsibility', saying "constitutional revision is out of question" (Tokyo Shimbun, 19 July 2013). Thus, Miyazaki's new animated film symbolizes his anti-war pacifism. There is no doubt that 'The Wind Rises' contains a "memory of war" as a "message for peace" in relation to Japan's 'war responsibility' over the Second World War. Furthermore, Miyazaki argues that Japan should not start a conflict with other Asian

countries by revising its peace clause (Tokyo Shimbun, 27 July 2013). The repeated opposition to constitutional revision by Suzuki and Miyazaki represent that Ghibli movies including 'The Wind Rises' value the importance of peaceful coexistence between Japan and other countries in the Asia Pacific and the World.

In sum, alongside Miyazaki's antiwar pacifism, this film conveys the following philosophical message: Despite the difficult times, "we must try to live" (*ikineba*), pursuing our dreams and cherishing love.

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Submission of papers: Submissions for review of papers relating to the peoples, societies, and cultures of the Asia Pacific region are welcome, including both the eastern and western shores of the Pacific and its islands. Papers should preferably be submitted electronically to RCAPS at rcaps@apu.ac.jp as email attachments. When submitting articles electronically, please send files in the Microsoft Word format (Word 97 or later). Please include all figures and tables in grayscale, a 150-200 word abstract and about 4-6 keywords. Papers should be in English but a limited number of Japanese papers, with a comprehensive English abstract, may be approved for publication. Authors are responsible for preparing any figures, diagrams, tables, etc. in a form ready to be printed, and for clearing any copyright permission.

Length: As a general guide your manuscript should not exceed 8,000 words in length, given the number of articles competing for space in most issues.

Footnotes: Footnotes should be kept to a minimum. Please number footnotes sequentially with superscript numbers and set Microsoft Word to print them at the bottom of the page.

References: References to works cited should generally be included in the text, rather than in footnotes. These references should give the author, date, and (where applicable) the page numbers, e.g. (Brown 1956: 36-38). There should be a full list of references at the end, sorted in alphabetical order by author's surname and then year, using the following models (please note in particular the use of capitals):

Books:

McCourt, Kathleen. 1977. *Working Class Women and Grass-Roots Politics*. Bloomington: Indiana University Press.

Chapters from books:

Macdonald, Dwight. 1970. "Introduction: Hoffman and His Age." Pp. 11–24 in *The Tales of Hoffman,* eds. M. Levine, G. McNamee, and D. Greenberg. New York: Bantam Books.

Papers from journals:

Molotch, Harvey. 1976. The city as a growth machine. *American Journal of Sociology* 82(9): 50-65.

Edited Books:

Ramos, Frank P., John R. Wizmont, and Clint T. O'Finnery, eds. 1966. *Texts and Nontexts*. Philadelphia: Nonsense Press.

Dissertations:

Muller, Chandra. 1983. "Resource dependency in community based organizations." Master's thesis, Department of Sociology, University of Chicago.

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http://www.mofa.go.jp/policy/economy/fta/strategy0210.html (accessed 17 March 2005).

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Kuwayama, Takami. 1996. "Genchi' no jinruigakusha: Naigai no Nihon kenkyû o chûshin ni" ["Native" anthropologists: With special reference to Japanese studies inside and outside Japan]. *Minzokugaku Kenkyû* [The Japanese Journal of Ethnology], 61(4): 517-542.

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